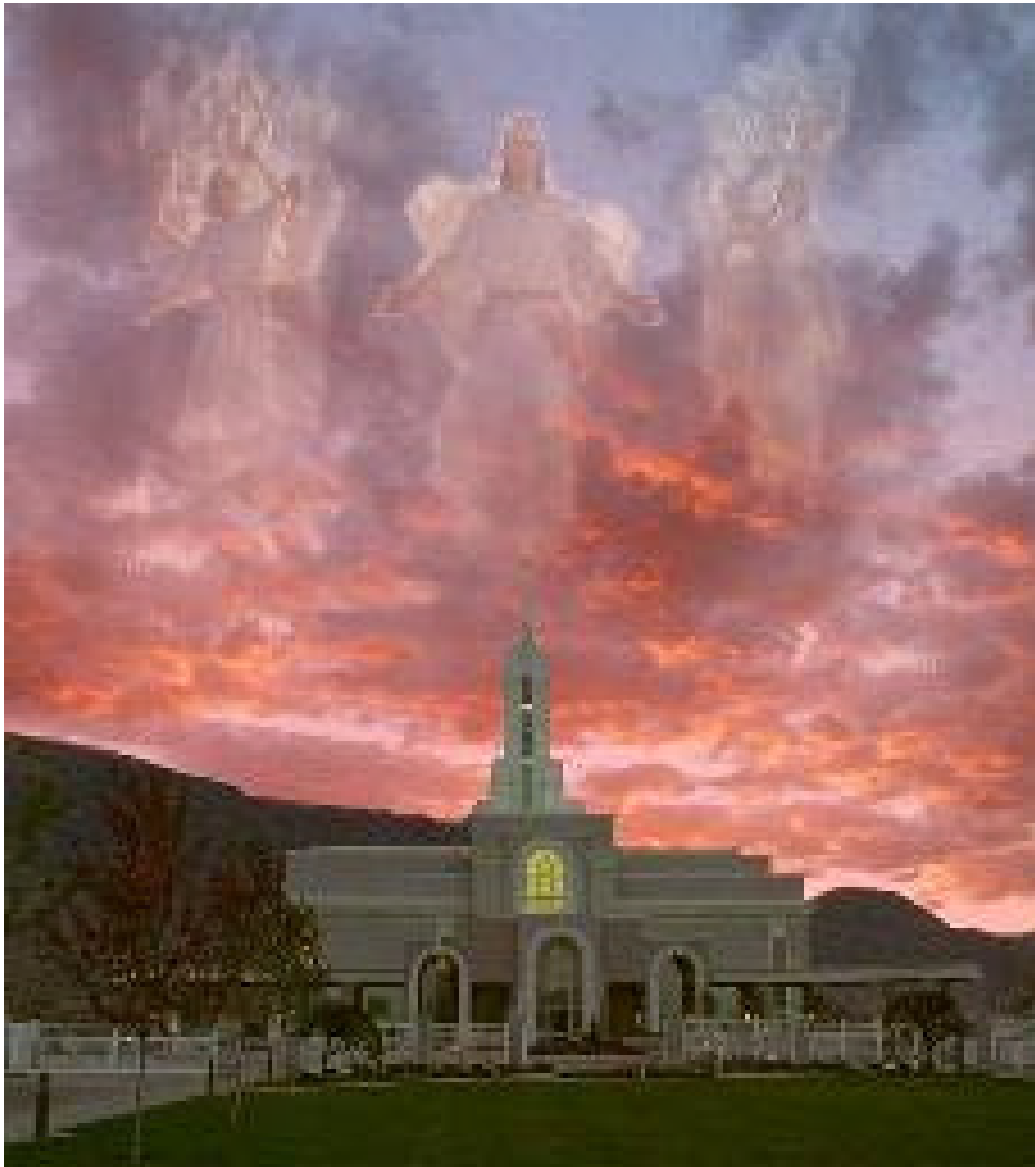


# Emergency





THE CHURCH OF  
**JESUS CHRIST**  
OF LATTER-DAY SAINTS

MAGNA UTAH CENTRAL STAKE

February 24, 1997

FROM: Magna Central Stake Presidency  
TO: Ward Bishops and Auxiliary Heads  
RE: Emergency Services Manual and Computer Disk

Brethren and Sisters:

Herewith is an Emergency Services Manual or computer disk that outlines procedures to be implemented in the event a catastrophic occurrence affects the people in Magna Central Stake.

It has been formatted to respond to Microsoft Word 97. Other Versions are available upon request including Word Perfect 5.1 and Adobe Acrobat. Please feel free to copy all or parts of the information for the benefit of your Ward Members and/or Auxiliary Leaders.

We stress that it will be necessary to implement the suggestions starting on page 10 to complete the link between Ward and Stake committees in order to make this an effective Emergency Program. May the Lord inspire you and bless you in developing and implementing your portions of this valuable data.

Sincerely,

E. Gaynor Pearson  
Timothy S. Wren  
Antone J. Elegante  
Magna Central Stake Presidency

# Emergency Preparedness Manual

## Preface

We strongly encourage all families to regularly study and review in their Family Home Evenings the information contained in this manual. It is hoped that the manual will be kept in a place that will allow it to be consulted with ease in the time of emergency.

Several different sources have been reviewed and/or consulted in the preparation of this text. This information is pertinent to this area specifically.

By adhering to these practices, those who live within the stake may be more properly assured of the Lord's promise "...if ye are prepared, ye shall not fear." (Doctrine and Covenants 38:30)

### Special Acknowledgement

We wish to acknowledge as major sources  
for the information herein contained, the  
Council of LDS Church Leaders of various dates  
Advice and assistance of Magna Central Stake Presidency  
Centerville Utah North Stake  
Seventh Ward Emergency Preparedness Handbook,  
Provo Utah Stake Emergency Preparedness Manual, May 1992  
Individual Contributions of interested Church Members from this local area and  
others throughout the world, who contributed information via e-mail.

### Please Note

**The contents of this booklet are intended to assist individuals and families in coping with emergency hazards. However, final decisions on preparation for actions taken during an emergency are the sole responsibility of individuals. No one knows your needs or can take care of you better than you can-nor does anyone else have that responsibility. Information and examples contained within this booklet are provided for illustration and advice only. Therefore, no liability is assumed by the Centerville Utah North Stake, Provo Utah Stake or Magna Central Stake for the use or misuse of any information or products contained in this publication.**

THE CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS  
SALT LAKE CITY, UTAH 84150

June 24, 1988

To: General Authorities and the following Priesthood leaders in the United States and Canada:  
Area Authorities (formerly Regional Reps.); Stake, Mission, and District Presidents;  
Bishops and Branch Presidents.

Dear Brethren:

OFFICE OF THE FIRST PRESIDENCY

Preparing for Emergencies (To be read in Sacrament Meeting.)

Occasionally people speculate about possible disasters, which speculation engenders fear and can cause members to become caught up in emergency preparedness efforts that are not only costly but go beyond the basics consistently taught by the First Presidency. Leaders should refer to *Preparing for and Responding to Emergencies: Guidelines for Church Leaders*. Member preparations require wise planning, diligence, and provident living. If circumstances warrant, the First Presidency and Council of the Twelve will provide additional guidance on such matters through established Priesthood channels.

We continue to encourage members to store sufficient food, clothing, and, where possible, fuel for at least one year. We have not laid down an exact formula for what should be stored. However, we suggest that members concentrate on essential foods that sustain life, such as grains, legumes, cooking oil, powdered milk, salt, sugar or honey, and water. Most families can achieve and maintain this basic level of preparedness. The decision to do more than this rests with the individual.

We encourage you to follow this counsel with the assurance that a people prepared through obedience to the commandments of God need not fear.

Sincerely your Brethren,

Ezra Taft Benson  
Gordon B. Hinckley  
Thomas S. Monson

The First Presidency

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# Teachings of the Brethren

## At the October 1936 General Conference, the First Presidency reviewed basic principles underlining the welfare plan, stating:

*"Our primary purpose was to set up, insofar as it might be possible, a system under which the curse of idleness would be done away with, the evils of a dole abolished, and independence, industry, thrift and self-respect be once more established amongst our people. The aim of the Church is to help the people help themselves. Work is to be re-enthroned as the ruling principle of the lives of our Church membership."* (October 1936 General Conference)

### President J. Reuben Clark, Jr.

Speaking for the first Presidency, President J. Reuben Clark, Jr. exhorted the Saints to live within their means:

*"Let us avoid debt as we would avoid a plague...Let every head of every household see to it that he has on hand enough food and clothing, and, where possible, fuel also, for at least a year ahead...Let every head of household aim to own his own home, free from mortgage. Let us again clothe ourselves with these proved and sterling virtues--honesty, truthfulness, chastity, sobriety, temperance, industry, and thrift; let us discard all covetousness and greed."* (April 1937 General Conference)

### Ezra Taft Benson

*"For over 100 years we have been admonished to store up grain. 'Remember the counsel that is given,' said Elder Orson Hyde, 'Store up all your grain, and take care of it!... And I tell you it is almost as necessary to have bread to sustain the body as it is to have food for the spirit.'* (Journal of Discourses, Vol. 5, p. 17)

And he also said: *'There is more salvation and security in wheat, than in all the political schemes of the world...'* (JD 2:207).

*"From the standpoint of food production, storage, handling, and the Lord's counsel, wheat should have high priority. Water, of course, is essential. Other basics could include honey or sugar, legumes, milk products or substitutes, and salt or its equivalent. The revelation to store food may be as essential to our temporal salvation today as boarding the ark was to the people in the days of Noah."* (October Conference, 1973).

### President Harold B. Lee:

*"Perhaps if we think not in terms of a year's supply of what we ordinarily would use, and think more in terms of what it would take to **keep us alive** in case we didn't have anything else to eat, that last would be very easy to put in storage for a year...just enough to keep us alive if we didn't have anything else to eat. We wouldn't get fat on it, but would live; and if you think in terms of that kind of annual storage rather than a whole year's supply of everything that you are accustomed to eat which, in most cases, is utterly impossible for the average family, I think we will come nearer to what President Clark advised us way back in 1937."* (Welfare conference address, October 1, 1966).

### Elder George A. Smith:

*"...How on the face of the earth could a man enjoy his religion when he had been told by the Lord how to prepare for a day of famine, when, instead of doing, so, he had fooled away that which would have sustained him and his family."* (JD 12:142)

### Vaughn J. Featherstone:

*"...I should like to address a few remarks to those who ask, 'Do I share with my neighbors who have not followed the counsel? And what about the nonmembers who do not have a year's supply? Do we have to share with them? 'No, we don't have to share--we get to share! Let us not be concerned about silly thoughts of whether we would share or not. Of course we would share!'"* (April Conference, 1976)

## Teachings of the Brethren

### Spencer W. Kimball:

*...“We encourage you to grow all the food that you feasibly can on your own property. Berry bushes, grapevines, fruit trees--plant them if your climate is right for their growth. Grow vegetables and eat them from your own yards. Even those residing in apartments or condominiums can generally grow a little food in pots and planters. Study the best methods of providing your own foods. Make your garden neat and attractive as well as productive. If there are children in your home, involve them in the process with assigned responsibilities...Develop your skills in your home preservation and storage. We reaffirm the previous counsel the Church has always given, to acquire and maintain a year's supply--a year's supply of the basic commodities for us.*

***We encourage families to have on hand this year's supply; and we say it over and over and over and repeat over and over the scripture of the Lord where He says, 'Why call ye me, Lord, Lord, and do not the things which I say?' How empty it is as they put their spirituality, so-called, into action and call him by his important names, but fail to do the things which he says.*** (April Conference, 1976)

### Marion G. Romney (Quoting Brigham Young):

*"...If we are to be saved in an ark, as Noah and his family were, it will be because we build it... My faith does not lead me to think the Lord will provide us with roast pigs, bread already buttered, etc., He will give us the ability to raise the grain, to obtain the fruits of the earth, to make habitations, to procure a few boards to make a box, and when harvest comes, giving us the grain, **it is for us to preserve it--to save the wheat until we have one, two, five or seven years' provisions on hand**, until there is enough of the staff of life saved by the people to bread themselves and those who will come here seeking for safety...(the fulfillment of that prophecy is yet in the future)".*(April Conference, 1976)

### Ezra Taft Benson:

*“Too often we bask in our comfortable complacency and rationalize that the ravages of war, economic disaster, famine, and earth quake cannot happen here. Those who believe this are either not acquainted with the revelations of the Lord, or they do not believe them. Those who smugly think these calamities will not happen, that they will somehow be set aside because of the righteousness of the Saints, are deceived and will rue the day they harbored such a delusion.”* (October Conference, 1980 Ensign, Nov 1980:32-33)

# Emergency Preparedness Recommendations

The following was given in talks by Swen Nielsen, Provo City Emergency Preparedness Director, and Provo Stake High Councilman, in January, 1991 and April, 1991. This is printed with his permission.

"It is not a matter of IF, but WHEN. Something will happen in this valley at some time. Flood is quite possible; a railroad transportation accident is possible. A 7.5 earthquake will leave NO government response. **Individual families must be prepared.**

The Lord's people are expected to prepare every needful thing. The Lord's people must do what we CAN do. The Book of Mormon people were told to fortify their cities against the Lamanites. The Lord could have done it, but he instructed the people to."

1. Threat Assessment: Earthquake, flood, hazardous material: assess threats within own home--such as free-standing water heater (gas company will tie down for

nominal fee); unsecured large heavy items that might tip over (bookcase, china hutch, entertainment center, etc.).

2. 72-hour supplies a MUST for every member of the family. Don't wait another week!! Medical supplies and training to use them (avail yourself of first-aid training offered by your ward, stake, Red Cross, etc.)
3. Family members must know how to shut off utilities (gas, water, power); keep shut-off tool near gas outlet (even chain it to meter).
4. Smoke detectors necessary (battery, not electric).
5. Catastrophic insurance on home and contents strongly recommended.
6. Battery-operated radio and batteries; check batteries often. (Tune to KSL 1160 AM for Emergency Broadcasting System.)
7. Conduct home emergency drills.
8. Live worthily—do everything you can yourself. Heed the counsel of the prophets and prepare!

Character is not built in an emergency--merely exhibited!

THE CHURCH OF  
**JESUS CHRIST**  
OF LATTER DAY SAINTS

---

**Area Presidencies and stake and district presidents:**

Emphasize self-reliance principles and applications in area training meetings, regional welfare committee meetings, and with stake and district welfare committees.

**Bishops and branch presidents:**

Promote self-reliance principles and applications in ward and branch welfare committees; apply these principles in administering welfare.

**Quorum and Relief Society Presidents:**

Foster self-reliance among members; help members resolve long-term needs and overcome obstacles that hinder self-reliance.

---

**PURPOSE FOR THE TRAINING**

Latter-day Saints are to care for themselves, their families, and the poor and needy in the Lord's way. To do this, they need to be self-reliant. Self-reliance engenders spiritual and temporal well-being. Priesthood and Relief Society leaders should use the scriptures, the welfare handbook entitled Providing in the Lord's Way, and the topics outlined below to teach members the principles of self-reliance and urge them to apply these principles.

---

**EDUCATION AND LITERACY**

Gain knowledge and wisdom. Be able to read, write, understand, and communicate, in order to be "prepared in all things" and able to fulfill Heavenly Father's purposes on earth (D&C 88:77-80).

**HEALTH**

Keep your minds and bodies healthy and unsullied by worldly influences. Treat your body as a temple, a fitting place for the Spirit of God to dwell (see I Corinthians 3:16-17).

**EMPLOYMENT**

Seek and maintain honorable employment. Work to provide for yourself and your family, to develop talents and divine attributes, and to build up the kingdom of God (see 1 Timothy 5:8).

**HOME STORAGE**

Produce and store items needed to sustain life. Prepare for adversity and enjoy the blessings of peace and security (see D&C 38:30-31).

**RESOURCE MANAGEMENT**

Be a wise steward over the Lord's possessions. Be prudent and frugal, and give generously so all may be provided for in the Lord's way (see D&C 104:11-18).

**SOCIAL, EMOTIONAL, AND SPIRITUAL STRENGTH**

Love God and keep his commandments. Deepen wholesome relationships by cultivating love and goodwill toward yourself and others (see Luke 10:27).

# Gospel Principles

## Underlying Welfare Services

"And the Lord called his people ZION, because they were of one heart and one mind, and dwelt in righteousness; and there was no poor among them." (Moses 7:18)

Welfare services is the organized application of gospel principles. In the following message, President Spencer W. Kimball discussed these principles, emphasized their scriptural basis, and showed all who labor in welfare services work how to improve the quality of their service:

"Because of the overriding significance of this great welfare plan, I thought it appropriate to restate the fundamental truths of this work and to emphasize how we should apply these in this generation. My hope is that we may intensify, if possible, our spiritual heritage in this work and, building on their foundation, lengthen our stride in its present implementation.

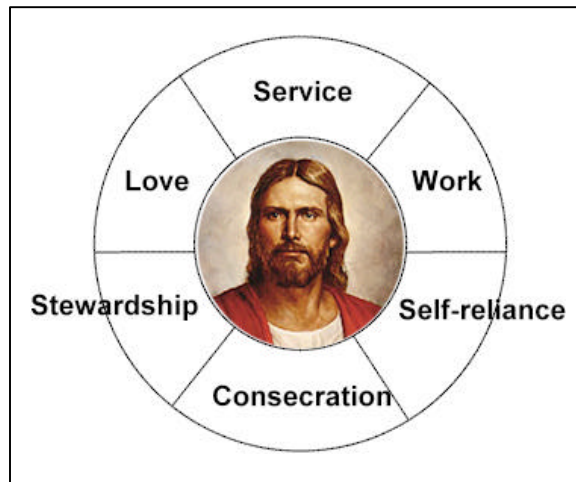
### THERE WAS NO POOR AMONG THEM

"Since the first dispensation of time on this earth the Lord has required his people to love their neighbors as themselves. Of Enoch's generation we are told that 'the Lord blessed the land, and they were blessed upon the mountains, and upon the high places, and did flourish."

"And the Lord called his people ZION, because they were of one heart and one mind, and dwelt in righteousness; and there was no poor among them." (Moses 7:17-18.)

### GIVE TO THE POOR TO BE GUILTLESS

"All through the Book of Mormon we see leaders teaching and generations learning this truth as spoken by that benevolent king, Benjamin:



"And now, for the sake of these things which I have spoken unto you--that is, for the sake of retaining a remission of your sins from day to day, that ye may walk guiltless before God--I would that ye should impart of your substance to the poor, every man according to that which he hath, such as feeding the hungry, clothing the naked, visiting the sick and administering to their relief, both spiritually and temporally, according to their wants.' (Mosiah 4:26)

### BE UNSELFISH AND PROSPER

"In Fourth Nephi we witness the blessings of the Nephites as they subdue selfishness and prosper in perfect righteousness for four generations. Who does not thrill to this picture of the ideal Zion?

"And they had all things common among them; therefore there were not rich and poor, bond and free, but they were all made free, and partakers of the heavenly gift..."

## TEMPORARY ASSISTANCE THROUGH THE STOREHOUSE RESOURCE SYSTEM

"And remember in all things the poor and the needy, the sick and the afflicted, for he that doeth not these things, the same is not my disciple." (D&C 52:40)



The Storehouse Resource System consists of a number of interrelated resources: an employment system, bishops' storehouses, production projects, LDS Social Services, Deseret Industries, fast offerings, welfare services missionaries, and other welfare resources. The immediate objectives of the system are to:

1. Provide cash resources, social services, and rehabilitative assistance to help those in need.
2. Produce, process, store, and distribute needed commodities.
3. Help find regular jobs for those who are able to work.

4. Provide temporary work within the Storehouse Resource System, when possible, for those who cannot be employed otherwise.
5. Serve as a resource to Church leaders in meeting local needs.

Through the Storehouse Resource System the Church seeks to supply those in need (see D&C 51:3). This is to be done not as a dole, but in recognition of their willingness to labor to the extent of their ability.

### THE LAW OF THE FAST

#### Fasting and Fast Offerings

Fast offerings have long been the Lord's way of providing for the needs of the poor. It is the objective of the Church to obtain through fast offerings the cash needs of welfare services and commodity needs.

The Church designates one day each month as a fast day during which members are to fast for two consecutive meals and contribute to the Church a minimum offering of an amount equal to the cost of the food they would have eaten. Any Latter-day Saint who has sufficient to eat can afford to pay fast offerings. All members are encouraged to fast except those who are physically unable. Children should be taught the principle of fasting and encouraged to pay fast offerings as they are able. Prayer is an essential part of fasting.

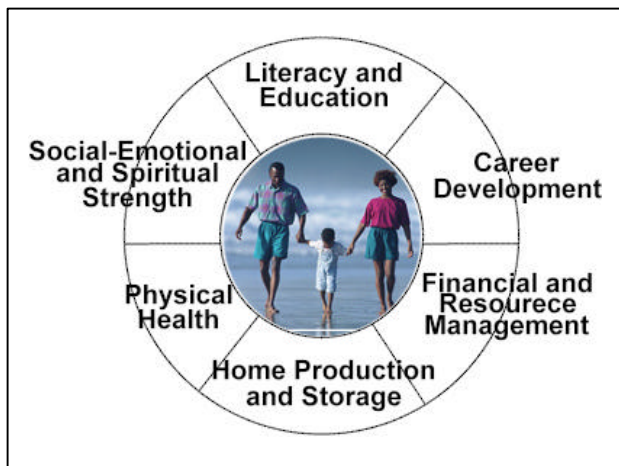
Members who are able should give a generous offering. President Spencer W. Kimball said:

"I think that when we are affluent, as many of us are, we ought to be very, very generous..."

"I think we should...give, instead of the amount saved by our two meals of fasting, perhaps much more."



## PERSONAL AND FAMILY PREPAREDNESS STANDARDS



"All things unto me are spiritual, and not at any time have I given unto you a law which was temporal" (D&C 29:34).

"When we speak of [personal and] family preparedness, we should speak of foreseen, anticipated, almost expected needs which can be met through wise preparation. Even true emergencies can be modified by good planning" (Bishop H. Burke Peterson, "The Family in Welfare services," Welfare Services Meeting, April 1975, p 4).

### Literacy and Education

Standard: To the extent of his capacity, each person is able to read, write, and do basic mathematics. He regularly studies the scriptures and other good books. Parents teach these skills and habits to family members, and both parents and children take advantage of educational opportunities. (See D&Cc 88:77-80, 118; 90:15; 130:18-19.)

### Career Development

Standard: Each young person receives counsel to help select a career in which he can use his talents and skills in meaningful employment.

Each person selects a suitable vocation and becomes proficient through appropriate training.

### Financial and Resource Management

Standard: Each person establishes financial goals, pays tithes and offerings, avoids debts, pays obligations, uses family resources wisely, and saves during times of plenty for times of need. (See D&C 42:54; 104:78-79; 119:5-6; Isaiah 58:6-8.)

### Home Production and Storage

Standard: Each person or family produces as much as possible through gardening, sewing, and making household items. Each person and family learns techniques of home canning, freezing and drying foods, and where legally permitted, stores a one-year supply of food, clothing, and, if possible, fuel. (See 1 Timothy 5:8; D&C 38:30.)

### Physical Health

Standard: Each person obeys the Word of Wisdom and practices sound principles of nutrition, physical fitness, accident prevention, weight control, immunization, sanitation, mother and child health, dental health, and medical care. Members live in a healthy and clean environment. In addition, each member acquires appropriate skills in first aid and safety, home nursing, and food selection and preparation. (See D&C 88:124;89.)

### Social-Emotional and Spiritual Strength

Standard: Each person builds spiritual strength to meet life's challenges with confidence and stability by learning to love God and communicate with him in personal prayer, to love and serve his neighbor, and to love and respect himself through righteous living and self-mastery. Social-emotional and spiritual strength is increased by living the principles of the gospel.

## Gospel Principles

<b>PERSONAL AND FAMILY PREPAREDNESS STANDARDS</b>	
<p><b>Instructions</b></p> <p>Devote a family home evening (or, if single, devote an hour or more) to developing a personal and family preparedness plan: (1) Establish a goal in one or more of the six headings (a few possible goals are listed in the left column);</p>	<p>(2) in the right column, list the major steps required to reach your goal and the date when you intend to achieve your goal. Carry out the steps to reach each goal. When you have achieved one of your goals, work to achieve another.</p>
<b>A Few Possible Goals</b>	<b>Steps for Accomplishing Your Personal or Family Goals and Date for Completion</b>
<p><b>1. Literacy and Education</b></p> <p>Obtain a copy of the standard works for each family member.            Study the scriptures regularly.            Read good books regularly.            Use the local public library and take advantage of special seminars, conferences, and courses.            Take advantage of on-the-job training opportunities.            Other</p>	
<p><b>2. Career Development</b></p> <p>Improve your job skills.            Learn a trade or profession.            Outline and follow a plan to prepare for your career.            Plan to perform your job well.            Teach children useful skills and to enjoy work.            Other:</p>	
<p><b>3. Financial and Resource Management</b></p> <p>Pay a full tithing, a generous fast offering, and other offerings.            Properly budget your money.            Live within your income.            Plan major purchases, avoiding credit purchases.            Work toward home ownership.            Get out of debt.            Have a savings plan.            Provide financial security for times of disability and advanced age.            Take better care of your possessions.            Other:</p>	

<p>4. Home Production and Storage          Plant and care for a garden.          Learn techniques of home canning, drying, and freezing foods.          Preserve home-grown products.          Where legally permitted, store a one-year supply of basic food, clothing, and where possible, fuel.          Store an emergency supply of water.          Other:</p>	
<p>5. Physical Health          Observe the Word of Wisdom.          Maintain proper weight and endurance through regular exercise, adequate rest, and a balanced diet.          Improve or maintain personal and home sanitation (water, waste disposal, food, etc.)          Practice preventive measures to preserve good health.          Learn and practice home health skills (first aid, home nursing, parent and child care).          Other:</p>	
<p>6. Social-Emotional and Spiritual Strength          Read the scriptures daily.          Have personal and family prayer morning and night.          Repent of wrongdoing.          Attend Church meetings regularly and participate in Church activities.          Hold family home evening weekly.          Perform frequent acts of service to family members and others.          Other:</p>	

## Self/Family Responsibility

### General Instructions:

Be wise in preparing your family--there is no need to unnecessarily alarm your children. Keep things in perspective. Don't instill fear and doom in the minds of youngsters. Nor is there any need to go deeply in debt in making emergency preparations--The purpose of the program is to be able to respond safely and quickly to an unusual event that may sometime affect your family and to help correlate your needs (and strengths) with others who may also be affected.

Begin to hold regular "Family Council" meetings. Consider anything a family member wants to bring up. Encourage your youngsters to make their views known.

Have some Family Home Evenings based on Emergency preparedness--Learn about possible emergencies for your locality and how to respond to them--Fire-Flood-Earthquake-etc.

Develop a program for acquiring--or making--the elements in a "72-Hour Kit." Holiday and Birthday gift giving could include such items. Encourage working youngsters to buy some of their own things--(they're useful for camping, picnics, vacations too if returned or replaced.)

Have a home evacuation plan: Who calls for help? (911) Who alerts others? Where do you meet? Where will you go? Do you need to practice evacuation drills?

Do you need to acquire special skills: CPR, First Aid, or learn utility shutoffs, etc.

Families are often separated through the day. Plan what to do during a daytime emergency.

Do you have some cash, medicines, and food readily available for emergency use?

Is your fire and liability insurance adequate?

If the emergency is in a neighboring--or distant--area, how do you feel about helping out?

### What actions should we take when:

#### Emergency is without warning? (Accidents, Falls, Fire, Water mishaps)

Compose yourself--Remember your training.

Ask those near you for help--or offer help if it is asked for--or else stay, and keep others, out of the way.

Call 911--Stay on line 'til they have all the information they want.

#### When the Emergency is WITH advance warning?

- 1) Learn how to respond immediately.
- 2) Learn how to evacuate area if necessary.
- 3) Learn how to help others.
- 4) Learn how to report your situation to family, Church, and Emergency leaders.
- 5) Consider your Post-Disaster needs:
  - a) Move backs, clean up, restoration replacement, etc.
  - b) Taking assignments to help others as soon as your own needs are met.

## Quorum/Home Teacher Responsibilities

### General Instructions:

#### Pre-Emergency Action:

Have home teaching fully organized to facilitate communication within the ward ("Home teaching is the umbrella under which all members may huddle for protection in times of adversity" - Pres. Kimball)

If evacuation is suggested by government or Church leaders, the home teacher will be expected to notify his families.

## The Plan

Encourage your families to be as independent and self-reliant as possible. Consider distributing copies of this outline to all family heads for study and use.

In PPIs, determine if families are learning these concepts.

Every Melchizedek Priesthood . holder should know how to properly bless the sick or injured or frightened in asking the blessings of the Spirit the families may need.

Instruct the Quorum or Group Leaders how they should respond as a Presidency to any emergency, whether many families are affected, or only one (which could be your own!)

### **Actions to Take During an Emergency:**

Presidency to contact each other to determine the extent that each can carry out assigned duties. (It may be necessary to assume each others' responsibilities). Secure your own family first, but remember you have responsibilities to others also, as soon as you can respond.

Alert your families of precautionary measures or impending emergencies...if necessary to relocate, know where to, route to take, and what to take.

By referral to or from the Bishop, rescue those whose lives are threatened

Provide First Aid

Account for all persons in your families

Provide emergency water, food, clothing, and housing

Restore "normal" living conditions ASAP

Limit (or prevent) property damage

Provide spiritual, emotional, social strength

Report to your Bishop:

- Your name, title, unit, contact number or place; locate Ham radio services if phones are out.
- Provide location, description, magnitude of damage to residences, civil, and Church buildings. Also locations of affected members.
- Provide names and details re injured, missing or dead, and the types of medical assistance still needed

- Detail actions being taken to help those in distress. Also list those from the affected area still able to help others, including special skills people
- Detail specialists needed for area, and resources needed from outside the area: water, medicine, food, clothes, fuel, shelter and Fast Offering needs
- Indicate your knowledge of what non-church and Government sources are doing.

Consider Post Disaster Concerns: clean-up, repairs, replacement, etc. Assign Quorum members to assist as directed by the Bishop.

### **Suggestions in Regard to the hazards of rescuing those in danger:**

Let trained personnel respond without interference

Assist trained personnel if asked

When expert help is not available, use common sense and caution, acting quickly as possible:

When entering damaged buildings, be aware of possible collapse, gas leaks, electric short circuits. Stay away from downed power lines. Do not smoke or light fires

### **In rescues, generally, consider this order:**

Are they in danger in present location? If so, move them, if not--don't!!

Restore breathing and heart beat

Control bleeding

Prevent shock

Treat for burns, breaks, poisons

Examine carefully and seek medical help

Keep checking individual until help comes

Be alert, calm, positive, give directions to those disoriented, dazed, disorganized

# Ward Responsibilities

## General Instructions:

### Pre-Emergency Recommendations

Welfare Services Committee to study Booklet PGWE 1522 "Preparing for Emergencies - Guidelines for Leaders" (or updates)

Also study Welfare Services Resource Handbook "Emergency Preparedness and Response"

Be familiar with Self/Family/Quorum responsibilities detailed earlier in this outline

Consider calling a Ward Emergency Preparedness Coordinator to give day to day direction and planning to the Ward...this person would assist the Bishop as needed in an actual emergency.

Distribute a copy of this overall plan to Quorum leaders and family heads

In PPIs, determine if Quorum leaders have carried out their assignments

Coordinate Ward plans with Stake Emergency Preparedness Committee

Be prepared to have your own building used as a Relocation Center by the Stake, under their direction

Keep current on Ward Directories and Home Teaching routes. This is important in the event of an evacuation order

Maintain a Special Skills/Special Needs list of Ward membership, and furnish periodic updates to Stake

Plan how to relieve Special Skills people of family duties so they can help out in emergencies

Be familiar with Church and non-Church resources which may be available to members

The Ward Committee will teach members to prepare for emergencies. The "Self/Family" section of this outline may be sufficient

Teach members how to report their condition during an emergency

Make special plans to care for singles in the Ward as well as single parent families

## Actions During Emergencies:

Wards should be the first unit of responsibility in an emergency:

If a single family is affected (i.e., a fire) Home Teachers and Quorums go into action to assist. Bishop and Relief Society to perform their usual roles

If numerous families are affected (floods, storm, etc.):

- Rescue people threatened
- Provide medical aid
- Account for affected members
- Provide food, water, housing, etc.
- Through Storehouse Services (if needed) help restore normal living conditions ASAP
- Limit or prevent further property damage to homes and businesses
- Fortify emotional, social, spiritual strengths. LDS Social Services might assist in some cases
- Report name, title, unit # to Stake, and who Church Headquarters should contact
- Provide description and location of the emergency including property damage to Church and family buildings
- Provide names of dead, missing, or injured, and number who still require skilled help
- Action taken to help those distressed
- Detail resources and assistance needed from outside sources
- Name of spokesman assigned to answer media queries
- Indicate what Government and non-Church sources are doing

Consider and address post-disaster concerns, cleanup, repair, replacement, etc.

Assign members via quorums to assist as directed by Stake President

If relocation is deemed necessary, Ward will focus energies on getting people to assigned Stake Center in or out of area

Members are to obey the law and be as helpful to others as possible

# Stake Responsibilities

## Pre-Emergency Preparations:

Be familiar with booklets mentioned in "Ward Section" of this outline--or updates

Be especially familiar with the "Self/Family" sections of this outline also

Consider appointing a Stake Emergency Services Coordinator to give day to day planning direction to the Ward and Stake Welfare Committees

Distribute copies of this outline to all Bishops, including those in new units.

Determine in Bishops PPIs if assignments in "Ward Section" have been carried out

Plan how to respond to disasters most likely to occur in your area, and be familiar with local Civil Defense and Red Cross Units Disaster Plans

Determine Relocation Centers and routes if evacuation is ordered

Need an appointee to serve as Stake Contact with non-LDS agencies (Do not release Church Services or supplies for public use. That can only be done by the First Presidency or Presiding Bishopric or their representative)

Ensure membership records and directories are current to facilitate communications from leaders to members

Develop written plans to use Church buildings (not Temples) for:

- Reception Centers
- Medical Services. Have First Aid books on hand. Identify a specialist to report with supplies for First Aid and medical care

Set aside space for:

- Communicable Disease Room(s)
- Mass Feeding. Assign a person to order food from Bishop's Storehouse
- Recreation/Diversion Area
- Modified Church meeting schedules

- Temporary Housing in Church buildings or homes
- Temporary Morgue

Plan to process help requests and coordinate volunteers

Plan security for buildings and people

Assign a Media contact person

Plan for a Command Center where the presiding Priesthood leader can remain and direct operations--take a radio/phone with him if necessary to leave for short periods

Plan for non-member appeals at Church buildings and how to enforce Church standards (Red Cross has a one-day course in Shelter Management)

A "Spearhead Unit" (authorized by Area Authority) can provide emergency, food, water, shelter for up to 1,000 people

## Actions During an Actual Emergency:

Inspect Stake Center for structural safety--if unsafe, post notice of next-nearest alternative site. If usable, post signs in appropriate areas as listed in previously. (note: post "reserved parking" signs at each entry)

Stake President will report to Area Authority every four hours as long as necessary:

- Location and description of emergency
- Detail of location of members affected
- Provide names of missing, sick, injured and dead members, and number who still need assistance and skilled medical help
- Actions taken to help those in distress and number of volunteers still available to assist
- Detail specialists and resources still needed from outside the area
- Name of media spokesman assigned to answer questions
- Indicate what Government and non-Church agencies are doing

Stake Presidency will meet regularly to determine status of activities, such as repairs, restoration, and cleanup

Stake Presidency will assign members to assist in community as and where needed or as directed by the Area Authority.

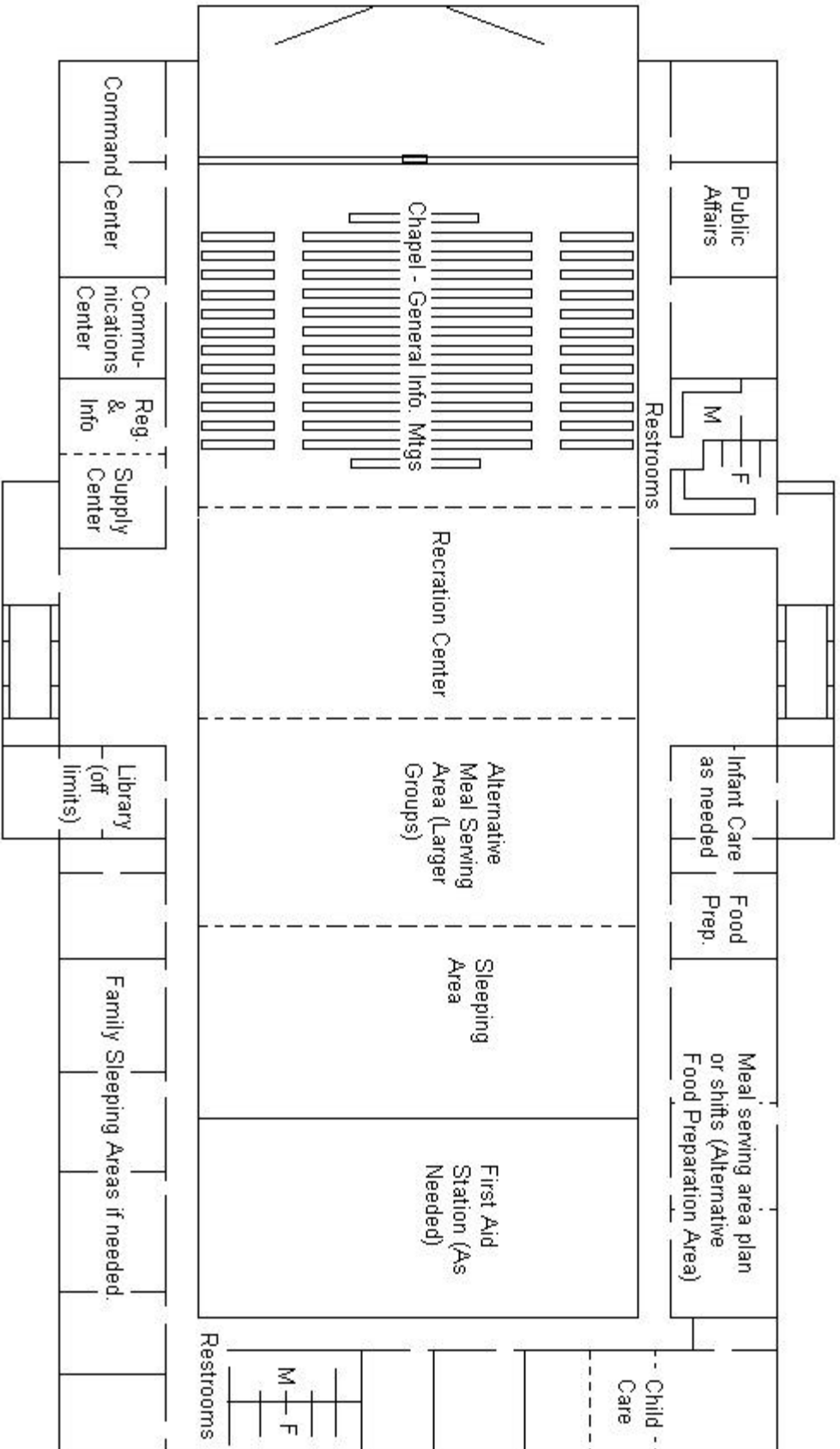
The Plan

## **Area Responsibilities**

NOTE: No attempt has been made at this point to offer advice that can be better handled by Area Authorities and/or Church headquarters.



## Possible Use of Church Meetinghouse as an Emergency Shelter



# 72 Hour Kits

The objective of the Family 72-Hour Emergency Preparedness Kit is to have, previously assembled and placed in one location, all of those essential items you and your family will need during a 72-hour time period following an emergency. When an emergency occurs you will probably not have the luxury of going around the house gathering up needed items, especially if you have to evacuate your home on short notice.

Take time now to gather whatever your family needs to survive for three days(72 Hours) based upon the assumption that those items are the only possessions you will have. Store these kits in a closet near the front door or some other easily accessible place where they can be quickly and easily grabbed on the way out the door.

Pack all items in plastic Zip-loc type bags to keep them dry and air tight. This will prevent a liquid item from spilling and ruining other items in your kit and keep rain and other forms of moisture away from the items stored.

Keep a list of the dates when certain items need to be reviewed, especially foods, outgrown clothing and medications so that they may be properly rotated.

Emergency supplies are readily available at preparedness and military surplus stores.

Fear may well be responsible for more deaths than exposure, hunger and injury combined. Realizing you have fears and that these are normal emotions in unfamiliar situation, you will be aware of them and better able to cope with them as they appear. Fears can be expected in any outdoor problem situation. Fear of the unknown and fear of your ability to cope with the situation will be foremost, along with a fear of being alone, darkness, suffering, or death. **Fear is usually based on lack of self-confidence and lack of adequate preparation and experience.** Knowledge and experience(practice sessions), will help to instill confidence and help to control fear.

## Container

The container you choose for your kit must be waterproof, have some type of carrying handle, and must be able to be carried easily by family

members. The following are good containers: backpack, beltpack, suitcase, polyethylene plastic bucket, duffel bag, trunk or footlocker, plastic garbage cans.

## Water

Advised amounts of water for a kit vary. The Utah County Sheriff's office recommends a minimum of two quarts per day for each adult. However, a person can survive quite well on less, and the load of carrying six quarts of water with a pack is great. Outdoor survival course veterans agree that a two-liter bottle should be adequate. Water purification tablets or crystals need to be a part of each kit. Refer to Emergency Water Supply for treatment methods and information on portable water filters.

## Food

You should include in your kit a three-day supply of non-perishable food. The food items should be compact and lightweight, in sealed packages. MRE's (Meals Ready to Eat) are a good choice because they require little or no preparation. Freeze-dried foods are lightweight but require extra water in your kit. Canned goods are heavy with extra refuse. Plan nutritionally balanced meals, keeping in mind that this is a **survival kit**. Include vitamins or other supplements, if desired.

### Possible foods for a kit might include:

- MRE's
- snack crackers
- hard candy
- dried fruits
- instant oatmeal
- powdered milk
- jerky
- bouillon cubes
- raisins/nuts
- instant rice/potatoes
- dried soups
- gum
- granola bars
- instant pudding
- powdered drink mixes

Also include a mess kit or other compact equipment for cooking and eating. A can opener may also be useful.

### Shelter

The objective of shelter is to provide emergency housing. It is extremely important to be physically protected from nature's weather elements. There are many types of shelter that can be easily included in your 72-hour kit. You may want to consider family tent, backpacker's tent, tube tent, rain poncho, garbage bags, nylon rope or cord, duct tape, space blanket and space sleeping bag.

### Bedding

- **Bedding** should be warm, lightweight, comfortable, waterproof and compact.
- **Sleeping bag** (2 1/2 pound hollow-fill)
- **Insulation.** Under your sleeping bag you will need some insulation to protect you from the cold ground. Though foam pads are generally thought of as an item of comfort, their true importance is in insulating you from the ground. The best types are "closed cell" foam pads about 3/8 of an inch in thickness. They are very light weight and easily attached to the backpack for carrying. You may also use a poncho, plastic ground cloth, newspapers, leaves, or pine boughs, for insulation but they are not nearly as effective as the closed cell foam pads.
- **Blankets** can be used to make a bed roll but generally they are not as comfortable nor as warm as a sleeping bag. Wool blankets are the best since they retain their warming ability even when wet. However, blankets are very heavy and bulky.
- **Space blanket or bag.** As explained in the previous section space blankets and space bags (aluminum coated mylar) are very efficient at retaining body heat and are a must for every 72-hour kit. Even when used by themselves, without the added benefit of a sleeping bag they will keep you warm during the night. In cold winter weather they may not be entirely comfortable but they will probably keep you warm enough to keep you alive. Being plastic, however, they are impervious to moisture. This is good for keeping out rain but they also retain sweat and condensation from your breath. you may find that periodically during the night

you will have to air them out in order to sleep comfortably. They can also be used during the day to protect from rain, sun and to retain body warmth.

### Clothing

Include in your kit one change of clothing and footwear, preferable work clothing. Anticipate severe weather conditions. If you have a growing family remember to update clothing sizes and needs at least once a year.

Try to avoid wearing cotton clothing. Tight cotton clothing holds water next to the skin. Wet inner clothing causes freezing. Cotton clothing "wicks" (draws water up the very small individual fibers), thus retaining water and spreading it over the entire body, causing loss of body heat at an ever greater rate.

Wool clothing is best. Wool is a natural thermostatic insulator that keeps you warm in the winter and cool in the summer. Wool is naturally durable and can withstand rugged and tough wear. Wool also repels water and has the unique property of keeping the body warm even if it does get wet. Wool dries from the inside out and does not "wick." Include two pairs of wool socks- one pair for wearing and one for keeping your feet warm while sleeping.

### Fuel

Every family member should have fire starting materials and know how to start a fire. Several of these items should be assembled into a kit and labeled as "fire starting kit." Teach all family members how to use them and let them practice building fires with all methods until they feel totally confident with their ability to do so. Even little children aged five or six can be safely instructed in correct fire building techniques under proper supervision. Then if an emergency arises, they will not panic or feel overwhelmed or frightened at the prospect of building a fire for their warmth and protection.

#### Some different sources are:

- **Matches.** Carry at least two dozen wooden kitchen matches that have been either dipped in wax or nail polish to make them waterproof or carry them in a waterproof container.

## 72 Hour Kit

- **Metal match.** Waterproof, fireproof, durable, and non-toxic. Will light thousands of fires. Available at sporting goods stores.
- **Butane lighters**, such as Bic cigarette lighters, are excellent ways to light a fire.
- **Magnesium fire starters** are good for starting fires with wet or damp wood. Shave magnesium shavings off of a magnesium block with a pocket knife and then strike a spark from a flint starter with a pocket knife. Magnesium burns exceptionally hot and will ignite almost any combustible material. Works even when wet and can be purchased at most sporting goods stores.
- **Small magnifying glass.** Use to concentrate sunlight onto paper, shredded bark or other tinder.
- **Flint and steel** A spark from flint and steel (such as an empty cigarette lighter or flint and steel striking bar), when directed at dry paper (especially toilet tissue), shredded bark, dry grass or other tinder, if persisted in patiently will work very well to start a fire. This is the most reliable "non-match" method of starting a fire.
- **Commercial fire starter kits.** These come in a variety of styles and fuels.
- **Steel wool.** Fine steel wool (used for scrubbing pots and pans- but not Brillo pads or other types that have soap already impregnated into them) can be used for tinder. Hold two "D" flashlight cells together in one hand (or one 9-volt transistor radio battery) while touching one end of a clump of steel wool to the positive end of the battery and the other end of the steel wool to the negative end of the battery. The current causes the steel wool fibers to incandesce and then produce a flame. It burns very hot and fairly fast so have lots of other tinder to burn once the steel wool ignites.
- **Candles** can be used for warmth, light, and starting fires. To start a fire simply cut a piece of candle about 1/2 inch in length and place it on top of the tinder. When lit the wax will run over the tinder making it act as a wick and ignite. You can also place small twigs and other easily burnable materials directly into the flame to build a fire.
- **Car Battery.** If you are near your car you can easily put sparks into tinder by attaching any wires to the battery posts and scraping the ends together in the tinder.
- **Sterno fuel** and stoves make an excellent cooking fuel when backpacking or in emergencies. Sterno can be lit with a match or by a spark from flint and steel. Slivers of gelled sterno can be cut from the can and placed on top of tinder and lit with flint and steel or with a match. It burns hot enough to ignite even damp tinder.
- **Cotton balls** and gauze from the first aid kit make excellent tinder and can be ignited with sparks or with matches.
- **Fuel tablets** such as tri-oxane and gelled fuels store well and ignite quickly and easily. Some can be fairly expensive, however.
- **Butane and propane stoves.** These are made especially for backpackers. The fuel is cheaper than sterno, it burns hotter and it heats better in windy situations than other fuels. Propane, however is more difficult to light as outside temperatures near zero.

## First Aid Kit

Update your first aid skills. Keep your first aid kit well supplied.

### Suggested first-aid supplies for 72-hour kit:

- first aid book
- waterproof container
- assortment of band-aids
- gauze pads
- butterfly bandages
- cotton balls
- small roll of gauze
- adhesive tape
- cotton swabs (Q-Tips)
- safety pins
- Pepto-bismol tablets
- antacid tablets (good for bee sting)
- cold pack
- consecrated oil
- hydrogen peroxide
- alcohol (disinfectants)
- smelling salts
- medicine dropper tweezers
- alcohol wipes
- Benadryl capsules
- aspirin (promotes healing of burns)
- Tylenol (chewable for children)
- collapsible scissors
- thermometer
- crushable heat pack
- special prescriptions or equipment
- small tube or packets antiseptic cream

- ointment
- small spool thread/two needles

### Miscellaneous

**Some other miscellaneous items that may be very helpful are:**

- light stick
- small flashlight
- extra batteries
- pocket handwarmer
- compact fishing kit
- compass
- pocketknife
- 50 ft. nylon cord
- plastic poncho
- garbage bag
- paper or cards
- pen, pencil
- fine wire
- extra plastic bags
- small scriptures
- favorite songs
- small game, toy, etc.
- spare glasses
- money (small bills and change)
- field glasses
- toothbrush/toothpaste
- metal mirror
- comb
- razor
- pre-moistened wipes
- toilet paper
- feminine products
- sunscreen
- soap
- lip balm with sunscreen
- bandana (may be used for hat, washcloth, mask, sling, tourniquet)
- tube soap, bar soap, waterless soap
- identification/medical permission card
- special blanket or such for little people
- portable radio with extra batteries

### Family Information Record

In addition to emergency survival supplies you should also collect vital family information. Record and keep it in at least two safe places—a fire resistant "get-away" box that you can take with you if you have to leave the home, and a safe-deposit box at your bank or credit union.

The following items would be useful for you to record and keep in these two locations:

- **Genealogy records**
- **Full name and social security numbers** of all family members
- **Listing of vehicles**, boats etc. with identification and license numbers
- **Listing of all charge account card numbers** and expiration dates, bank account numbers (both checking and saving), insurance policy numbers, securities, deeds, and loan numbers showing the company name, address and telephone numbers.
- **Name, address, and telephone number** for each of the following:
  - employer
  - schools
  - fire/paramedics
  - family contacts
  - utility company
  - police
  - doctor
  - hospital
  - attorney
  - civil defense
- Location of important documents
  - insurance policies
  - deeds
  - securities
  - licenses
  - loans
  - will
  - safe-deposit box key
  - vehicle titles (pink slips)
  - birth/death certificates
  - social security I.D. cards
  - citizenship papers
  - letter of instruction
  - tax returns (last 5 years)

### Infants

## 72 Hour Kit

When assembling items for your 72-hour kit be sure to include all necessary items for infants. It would be a good idea to include a separate back pack or other container that holds nothing but infant supplies (which can be surprisingly voluminous). This kit should be kept with the kits of other family members so that it will not be forgotten in a moment of haste. As the baby begins to grow, replace clothing and diapers with the next larger size.

### **Car Mini-Survival Kit**

Your car is frequently your home away from home. Most of us spend many hours in our cars each month. Anything from a jammed-up freeway to a major disaster could force you to rely on your car for short-term shelter and survival. It is a wise practice to keep simple provision for emergencies in your car.

A self-made cold-weather car kit, as described in some preparedness stores, is also good to keep in the car.

### **At-Work Survival Kit**

Many persons stand a 40 percent chance of being at work when an earthquake or other emergency strikes. A mini-survival kit kept at your place of work could make the hours until you are able to get home more comfortable and safer. This kit could be a duplicate of the car mini-survival kit.

## Food Storage

The home production and storage program is an integral part of the Church welfare services but is undertaken individually, according to the needs of each member or family. It's application, therefore, differs in relation to circumstances, but the responsibility of preparedness remains solely upon the individual family. The vast majority of commodities in the Bishop's Storehouse system of the Church must be found, as the Brethren have counseled, within the home and basements of individual families. Refer to Church publication "Essentials of Home Production and Storage" (PGWE 1125) for guidance in planning your home storage.

The following basic items are recommended for storage. Indicated is the approximate amount of each needed to sustain an average adult for one year:

Grains (wheat, rice or cereals)	300	lbs.
Powdered milk (nonfat)	75	lbs.
Sugar or honey	60	lbs.
Beans & legumes	60	lbs.
Cooking oil or shortening	20	lbs.
Salt	5	lbs.

To these basic foods, others may be added according to availability, cost, and individual taste. Those frequently chosen are the dried legumes (peas, beans, peanuts, lentils which are high in protein and store well)-dried fruits and vegetables, and canned meats and fish. Dehydrated and freeze-dried foods may be included, however, foods preserved in this way are more expensive but they store well and better retain their vitamin content. It would also be a good idea to store (and use through rotation) a good multiple vitamin and mineral supplement.

People in highly mobile situations or those who have small homes with little storage area may find it more difficult to store a year's supply of food, clothing or fuel. However it is better to have food storage sufficient for a few months than to have no storage at all.

As has been indicated, the food storage program is to be adapted on an individual basis.

The Church neither sponsors nor endorses any commercial products or firms.

Successful food storage is dependent on several factors. Obtain the top grade food whenever possible, and store it away from other products that may affect the flavor of the food. Usually metal storage cans or heavy plastic containers with air-tight lids are best. Foods store best at from 40-60° F. Shelf life diminishes in proportion to the higher temperature. Date food items as you purchase or can them, using older items first. Use storage areas that are well ventilated, clean dark, dry and cool. Do not place food storage containers on or against cement or dirt floors and walls. Allow for ventilation between and under storage containers. Do not go into debt to acquire food storage. Building a year's supply should be done in an orderly and systematic manner, consistent with a family's income.

Store sufficient clothing and/or fabric for your family's needs for a year. If possible a year's supply of fuel should be stored (refer to section on Heating, Cooking, and & Lighting).

First-aid articles, prescribed medicines, soaps and cleaning agents, matches, bedding and other such necessary items should be included.

Dry pack canning is one of several excellent methods for storing foods with low moisture content. Grains, dry beans, non-fat dry milk and dried vegetables are examples. Dry pack canning is not recommended for products that contain oil or egg or are moist enough to support the growth of mold and/or other undesirable organisms. The following should **NOT** be dry pack canned: brown rice, cooking oil, roasted nuts, honey, baked goods, flour mixes containing leavening, dried meats, egg noodles, peanut butter, coconut. Dry pack canning may be done at the Granger Cannery, as well as some wet pack items.

### Wheat and Other Grains

Buy dark hard winter or dark hard spring wheat. (Investigate new breeds). Buy #2 grade or better. Protein content should be from 12-15 percent. Moisture content should be 10% or less. The wheat should be clean and free from living insects and foreign matter.

After purchase, the wheat should be placed in a sturdy, moisture proof container; a 5 gallon airtight metal container with a tight fitting

## Food Storage

double-friction lid (seal is the same as a paint can) is a good container. Sturdy poly-ethylene plastic buckets with tight fitting lids are also acceptable for wheat storage. Don't store wheat directly on concrete floors. Keep cool and dry and away from steam, water pipes, un-vented clothes dryer, wet clothes, etc.

Wheat should be treated at time of storage to guard against hatching of insect eggs. If the wheat is stored in an airtight container, it may be treated with dry ice. Drop a piece (Not pulverized) of dry ice (one-fourth pound per 5-gallon container) in the container and pour the wheat on top of it. Place the lid on, but not tightly, for five to six hours; then tighten the lid to be airtight.

Other grains to consider storing are rye, triticale, corn, popcorn, barley, millet, rice, and oats. Pasta products can be counted in your grain quota.

Uncooked milled rice (white, par-boiled, and precooked) keeps indefinitely without refrigeration. Because of the oil in it's bran layers, brown rice has a shelf life of only about six months. Refrigerator or freezer storage is recommended. Cooked rice may be stored in the refrigerator for up to one week or in the freezer for six months.

Flour should never be stored by apples, onions, potatoes, etc. as it will absorb moisture from them causing it to spoil more quickly and it will also take up their flavors.

### Non-Fat Dry Milk/Dairy Products

Powdered milk may be purchased in both instant and regular forms. There is no nutritional difference between the two forms, and the storage life is equivalent.

Buy "extra" grade "low heat" powder. It should have been dried using a "low heat spray process". It should ideally also have been fortified with vitamins A and D.

Dry milk should be stored in a tightly covered container and stored in a cool, dry, and dark location up off the floor. Dry milk must be rotated, even if you package and store it correctly. Dry milk will store well at 40° F. for 36-60 months and at 70° F. for 12-24 months. Dry milk will store longer when packed in vacuum or nitrogen.

Other dairy products which may be stored include: canned evaporated milk, canned baby

formula, powdered baby formula, cream substitutes, cheese spreads, brick cheese, powdered cheese, margarine, butter, powdered butter, dried eggs.

### Sugar or Honey

Sugars are high in calories and low in nutrients and are one of the most maligned of all foods. There is no scientific evidence that sugar is responsible for all the problems attributed to it. The main health hazards from eating too much sugar are a possible increase in dental caries and obesity. White sugar, brown sugar, powdered sugar, corn syrup and honey may be stored.

Honey kept for many months may darken slowly and become stronger in flavor but will still be usable. Honey and corn syrup may crystallize as they get older, but may be melted over hot water for use. The Honey Association recommends that **infants under one year old should not be given honey** because it is a raw product and may contain naturally occurring bacteria their systems cannot handle.

You may also wish to store jams and preserves, flavored gelatin and pudding mixes, powdered drink mixes, sweet toppings and syrups, candy, and soft drinks.

### Salt

Iodized salt is best as it will help in proper functioning of the thyroid gland. Pickling salt may also be stored for bottling pickles and rock salt for making ice cream. Store salt in its original container in a dry cool, dark location and it will keep indefinitely.

### Fats and Oils

Twenty pounds of fats or oils per person should be stored for one year (1 gallon equals 7 pounds). Soybeans, flax, safflower, sunflower, and castor beans are examples of crops which are grown primarily for their oil. Most cooking oils and shortenings will store for two to three years if kept in a cool dark, dry location. Olive oil and corn oil are also very good storage oils and have a better flavor than soybean and safflower oils. Fats and oils may be stored in the following forms: cooking oil (vegetable oil), shortening, butter (fresh and dried), margarine



or margarine powder, mayonnaise, salad oils and dressings including dried mixes.

### **Dried Beans and Legumes**

Beans, peas, lentils, etc. provide an economical substitute for meat or other animal protein. The packaged beans, which are on the grocery shelf, are normally the highest grades. Dry beans are an easily stored food. They should be kept in a tightly covered, metal, glass, or plastic container in a dark, dry and cool location. The quality should be good for many years when stored under these conditions. Older beans will require longer soaking and cooking periods than freshly harvested beans.

Varieties of beans that may be stored are navy, pinto, kidney, black, lima, garbanzo, black-eyed peas, split peas, lentils and soybeans.

Textured vegetable protein (TVP) is a vegetable protein made from soybeans, but its texture is similar to that of meat. When used with meat, good quality TVP absorbs the flavor and is difficult to distinguish from the meat. It can be bought as unflavored or flavored (beef, ham, bacon, or chicken). Shelf-life is two to three years. As it ages, it becomes stale.

### **Vitamin and Mineral Supplements**

It is recommended that 365 vitamin or vitamin/mineral tablets or capsules be stored for each family member to help compensate for possible deficiencies in the diet due to a lack of variety of foods, and because of vitamins lost during food processing, storage, and preparation. Shelf-life is about three to five years if stored in a cool, dry and dark location.

Despite careful food planning, women may still need an iron and calcium supplement, particularly if they are pregnant or nursing. Storage of iron and calcium should be carefully considered.

### **Suggestions on Storage of Canned Foods**

(Issued by The General Church Welfare Committee) Since pioneer days, our people have been counseled by their leaders to have a reserve of essential foodstuffs. In many cases, this reserve will be produced by the householder and preserved by him.

When these foods are processed in metal cans coated with tin or enamel linings, the question frequently arises as to the length of time the foods can be safely stored for human consumption. Canned foods that have been in storage for a long period of time in cans that are not bulged or leaking are safe to eat as the first day packed. However, they may have lost some of their flavor due to a chemical reaction in the can. This reaction is not poisonous, but does alter the flavor, texture, and nutritive value. The rate at which chemical reactions occurs doubles with each 18 degrees Fahrenheit rise in temperature. Fifty degrees Fahrenheit storage will hold four times longer than an 80 degree Fahrenheit temperature.

Due to the various temperatures where canned food may be stored, it is difficult to determine the definite period of time at which all canned foods will hold. We will group some of them. The short shelf life products are highly acid and pigmented foods such as grapefruit and orange juice, black and red cherries, all colored berries, prunes and plums. These canned foods generally have an average storage life of one to two years. Other fruits such as peaches, pears, apricots, and applesauce should average from two to three years. Vegetables such as beets, carrots, green beans, spinach, greens, tomatoes and tomato juice should have an average storage life from three to four years. Vegetables and meats such as peas, corn, lima beans and roast beef should have an average from four to five years. Canned milk should be agitated every thirty days. This prevents the fats from separating, and the product should be consumed within a year.

Canned goods should be stored in a cool, dry place; the cooler and dryer the canned goods are kept, the longer they will last. Place the oldest canned goods on the shelves so that they will be used first. Fruits, vegetables, and meats properly processed in glass jars and stored in the home will keep in a cool, dark, dry place fully as long as canned goods. Some fruits, such

## Food Storage

as the highly pigmented, will keep longer in a glass container.

The utmost care should be taken to see that foodstuffs produced and preserved by the householder do not spoil for that would be waste, and the Lord looks with disfavor upon waste. He has blessed His people with abundant crops. The Lord is doing His part, He expects us to do ours.

## Emergency Water Supply

Health department and public water safety officials use many safeguards to protect the sanitary quality of your daily drinking water. However, this protection may break down during emergencies caused by natural disasters.

During times of serious emergency, the normal water supply to your home may be cut off or become so polluted that it is undrinkable. **A supply of stored water could be your most precious survival item!**

You and your family may then be on your own to provide a safe and adequate water supply. Remember that typhoid fever, Dysentery, and infectious hepatitis are diseases often associated with unsafe water.

Don't take a chance! Generally, under serious disaster conditions, ***no water can be presumed safe--all drinking and cooking water should be purified.***

### Required Amounts of Drinking Water Per Person

A minimum of two quarts and up to one gallon of water is needed per day, depending on the size of the person, the amount of exertion, weather, and perspiration loss. A minimum of seven gallons pure water per person would be needed for a two-week survival supply. With careful rationing, this amount would be sufficient for drinking, food preparation, brushing teeth, etc. Fourteen gallons per person will allow for hygiene care.

Keep an emergency supply of drinking water in plastic containers. Commercially bottled drinking water is available. It stays pure for months and has the expiration date clearly marked on it.

There are several other sources of water if your water supply is turned off--water drained from the hot water tank (usually contains 30 to 60 gallons of usable water), clear water from the toilet flush-tank, if kept constantly clean ( not the bowl !), melted ice cubes, canned fruits and vegetable juices, and liquid from other canned goods.

### How to Purify Water for Drinking

1. If water is cloudy, smelly, or otherwise polluted, strain it through a paper towel or several layers of clean cloth into a container in order to remove any sediment or floating matter.
2. Water that is boiled vigorously for five full minutes will usually be safe from harmful bacterial contamination.
3. If boiling is not possible, strain the water as above and treat by adding ordinary liquid chlorine household bleach or tincture of iodine. Since liquid chlorine bleach loses strength over time, fresh bleach should be used as a water disinfectant. If the bleach is a year old the amount should be doubled. Two-year-old bleach should not be used as a water disinfectant.
4. Other chemical treatments for water purification also include halzone tablets, iodine tablets or crystals.

Number of drops to be added per quart of water:			
	<u>Chlorine</u>	<u>Clean</u>	<u>Cloudy</u>
Common household laundry bleach		2	4
<u>Tincture of Iodine</u>		3	6
From medicine chest or first aid kit (2% chlorine) (Rotate your iodine each year to ensure that it will work when you need it)			

Mix thoroughly by stirring or shaking the water in its container. Let it stand for 30 Minutes.

A slight chlorine odor should be detectable in the water; if not, repeat the dosage and let the water stand for an additional 15 minutes before using.

Use an eye dropper to add the chlorine or the iodine to the water. Use it only for this purpose.

### How to Prepare and Store Bottles of Purified Water

Keep the drinking water safe from contamination by carefully storing in clean non-corrosive, tightly-covered containers.

Use one-gallon containers, preferably made of heavy opaque plastic with screw-on caps. Plastic milk bottles are not recommended. Sterilize the bottles.

## Emergency Water Supply

1. Wash bottles with soapy water, then rinse thoroughly.
2. Run about three quarts tap water into one of the containers, then add 3/4 cup bleach to the water.
3. Shake well, turning upside down a time or two so that the stopper will be sterilized also.
4. Let the mixture stand for two to three minutes, then pour it into the next container. You can use the same chlorinated water for several containers.
5. Fill the empty bottle with pure or purified water and seal it tightly close with cap or stopper.
6. Label with "Drinking Water--Purified", and the date of preparation.
7. Water purification tablets may also be used and are available in drug stores and sporting goods stores. They are recommended for your first aid kit. Four tablets will purify one quart of water.
8. Some stored water may develop a disagreeable appearance, taste, or odor. These properties are not necessarily harmful. Inspect your water supply every few months to see whether the containers have leaked or other undesirable conditions have developed. Replace the water if it becomes contaminated.

## Portable Water Purification Equipment

A high quality filter system should possess the following characteristics: light-weight; have fewer parts (less to go wrong); a fine pre-filter; a replaceable or clearable filter; tight, well-made pump; high volume output; quick filtration; should screen out organisms over 0.5 microns (0.2 microns is best).

A system with all of these features may not be inexpensive, however. The cost will usually reflect reliability as well as technology of design.

Always use a filter properly. Use clearest water available, allowing suspended matter to settle out. Use pre-filter if your system has one. Do not let outlet end of filter come in contact with contaminated water. Be sure vessel you're pumping into is clean.

**Sanitize all bottles!**

**¼ Cup Clorox to 1 Quart Water**

# First Aid

The Brethren state That "All members of the Church should be trained in basic first-aid skills." (Preparing and Responding to Emergencies: Guidelines for Church Leaders)

You are likely to encounter an emergency needing first aid attention several times during your life. Families with young children are constantly being subjected to situations in which injury may occur and your quick calm thinking and application of first aid principles may make the difference between life and death.

Automobile accidents account for slightly more than one-half of all accidental deaths occurring each year. Your knowledge of first aid could not only save a member of your immediate family but could also save the life of a total stranger.

This chapter is not intended to teach you all you need to about first aid. Such knowledge can only be obtained by attending first aid training courses sponsored by the American Red Cross or other training organizations and/or by extensively reading and studying books on first aid. The purpose of this chapter is to acquaint you with the most basic and elementary first aid procedures that may be needed to save a life in an emergency and to suggest items to include in a family first aid kit.

## Emergency Care

Depending on the type of emergency, you will have to make a quick decision of what to do first and what not to do.

1. Keep the victim lying down his head level with body until you have made some assessment of the problem.
  - If the victim is in severe shock place on back with legs slightly elevated.
  - If victim is vomiting or bleeding from the mouth and is semi-conscious there is danger of victim aspirating this material, place him on his side.
  - Shortness of breath-- if victim has a chest injury, place him in a sitting or semi-sitting position, or position of comfort.

2. Examine the victim for hemorrhage (serious bleeding), asphyxiation (suspended breathing), and shock-- all of which require immediate treatment. The primary survey covers these four areas:
  - Open airway.
  - Check breathing.
  - Check circulation.
  - Stop hemorrhage or severe bleeding.
3. Do not move the victim more than is absolutely necessary. Remove clothing only enough to determine the extent of injuries. It is preferable to rip or cut clothing to remove it ( removing in conventional manner may compound the injuries if they are severe).
4. Keep the victim reassured and as comfortable as possible.
5. If the victim's injury is extensive, it is best not to let them see it.
6. Do not touch open wounds.
7. Do not give unconscious persons any solids or liquids by mouth.
8. Do not move the victim unless necessary to prevent further harm or injury. If you must move the victim do it keeping the lengthwise axis of the body straight.

Keep the victim warm, but not overly hot. Remember, by far the greater number of injuries will require a minimum of effort on your part and a maximum of judgment and self-control to prevent doing too much.

In emergency situations rapid, calm, efficient efforts can minimize problems; and even in prolonged emergency situations, sticking with standard first aid care may be better than risking life-threatening procedures.

## Immediate Lifesaving Measures

Most injuries can be dealt with calmly and without hurry. However, in serious life threatening injuries first steps must be taken immediately to preserve life. **First**, open the victim's airway and restore his breathing and heartbeat if necessary (See Cardiopulmonary Resuscitation -- CPR Below). **Second**, Stop any bleeding (See Bleeding below) and dress and bandage wounds to prevent infection. **Third**, treat the victim for poisoning, and **Fourth**, treat him for shock.

# First Aid

## Respiratory Emergencies

### Causes:

Blocked air passages  
insufficient oxygen in the air  
inability of the blood to carry oxygen  
paralysis of the breathing center in the brain

A Person who has stopped breathing is not necessarily dead, but is in critical danger. Life is dependent upon oxygen which is breathed into the lungs and then carried by blood to every body cell. Since body cells cannot store oxygen, and since the blood can hold only a limited amount, death will surely result from continued lack of breathing (oxygen must be provided in three to six minutes or damage to the brain cells or death will result).

The heart may continue to beat for a time after breathing has stopped and the blood may still be circulated to the body cells. Thus, for a few minutes there is a chance to save a life, by the means of **artificial respiration**. Mouth-to-mouth resuscitation is the approved method for this.

## Mouth - To - Mouth Resuscitation

People may stop breathing because of electrical shock, drowning, suffocation, poisoning, physical blow to the head, chest or abdomen, or any number of other causes. If you suspect an individual is not breathing act immediately because time is life.

Waste no time, check to see if the victim is breathing. If he appears to be unconscious tap him firmly on the shoulder and ask in a loud voice, "Are you all right ?" If you get no response then immediately do the following:

1. Tilt the head back so that the chin is pointing upward ( this is the most important



- action you can take to enable a person to breathe again, and may alone help the victim to start breathing).
2. Pinch nose closed.
3. Take a big breath and blow into the mouth, providing one breath every five seconds for

adults, every three seconds for small children.

4. Watch for the chest to expand, and listen for air to come out.
5. Repeat until the victim begins to breathe on his own. The victim's chest should rise with each breath. If the air goes to his stomach ( as seen by the stomach rising instead of the chest ) turn the victim onto his side and press on his abdomen to push the air out. Turning the victim to the side should prevent the inhalation of any regurgitated matter into the lungs. If the victim regurgitates, quickly clean the matter out of the victim's mouth with your finger and continue giving him artificial respiration. A drowning victim will almost always vomit as air replaces water in the lungs.

If the victim is a baby or young child, place your mouth over the nose and mouth rather than pinching the nostrils. Use puffs of air on and infant or young child rather than large breaths because their lung capacity is not as great as yours.

Artificial respiration may be given mouth-to-nose if the victim's mouth is severely injured. Also, if artificial respiration is necessary for a person with a stoma (an opening in the neck to facilitate breathing) just blow into the stoma. If the stoma is open to the mouth and nose, as some are, it may be necessary to close off the nose and mouth with a free hand while using the stoma for respiration. Do not stop giving artificial respiration until the victim can breathe for himself or until he is pronounced dead by a physician.

Check the victim's carotid pulse to see if his heart is beating by placing your index and middle fingers at the side of the Adam's apple (larynx) between the muscles of the neck and the trachea. If no pulse is detectable, begin CPR immediately. If pulse is present, continue artificial respiration but check the carotid pulse periodically to insure that his heart continues to beat.

If you have never received training in proper administration of mouth-to-mouth resuscitation you should consider enrolling in a class taught by the American Red Cross or other qualified institution.

## First Aid

### CPR - Cardiopulmonary Resuscitation

CPR is a combination of artificial respiration and artificial circulation by means of external cardiac compression. CPR is almost always used in conjunction with mouth-to-mouth resuscitation.

When the victim has no pulse ( check the pulse as described above), artificial circulation must also be provided by the rescuer without delay. The victim must be on a hard surface, and his legs may be elevated eight to ten inches **if this can be done without injuring him further or delaying the administration of CPR.**

If you are alone, kneel by the victim's side and place the heel of your hand on the center of the chest one and one-half to two inches above the notch of the victim's sternum. Place your other hand on top of the first hand and, with arms straight and your shoulders directly above your hands, begin compressing the victim's chest one and one-half to two inches at the rate of about eighty times per minute. Keep your elbows straight and your fingers off the victim's chest; press only with the heel of your hand. Every fifteen compression's, stop and give two quick breaths (mouth-to-mouth) to provide artificial respiration, then resume compressions.

CPR should not be interrupted for longer than five seconds. CPR is not easy, and it would be difficult to perform properly after only reading about it. Instructions here are only meant to renew what has already been learned.

CPR should be learned under competent supervision with hands-on experience gained in the learning. **Take a class on CPR!!** The life of a loved one may depend on it.

### Bleeding

Extensive bleeding can cause death if not stopped promptly. External bleeding can be stopped by direct pressure when applied at an appropriate location on the supplying artery, or as a drastic last effort to save a life, by use of a tourniquet.

**Direct pressure** is the first step in controlling bleeding, and is applied by pressing a sanitary dressing directly to the wound. If there is no dressing available, use the bare hand. If blood soaks through a dressing *do not remove it*; add

another dressing on top and continue the pressure.

If bleeding persists, continue direct pressure and *elevate* the extremity above the heart. Gravity helps reduce blood pressure and thus slows bleeding to allow clotting.

**Pressure Points** to the artery supplying blood to the wounded area may be used in addition to the direct pressure if the direct pressure and elevations does not stop the bleeding. While continuing the direct pressure and elevation as described above, choose the pressure point



between the heart and the wound that lies closest to the wound. There is a particular need to know the brachial and femoral artery pressure points because of the frequency of injury to arms and legs. The purpose of using a pressure point is to press the artery between the fingers of the first aider and the victim's bone, thus slowing the flow of blood to the injured area. When the pressure point is being effectively applied the first aider can almost always feel the pulse.

**Nose Bleeds** can usually be treated effectively by having the victim sit upright in a comfortable position and then squeezing the nostrils together. The pressure should be applied equally to both sides of the nose and should be hard enough to stop bleeding out of the nostrils or down the back of the throat. Continue the pressure for ten to fifteen minutes.

**A tourniquet** should be used only in extreme cases when direct pressure and pressure on the appropriate pressure point have failed to stop

## First Aid

the bleeding and the victim's life is in danger, or in the case of traumatic amputation. The use of a tourniquet will very likely result in the loss of the limb to which it is applied. Once a tourniquet has been applied it should not be removed or loosened until done by a physician.

If you do not have a specially designed tourniquet you can make one with any soft, strong, pliable material such as cloth or gauze. *The band of material should be about two inches wide or wide enough so that it will remain at least one inch wide after it tightened.* A stick or other rigid material is needed to tighten the tourniquet. Place the band around the limb slightly above the wound (two to four inches). Tie a knot in the band, leaving it loose enough to put a stick into it. Insert the stick under the band and twist until just sufficient pressure to stop the bleeding is applied. Secure the end of the stick to the victim so that it will not come loose. Record the time the tourniquet was applied and seek medical assistance immediately. **Again, never use a tourniquet unless life is threatened !** Always treat a victim of severe bleeding for shock.

1. Apply direct pressure on the wound.
2. Elevate the wounded area if an arm or leg is bleeding.
3. Apply pressure on the supplying artery of the arm or leg if steps 1 and 2 do not stop the bleeding.
4. Only as a last resort of life saving measure apply a tourniquet to stop bleeding. Once applied, a tourniquet must not be loosened except by a physician.

## Shock

In any first aid emergency **treat for shock!** Shock may be immediate or delayed and is a life threatening illness that can be caused by almost any traumatic injury.

Injuries involving large fluid loss such as bleeding and burns are especially prone to cause shock. Shock is a depression of the action of the nervous system and its control over body functions such as circulation and respiration and is characterized by weakness, rapid and weak pulse, paleness, and cool perspiration on the victim. The pupils of the eyes may be dilated and at the extreme the victim may also become incoherent.

Reassure and comfort the victim and have him/her lie down. Treat the causes of the shock

(burn, fractures, bleeding, etc.). Maintain normal body temperature. Most shock victims begin to lose body temperature so they will need to be covered with a blanket or other warming material. However, occasionally a shock victim's body temperature may rise, in which case you will need to lower it.

If no head injuries are present elevate the victim's legs. Call for emergency help.

Mild fluids may be given if medical assistance is not readily available, as may be the case in an extended emergency. A saline solution made by mixing one teaspoon of salt and one-half teaspoon of baking soda in a quart of lukewarm water may be used, having the victim drink one half glass every 15 minutes. If Abdominal injuries are present, do not give fluids. If there is any question of the victim losing consciousness, do not give fluid because the victim may regurgitate and aspirate the vomitus. The symptoms of shock are:

- Pale, cold, clammy skin.
- Weak, rapid pulse.
- Shallow breathing.
- General body weakness.

Always treat a victim for shock by:

- Laying the victim down and elevating feet slightly higher than the head.
- Wrapping with a blanket to avoid chilling, or cooling if the victim develops a fever.
- Raising the head and shoulders if the victim has difficulty in breathing.
- If medical help will not be available within 30 minutes, give a lukewarm solution of salt and baking soda every 15 minutes.

Never give fluids if victim is nauseated, unconscious, has a penetrating abdominal wound, or requires surgery.

## Poisoning

No one wants to see someone poisoned, but it still happens over a million times a year. As a result, you should be very concerned about possible poisoning in your home, especially accidental poisoning of small children.



## First Aid

Suspect a poisoning when somebody suddenly becomes sick, unconscious, or behaves in an unusual manner and there is no explanation for the illness or abnormal behavior.

If you take enough of anything it can be poisonous. The most critical period of time is the first hour or two after the poisoning occurs - **-do not delay seeking advice.-**

### Do These Things Before You Call Someone

Remove poisons from contact with eyes, skin, or mouth.

**EYES:** Gently wash eyes with plenty of water for 10 to 15 minutes with the eyelids held open. Remove contact lenses and again wash the eyes. Do not allow victim to rub the eyes.

**SKIN:** Wash poisons off the skin with large amounts of plain water. Then wash the skin with a detergent if possible. Remove and discard all contaminated clothing.

**Mouth:** Look into victim's mouth and remove all tablets, powder, plants, or any other material that you find. Also examine for cuts, burns, or any unusual coloring. Wipe the mouth out with a cloth and wash thoroughly with water.

Remove victim from contact with poisonous fumes or gases, **if safe for rescuer.**

Get the victim into fresh air. Loosen all tight-fitting clothing. If the victim is not breathing, you should start artificial respiration immediately. Do not stop until the victim is either breathing well or help arrives. Use oxygen if available. Send someone else to call for help.

If a caustic poison has been swallowed, you should dilute it by giving one or two glassfuls of milk (or water if milk is not available).

**For information about what to do next, call: 911 or the Poison Control Center 1-800-456-7707**

- Identify yourself and your relationship to the victim.
- Describe the victim by name, age, and sex.
- Have the package or poison in your hand and identify exactly (as best you can) what the victim took and how much he took.

Call for information even if you are not sure. Keep calm. You have enough time to act, but don't delay unnecessarily.

### How To Induce Vomiting

Have syrup of Ipecac available in your first aid kit to induce vomiting. Ipecac is a plant extract that when swallowed irritates the stomach and causes vomiting. It is not harmful if taken as directed, except of course that it will make you vomit. However, there are certain types of poisonings where it should not be used, so call your doctor or the poison center before you use it. Ipecac may be purchased at any pharmacy.

Your pharmacist can give you one ounce (30 cc), of syrup of Ipecac without a prescription. All you have to do is request it. It will keep for several years stored at room temperature.

If you are instructed to use Ipecac: Give the victim one tablespoon of Ipecac syrup followed by a glass (8 oz.) of liquid, (water, juices, etc.). Then give additional liquid as tolerated. If the patient hasn't vomited within 15 or 20 minutes, give another tablespoon of Ipecac and more water.

**Don't waste time trying other ways to make the victim vomit.** Tickling the back of the throat with your fingers, a spoon or some other object is not very effective. **Do not use salt water. It is potentially dangerous.**

**Never induce vomiting if the patient is unconscious, is having convulsions (fits), or has swallowed strong caustics or corrosives.**

**Induce vomiting only** if you are instructed to do so by your doctor or the poison center. **Never induce vomiting until you are instructed to do so.**

**If you go to the hospital,** take or send the poison container, poisonous plant, etc. with you; take any vomitus you collect; don't give substances like stimulants or drugs to the victim.

The poison Control Center is open 24 hours a day.

### Burns

1) Degrees of burns:

- 1st degree -- Skin is red and tender. (As in a sunburn)
- 2nd degree -- Blisters develop, Never break or open blisters.
- 3rd degree -- Deep tissue damage.

2) First Aid for 1st and 2nd degree burns -- exclude air by:

## First Aid

- Submerging in cold water (the best thing to do.)
  - Applying a cold pack not ice.
  - Covering with a thick dressing or plastic. Do not use plastic on the face. After using cold water or cold pack, cover the burn area with a thick dry sterile dressing and bandage firmly to exclude air.
- 3) First Aid for 3rd degree burns:
- Apply a thick dry sterile dressing and bandage to keep out air.
  - If large area, wrap with clean sheet or towel.
  - Keep burned hands and feet elevated and get medical help immediately.
  - Treat the same as shock victim, giving fluids as indicated and warmth if necessary.
- 4) First Aid for Chemical burns:
- Wash chemical away with water.
  - Acid or alkali burns of the eyes: wash eye thoroughly in plain water for 10 to 15 minutes. If the victim is lying down, turn head to side. Hold the lid open and pour from inner corner outward.
  - Have the victim close the eye, place eye pad over lid, bandage and get medical help as soon as possible.

### Broken Bones

- 1) Signs of a closed fracture:
- Swelling
  - Tenderness to touch
  - Deformity
  - Discoloration
- 2) Treatment for closed fractures:
- Keep broken bone ends from moving.
  - Keep adjacent joints from moving.
  - Treat for shock.
  - See section #4 below on splinting.
- 3) Treatment for open fractures:
- Do not move protruding bone ends

- If bleeding, control bleeding by direct pressure on wound.
  - Treat same as closed fracture after bleeding is controlled.
- 4) Splinting:
- Place one hand above and one hand below fracture to support it.
  - Have someone grasp end of limb and pull steadily until bone is set and splints are in place.
  - Secure the splints to the limb.
  - Treat for shock

### Sprains

Injury to soft tissue around a joint.

1. Always immobilize.
2. Elevate joint.
3. Apply cold during first half hour.
4. Treat the same as a closed fracture.

### Head Injuries

- 1) Symptoms of head injuries:
- May or may not be conscious.
  - Any changes in level of consciousness.
  - Bleeding from mouth, nose, or ears.
  - Paralysis of one or more extremities.
  - Difference in size of pupils of the eyes.
- 2) First aid for head injuries:
- No stimulant or fluids.
  - Do not raise feet, keep victim flat.
  - Observe carefully for stopped breathing or blocked airway.
  - Get medical help immediately.
  - When transported, gently, lying flat.
  - Position head to side so secretions may drool from corner of mouth.
  - Loosen clothing at neck.

## Internal Bleeding

Treat for shock and seek medical help. There is nothing else that you can do. If internal bleeding does not stop on its own, it must be surgically terminated.

## Epilepsy

1. Allow the victim to have the seizure.
2. Remove objects that may injure the victim during the attack.
3. Be aware of the possibility of breathing emergency.
4. Place victim on side after seizure has stopped.

## Electric Shock

1. Do not touch the victim if he is still in contact with the electricity
2. Turn off the power source or remove wires from the victim.
3. After the rescue, check immediately for stopped breathing; if stopped, administer artificial resuscitation.
4. Treat for shock.

## Psychological First Aid

Catastrophic difficulties frequently bring about severe emotional reactions in the parties involved. These are often unpredictable but are normally only temporary.

If the person is not violent, the first thing to do is to treat physical injuries. If person becomes violent, call for professional help, **911**. Stay calm. Comfort the person; do not criticize him but on the other hand do not be overly solicitous. Avoid expressions such as "snap out of it", or "get hold of yourself." Avoid joking.

Accept the person's feelings and try to reassure him. Make things as comfortable as possible. Involve the victim in meaningful but not overly taxing activity as soon as possible to help him release tensions and forget his troubles.

Be patient with the disturbed. It may take awhile, but they will probably return to normal. Do not give sedatives or tranquilizers; these will only delay his adjustment to the situation.

## Diarrhea

In some cases diarrhea can be a serious malady. When it occurs, the victim should stop eating solid food and start a diet of clear fluids, such as broths, Jell-O water, juices, and similar liquids. Milk and other dairy products should be avoided. Fluids could also include a sugared salt solution made with one and one-half tablespoons of sugar and one teaspoon of salt in a quart of water. Kaopectate also helps. While the diarrhea continues, pay particular attention to sanitation and hygiene to prevent spread of the disease.

## Hypothermia

For complete information and instruction, see "Winter Storms."

## Choking: The Heimlich Maneuver

Choking on food is the sixth leading cause of accidental death in the U.S.

Over 3,000 and as many as 6,000 deaths occur each year. The usual slap on the back does not help very much, but the Heimlich Maneuver is easy to administer and is quite safe if administered properly.

Choking occurs when food is sucked into the windpipe instead of being swallowed. Onlookers often mistake the symptoms for those of a heart attack and administer inappropriate treatment.

The maneuver utilizes air that is already in the lungs. Even when we've breathed out, we still have quite a bit of air in the lungs. The Maneuver forces the diaphragm upward which forces air up through the windpipe to dislodge the obstruction.

The most important thing is to make sure the victim is choking, but the choking victim cannot talk. Therefore if the patient is still conscious, one must quickly ask questions that can be answered by shaking or nodding the head -- but **quickly**. The choking patient will soon collapse. The Maneuver forces air that is in the lungs out through the windpipe, dislodging the obstruction. This can be done with the patient in the standing or sitting positions or with the patient lying on his back.

# First Aid

## Standing

Stand behind the victim and make a fist. Place the thumb end of the fist against the abdomen of the victim, with the fist definitely below the rib cage, between the belly button and the rib cage, but well below the rib cage. Place the other hand over the fist and pull up and in, quickly. The force should depend on the amount required to move enough air to remove the obstruction.

In order to prevent injury from using more force than is necessary, one may wish to start with minimal force and increase with each attempt. It may be necessary to repeat the Maneuver four or five times. With small children, use only the fingers to apply pressure.

## Sitting

When the victim is sitting, the chair can provide a good brace or support to perform the Maneuver, which is performed as above.

## Lying Down

If the victim has collapsed, or if the victim is so large that the person applying the treatment is unable to reach around the victim, the victim should be placed on the floor on his back. The person applying the treatment quickly straddles the hips of the victim, places one hand over the other and with the heels of the hands well below the rib cage (between the rib cage and the belly button) quickly pushes up and in. Remove the food quickly after it is expelled. Also the patient may vomit, so quickly turn him on his side after treatment.

After all, there is very little time. Death or brain damage will occur in just a few minutes. You must act fast. The victim should be examined by a physician after a choking episode and treatment.

## If Alone

This can be administered to yourself by placing the hands as if standing behind a victim and then letting yourself fall over a chair or table.

## A Distress Signal

Placing the hand to the throat is an almost automatic response of someone choking. This will convey the message, " **I Am choking**". Teach this Maneuver to every member of your family so that they may react quickly to save the life of another.

## First Aid Kit

The first aid kit as suggested below can easily be included on family outings or used for everyday problems at home. Be sure to keep it well and freshly stocked. This first aid kit is different from the one listed in the section on 72-hour survival kits, in that this one is much more comprehensive and not as portable.

The kit and first aid book should be stored together in an easy to reach location. The contents should fit the needs of your family. Filling a small tool box, fishing tackle box, or Tupperware container with those things your family needs may be better than buying a pre-assembled kit. Some of the items you may want to consider including in your first Aid Kit:

- Consecrated olive oil
- Prescription drugs
- Antibiotic ointment
- Aspirin tablets (5 grain)
- Children's aspirin
- Tylenol
- Children's Tylenol
- Ipecac – To induce vomiting
- Motion sickness medication
- Kaopectate (diarrhea medication)
- Laxative
- Eye drops
- Ear drops
- Nasal spray
- Aerosol Burn spray
- Benadryl
- Cough medicine (Codeine Prescription)
- Vaseline
- Hand lotion
- Iodine
- Hydrogen peroxide
- Smelling salts
- Table salt
- Baking soda
- Rubbing alcohol
- Sun screen

## First Aid

- Water Purification tablets
- Soap (tincture of green soap)
- Artificial skin spray
- Chlorine bleach
- Inhalation aids (Vicks, etc)

When buying drug items, check the expiration dates and only buy fresh supplies for longest shelf life.

### Dressings

- Adhesive tape, roll 2" wide.
- Bandage, sterile roll 2" wide.
- Bandage, sterile roll 4" wide.
- Bandages, large triangular (37x37x52).
- Band aids (plastic strips).
- Cotton-tipped swabs (Q-tips).
- Cotton, sterile absorbent.
- Ace bandages.
- Gauze pads (4x4)
- Butterfly bandages

### Other necessary or useful supplies:

- Tweezers
- Plastic spoons
- Scissors
- Pocket knife
- Needles, thread
- Space Blankets
- Safety pins, assorted sizes
- Paper and pencil
- Thermometer
- Heavy string
- Sanitary Napkins
- Snake Bite Kit
- Tissues
- Matches, butane lighter
- Clean sheets, torn into long strips
- Medicine dropper(s)
- Splints, wooden 18" (optional)
- Rubber Gloves
- Cold pack (turns cold when opened)
- Plastic sheeting
- Dental floss
- Waterproof first aid kit
- Paper cups, 3 ounce size
- Razor Blades

You should also have a good book on first aid in your first aid kit such as:

- Standard First Aid and Personal Safety, American National Red Cross (Garden City, NY; Double day and Company, Inc.)
- Boy Scout Handbook.

- Boy Scout First Aid Merit Badge Handbook.
- This Emergency Preparedness Handbook.

All families that have children should complete an Authorization of Consent to Treatment of Minor form for each of their children and file it with their schools, doctor's office, hospital, baby sitter, or other place where the child is likely to be when a personal injury may occur when the parents are not around. Include with this form a brief history of any known medical problems your child may have such as allergies to certain medications, recurring medical ailments, etc.

## Emergency Heating, Cooking & Lighting

# Emergency Heating, Cooking & Lighting

### HEATING

**Coal** stores well if kept in a dark place and away from moving air. Air speeds deterioration and breakdown, causing it to burn more rapidly. Coal may be stored in a plastic-lined pit or in sheds, bags, boxes, or barrels and should be kept away from circulating air, light, and moisture. Cover it to lend protection from weather and sun.

**Wood.** Hardwoods such as apple, cherry, and other fruit woods are slow burning and sustain coals. Hardwoods are more difficult to burn than softer woods, thus requiring a supply of kindling. Soft woods such as pine and cedar are light in weight and burn very rapidly, leaving ash and few coals for cooking. If you have a fireplace or a wood/coal burning stove, you will want to store several cords of firewood. Firewood is usually sold by the cord which is a neat pile that totals 128 cubic feet. This pile is four feet wide, four feet high, and eight feet long. Some dealers sell wood by the ton. As a general rule of thumb, a standard cord of air dried dense hardwood weighs about two tons and provides as much heat as one ton of coal. Be suspicious of any alleged cord delivered in a 1/2 or 3/4 ton pickup truck.

For best results, wood should be seasoned (dried) properly, usually at east a year. A plastic tarp, wood planks, or other plastic or metal sheeting over the woodpile is useful in keeping the wood dry. Other types of fuels are more practical to store and use than wood or coal.

**Newspaper logs** make a good and inexpensive source of fuel. You may prepare the logs in the following manner:

- Use about eight pages of newspaper and open flat.
- Spread the stack, alternating the cut sides and folded sides.
- Place a 1" wood dowel or metal rod across one end and roll the paper around the rod very tightly. Roll it until there are 6-8 inches left to roll, then slip another 8 pages underneath the roll. Continue this

procedure until you have a roll 4-6 inches in diameter.

- With a fine wire, tie the roll on both ends. Withdraw the rod. Your newspaper log is ready to use. Four of these logs will burn about 1 hour.

**Propane** is another excellent fuel for indoor use. Like kerosene, it produces carbon dioxide as it burns and is therefore not poisonous. It does consume oxygen so be sure to crack a window when burning propane.

Propane stores indefinitely, having no known shelf life. Propane stoves and small portable heaters are very economical, simple to use, and come the closest to approximating the type of convenience most of us are accustomed to using on a daily basis.

The storage of propane is governed by strict local laws. In this area you may store up to 1 gallon inside a building and up to 60 gallons stored outside. If you store more than these amounts, you will need a special permit from the fire marshal.

The primary hazard in using propane is that it is heavier than air and if a leak occurs it may "pool" which can create an explosive atmosphere. Furthermore, basement natural gas heating units CANNOT be legally converted for propane use. Again, the vapors are heavier than air and form "pockets." Ignition sources such as water heaters and electrical sources can cause an explosion.

**White gas** (Coleman fuel). Many families have camp stoves which burn Coleman Fuel or white gasoline. These stoves are fairly easy to use and produce a great amount of heat. However, they, like charcoal, produce vast amounts of carbon monoxide. **NEVER** use a Coleman Fuel stove indoors. It could be a fatal mistake to your entire family.

Never store fuels in the house or near a heater. Use a metal store cabinet which is vented on top and bottom and can be locked.

**Kerosene** (also known as Range Oil No. 1) is the cheapest of all the storage fuels and is also very forgiving if you make a mistake. Kerosene is not as explosive as gasoline and Coleman fuel. Kerosene stores well for long periods of time and by introducing some fuel additives it can be made to store even longer. However, do

## Emergency Heating, Cooking & Lighting

not store it in metal containers for extended time periods unless they are porcelain lined because the moisture in the kerosene will rust through the container causing the kerosene to leak out. Most hardware stores and home improvement centers sell kerosene in five gallon plastic containers which store for many years. A 55 gallon drum stores in the back yard, or ten 5 gallon plastic containers will provide fuel enough to last an entire winter if used sparingly.

**Caution:** To burn kerosene you will need a kerosene heater. There are many models and sizes to choose from but remember that you are not trying to heat your entire home. The larger the heater the more fuel you will have to store. Most families should be able to get by on a heater that produces about 9,600 BTUs of heat, though kerosene heaters are made that will produce up to 25,000 to 30,000 BTUs. If you have the storage space to store the fuel required by these larger heaters they are excellent investments, but for most families the smaller heaters are more than adequate. When selecting a kerosene heater be sure to get one that can double as a cooking surface and source of light. Then when you are forced to use it be sure to plan your meals so that they can be cooked when you are using the heater for heat rather than wasting fuel used for cooking only.

When kerosene burns it requires very little oxygen, compared to charcoal. You must crack a window about 1/4 inch to allow enough oxygen to enter the room to prevent asphyxiation. During combustion, kerosene is not poisonous and is safe to use indoors. To prevent possible fires you should always fill it outside. The momentary incomplete combustion during lighting and extinguishing of kerosene heaters can cause some unpleasant odors. To prevent these odors from lingering in your home always light and extinguish the heater out of doors. During normal operation a kerosene heater is practically odorless.

**Charcoal.** **Never** use a charcoal burning device indoors. When charcoal burns it is a voracious consumer of oxygen and will quickly deplete the oxygen supply in your little "home within a home." Furthermore, as it burns it produces vast amounts of carbon monoxide which is a deadly poison. If you make the mistake of trying to heat your home by burning charcoal it could prove fatal to your entire family. Never burn charcoal indoors.

### Cooking

<u>Heaters</u>	<u>Amount</u>	<u>Burning Time</u>
Catalytic	5 quarts	18-20 hours
	3 quarts	12 hours
White Gas	2 quarts	18-20 hours
Stoves (two burner)	3 ½ pint aerosol can	4 hours

To conserve your cooking fuel storage needs always do your emergency cooking in the most efficient manner possible. Don't boil more water than you need, extinguish the fire as soon as you finished, plan your meals ahead of time to consolidate as much cooking as possible, during the winter cook on top of your heating unit while heating your home, and cook in a pressure cooker or other fuel efficient container as much as possible. Keep enough fuel to provide outdoor cooking for at least 7-10 days.

It is even possible to cook without using fuel at all. For example, to cook dry beans you can place them inside a pressure cooker with the proper amount of water and other ingredients needed and place it on your heat source until it comes up to pressure. Then turn off the heat, remove the pressure cooker and place inside a large box filled with newspapers, blankets, or other insulating materials. Leave it for two and a half hours and then open it, your meal will be done, having cooked for two and a half hours with no heat. If you don't have a large box in which to place the pressure cooker, simply wrap it in several blankets and place it in the corner.

Store matches in waterproof airtight tin with each piece of equipment that must be lit with a flame.

**Sterno** fuel, a jellied petroleum product, is an excellent source of fuel for inclusion in your back pack as part of your 72 hour kit. Sterno is very light weight and easily ignited with a match or a spark from flint and steel but is not explosive. It is also safe for use indoors.

A Sterno stove can be purchased at any sporting goods store and will retail between \$3 and \$8, depending upon the model you choose. They fold up into a very small, compact unit ideal for carrying in a pack. The fuel is readily

## Emergency Heating, Cooking & Lighting

available at all sporting goods stores and many drug stores. One can of Sterno fuel, about the diameter of a can of tuna fish and twice as high, will allow you to cook six meals if used frugally. Chafing dishes and fondue pots can also be used with Sterno.

Sterno is not without some problems. It will evaporate very easily, even when the lid is securely fastened. If you use Sterno in your 72 hour kit you should check it every six to eight months to insure that it has not evaporated beyond the point of usage. Because of this problem it is not a good fuel for long-term storage. It is a very expensive fuel to use compared to others fuel available, but is extremely convenient and portable.

**Coleman fuel** (white gas), when used with a Coleman stove is another excellent and convenient fuel for cooking. It is not as portable nor as lightweight as Sterno, but produces a much greater BTU value. Like Sterno, Coleman fuel has a tendency to evaporate even when the container is tightly sealed so it is not a good fuel for long-term storage. Unlike Sterno, however, it is highly volatile; it will explode under the right conditions and should therefore never be stored in the home. Because of its highly flammable nature great care should always be exercised when lighting stoves and lanterns that use Coleman fuel. Many serious burns have been caused by carelessness with this product. Always store Coleman fuel in the garage or shed, out of doors.

**Charcoal** is the least expensive fuel per BTU that the average family can store. Remember that it must always be used out of doors because of the vast amounts of poisonous carbon monoxide it produces. Charcoal will store for extended period of time if it is stored in air tight containers. It readily absorbs moisture from the surrounding air so do not store it in the paper bags it comes in for more than a few months or it may be difficult to light. Transfer it to airtight metal or plastic containers and it will keep almost forever.

Fifty or sixty dollars worth of charcoal will provide all the cooking fuel a family will need for an entire year if used sparingly. The best time to buy briquettes inexpensively is at the end of the summer. Broken or torn bags of briquettes are usually sold at a big discount. You will also want to store a small amount of charcoal lighter

fluid (or kerosene). Newspapers will also provide an excellent ignition source for charcoal when used in a funnel type of lighting device.

To light charcoal using newspapers use two or three sheets, crumpled up, and a #10 tin can. Cut both ends out of the can. Punch holes every two inches around the lower edge of the can with a punch-type can opener (for opening juice cans). Set the can down so the punches holes are on the bottom. Place the crumpled newspaper in the bottom of the can and place the charcoal briquettes on top of the newspaper. Lift the can slightly and light the newspaper. Prop a small rock under the bottom edge of the can to create a good draft. The briquettes will be ready to use in about 20-30 minutes. When the coals are ready remove the chimney and place them in your cooker. Never place burning charcoal directly on concrete or cement because the heat will crack it. A wheelbarrow or old metal garbage can lid makes an excellent container for this type of fire.

One of the nice things about charcoal is that you can regulate the heat you will receive from them. Each briquette will produce about 40 degrees of heat. If you are baking bread, for example, and need 400 degrees of heat for your oven, simply use ten briquettes.

To conserve heat and thereby get the maximum heat value from your charcoal you must learn to funnel the heat where you want it rather than letting it dissipate into the air around you. One excellent way to do this is to cook inside a cardboard oven. Take a cardboard box, about the size of an orange crate, and cover it with aluminum foil inside and out. Be sure that the shiny side is visible so that maximum reflectivity is achieved. Turn the box on its side so that the opening is no longer on the top but is on the side. Place some small bricks or other noncombustible material inside upon which you can rest a cookie sheet about two or three inches above the bottom of the box. Place ten burning charcoal briquettes between the bricks (if you need 400 degrees), place the support for your cooking vessels, and then place your bread pans or whatever else you are using on top of the cookie sheet. Prop a foil-covered cardboard lid over the open side, leaving a large crack for air to get in (charcoal needs a lot of air to burn) and bake your bread, cake, cookies, etc. just like you would in your regular oven. Your results will amaze you.



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To make your own charcoal, select twigs, limbs, and branches of fruit, nut and other hardwood trees; black walnuts and peach or apricot pits may also be used. Cut wood into desired size, place in a large can which has a few holes punched in it, put a lid on the can and place the can in a hot fire. When the flames from the holes in the can turn yellow-red, remove the can from the fire and allow it to cool. Store the briquettes in a moisture-proof container. Burn charcoal only in a well-ventilated area.

**Wood and Coal.** Many wood and coal burning stoves are made with cooking surface. These are excellent to use indoors during the winter because you may already be using it to heat the home. In the summer, however, they are unbearably hot and are simply not practical cooking appliances for indoor use. If you choose to build a campfire on the ground outside be sure to use caution and follow all the rules for safety. Little children, and even many adults, are not aware of the tremendous dangers that open fires may pose.

**Kerosene.** Many kerosene heaters will also double as a cooking unit. In fact, it is probably a good idea to not purchase a kerosene heater that cannot be used to cook on as well. Follow the same precautions for cooking over kerosene as was discussed under the section on heating your home with kerosene.

**Propane.** Many families have propane camp stoves. These are the most convenient and easy to use of all emergency cooking appliances available. They may be used indoors or out. As with other emergency fuel sources, cook with a pressure cooker whenever possible to conserve fuel.

### Lighting

Most of the alternatives require a fire or flame, so use caution. More home fires are caused by improper usage of fires used for light than for any other purpose. Especially use extra caution with children and flame. Teach them the proper safety procedures to follow under emergency conditions. Allow them to practice these skills under proper adult supervision now, rather than waiting until an emergency strikes.

**Cyalume sticks** are the safest form of indoor lighting available but very few people even know what they are. Cyalume sticks can be purchased at most sporting goods stores for about \$2 per stick. They are a plastic stick about four inches in length and a half inch in

diameter. To activate them, simply bend them until the glass tube inside them breaks, then shake to mix the chemicals inside and it will glow a bright green light for up to eight hours. Cyalume is the only form of light that is safe to turn on inside a home after an earthquake. One of the great dangers after a serious earthquake is caused by ruptured natural gas lines. If you flip on a light switch or even turn on a flashlight you run the risk of causing an explosion. Cyalume will not ignite natural gas. Cyalume sticks are so safe that a baby can even use them for a teether.

**Flashlights** are excellent for most types of emergencies except in situations where ruptured natural gas lines may be present. Never turn a flashlight on or off if there is any possibility of ruptured gas lines. Go outside first, turn it on or off, then enter the building.

The three main problems with relying upon flashlights is that they give light to very small areas, the batteries run down fairly quickly during use, and batteries do not store well for extended time periods. Alkaline batteries store the best if stored in a cool location and in an airtight container. These batteries should be expected to store for three to five years. Many manufacturers are now printing a date on the package indicating the date through which the batteries should be good. When stored under ideal conditions the shelf life will be much longer than that indicated. Lithium batteries will store for about twice as long as alkaline batteries (about ten years).

If you use flashlights be sure to use krypton or halogen light bulbs in them because they last much longer and give off several times more light than regular flashlight bulbs on the same energy consumption. Store at least two or three extra bulbs in a place where they will not be crushed or broken.

**Candles.** Every family should have a large supply of candles. Three hundred sixty-five candles, or one per day is not too many. The larger the better. Fifty-hour candles are available in both solid and liquid form. White or light colored candles burn brighter than dark candles. Tallow candles burn brighter, longer, and are fairly smoke free when compared to wax candles. Their lighting ability can be increased by placing an aluminum foil reflector behind them or by placing them in front of a

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mirror. However, candles are extremely dangerous indoors because of the high fire danger--especially around children. For this reason be sure to store several candle lanterns or broad-based candle holders. Be sure to store a goodly supply of wooden matches

Save your candle ends for emergency use. Votive candles set in empty jars will burn for up to 15 hours. Non-candles (plastic dish and paper wicks) and a bottle of salad oil will provide hundreds of hours of candle light.

**Trench candles** can be used as fireplace fuel or as a candle for light. To make trench candles:

1. Place a narrow strip of cloth or twisted string (for a wick) on the edge of a stack of 6-10 newspapers.
2. Roll the papers very tightly, leaving about 3/4" of wick extending at each end.
3. Tie the roll firmly with string or wire at 2-4" intervals.
4. With a small saw, cut about 1" above each tie and pull the cut sections into cone shapes. Pull the center string in each piece toward the top of the cone to serve as a wick.
5. Melt paraffin in a large saucepan set inside a larger pan of hot water. Soak the pieces of candle in the paraffin for about 2 minutes.
6. Remove the candles and place on a newspaper to dry.

**Kerosene lamps** are excellent sources of light and will burn for approximately 45 hours on a quart of fuel. They burn bright and are inexpensive to operate. The main problem with using them is failure to properly trim the wicks and using the wrong size chimney. Wicks should be trimmed in an arch, a "V," an "A" or straight across the top. Failure to properly trim and maintain wicks will result in smoke and poor light.

Aladdin type lamps that use a circular wick and mantle do not need trimming and produce much more light (and heat) than conventional kerosene lamps. These lamps, however, produce a great amount of heat, getting up to 750 degrees F. If placed within 36 inches of any combustible object such as wooden cabinets, walls, etc. charring can occur. Great caution

should therefore be exercised to prevent accidental fires.

The higher the elevation the taller the chimney should be. Most chimneys that come with kerosene lamps are made for use at sea level. At about 4500 feet above sea level the chimney should be about 18-20 inches high. If your chimney is not as tall as it should be you can improvise by wrapping aluminum foil around the top of it and extending it above the top. This will enable the light to still come out of the bottom portion and yet provide proper drawing of air for complete combustion. If the chimney is too short it will result in smoke and poor light. Be sure to store extra wicks, chimneys and mantles.

**Propane and Coleman lanterns.** Camp lanterns burning Coleman fuel or propane make excellent sources of light. Caution should be used in filling and lighting Coleman lanterns because the fuel is highly volatile and a flash type fire is easy to set off. Always fill them outside. Propane, on the other hand, is much safer. It is not as explosive and does not burn quite as hot. A double mantle lantern gives off as much light as two 100-watt light bulbs. Either propane or Coleman fuel type lanterns are very reliable and should be an integral part of your preparedness program. Be sure to store plenty of extra mantles and matches.

Store lots of wooden matches (1,000-2,000 is not too many). Also store butane cigarette lighters to light candles, lanterns and fireplaces. It would be a good idea for everyone to have a personal fire building kit with at least six different ways to start a fire.

Above all, your home and family must be protected from the ravages of fire by your actions. Study the instructions for any appliance used for heating, cooking, or lighting and understand their features as well as their limitations.

Don't go to sleep with any invented burning device in your home. Your family might not wake up.

Whatever you store, store it **safely** and **legally**. In an emergency, survival may cause you to make decisions that are questionable with regard to safety. Become educated to the inherent hazards of your choices and make a decision based on as much verifiable

## Emergency Heating, Cooking & Lighting

information as possible. You and your family's lives will depend on it.

Consider carefully how you will provide fuel for your family for heating, cooking, and lighting during times of emergencies. Next to food, water, and shelter, energy is the most important item you can store.

<u>Fuel</u>	<u>Amt</u>	<u>Burning Time</u>
White gas Lanterns		
Two mantle	2 pints	10-12 hours
Single mantle	2 pints	16-18 hours
Kerosene Lanterns	1 quart	45 hours
Candles	¾ X 4"	2 1/3 hours
	7/8 X 4"	5 hours

## Emergency Sanitation

# Emergency Sanitation

## Care and Use of Water Supplies

For proper water treatment, refer to section entitled "Emergency Water Supply." If you are asked to shut off the service valve that controls the water supply to your home, or if the taps do not flow following a disaster, turn off all the water outlets. These include taps or faucets, valves on pipes supplying float-controlled equipment such as flush toilets, air cooling equipment, and heating equipment. Then when the water comes on again your home will not be flooded as these flotation devices sometimes stick after they have been allowed to dry out.

Turn off the gas or electricity that supplies your hot-water heater after closing your home water service valve, or when your water supply is interrupted for any other reason. Otherwise, if the limited supply of water remaining in your hot-water storage tank continues to be heated, an explosion may occur. Also, if no more water can reach the tank, continued heat will soon muddy its contents through oxidation and make the water useless for washing or drinking purposes.

If your water service is cut off following enemy attack or other natural disaster, do not try to telephone or otherwise communicate with your local water department or water company. Once service is restored, the water from your faucets may have a strong chlorine taste. Do not worry about this. It is a sign that extra precautions are being taken for your safety.

Be alert for instructions regarding water usage from your public health officials, or from the water department itself. Their instructions will be relayed to you by messengers, radio, mobile loud speakers, handbills, or newspaper stories.

It is especially important to be sanitary in the storing, handling, and eating of food to avoid digestive upsets or other more serious illnesses. Be sure to:

- Keep all food in covered containers.
- Keep cooking and eating utensils clean. Diarrhea may result from dish soap that is not thoroughly rinsed from dishes.

- Keep all garbage in a closed container or dispose of it outside the home when it is safe to go out. If possible, bury it. Avoid letting garbage or trash accumulate inside the shelter, both for fire and sanitation reasons.

- Wash hands and utensils frequently.
- Prepare only as much food as will be eaten at each meal.
- Paper cups and plates, paper towels and napkins are helpful if the water supply is cut off.
- Refrigerators and home freezer units should be kept closed as much as possible once the services they depend on are cut off. The food they contain will keep longer if you plan your meals well in advance so that you won't have to open the doors any more than necessary. If the gas or electric service is not restored within 12 hours, eat or cook the most perishable items in your refrigerator before they spoil. If foods show signs of decomposition, discard them before they contaminate other foods that keep better.
- Food will keep in home freezer units after they are shut off for varying periods depending on the amount and kind of food, the temperature at which it was kept, and the construction of the freezer. Frozen meats and other frozen foods can be preserved for later use by cooking them soon after they have thawed or by quick re-freezing before they have completely thawed.

Official instructions regarding food will be issued locally in the event of an emergency. These instructions will tell you the type of disaster and its effect upon milk and other foods. Follow official instructions closely. Don't listen to rumors, and don't pass them on to others.

## Laundry and Cleaning Supplies

During times of emergency it is critical that sanitation be strictly observed in the cleaning of clothing, bedding materials, and all kitchen and food preparation utensils.

A book entitled *Housecleaning on a Shoestring* is available by writing to the Cooperative Extension Service, Utah State University,

## Emergency Sanitation

Logan, UT 84321. It contains useful recipes to make housecleaning products out of basic ingredients found in the home

Suggested laundry and cleaning storage items are:

- deodorizer tablets and air fresheners
- Lysol-type disinfectant
- toothpaste and toothbrushes
- laundry detergent
- liquid chlorine bleach
- dish detergent
- bar soap
- shampoo and conditioner
- hair spray
- deodorant
- feminine supplies
- shaving supplies

## Disposal of Garbage and Rubbish

Garbage may sour or decompose, rubbish (trash) will not, but offers disposal problems in an emergency. The following suggestions will make it easier for you to take care of the refuse problem.

Garbage should be drained before being placed in storage containers. If liquids are strained away, garbage may be stored for a longer period of time without developing an unpleasant odor. After straining, wrap the garbage in several thicknesses of old newspapers before putting it into your container. This will absorb any remaining moisture. A tight-fitting lid is important to keep out flies and other insects.

Final disposal of all stored garbage and refuse can be accomplished in the following manner, provided there is no danger from radioactive fallout:

1. All stored garbage should be buried if collection service is not restored and if unpaved yard areas are available--keep a shovel handy for this purpose. Dig a hole

deep enough to cover it with at least 18-24 inches of dirt, which will prevent insect breeding and discourage animals from digging it up.

2. Other rubbish may be burned in open yard areas (if permission is granted by authorities under existing conditions) or left at dumps established by local authorities. Can should be flattened to reduce their bulk. Do not deposit ashes or rubbish in streets or alley ways without permission. Such material may interfere with the movement and operation of fire-fighting and other emergency equipment.

## Sewage Disposal

An emergency chemical toilet consisting of a water-tight container with a snug-fitting cover should be an integral part of your preparedness program. It could be a garbage container, a pail, or a 5-gallon garbage can (also with a tight-fitting lid). Another should be available to empty the contents into for later disposal. If possible, both containers should be lined with plastic bags or garbage can liners. NEVER deposit human waste or garbage on the open ground. If you have no other alternative for disposal, it is safe to bury waste in trenches 24-30 inches in depth.

Every time someone uses the emergency toilet, he should pour or sprinkle into it a small amount of regular household disinfectant, such as creosol, Pinesol, chlorine bleach, baking soda, alcohol, laundry detergent, or insecticide to keep down odors and germs. After each use, the lid should be replaced.

## Emergency Chemical Toilet

The following items should be stored together inside a 5-gallon plastic bucket. The bucket will serve as the toilet during an emergency.

To use this toilet simply remove the contents from the bucket, insert a large plastic garbage can liner into the bucket and fold the edges over the rim of the bucket. Mix one cup of liquid chlorine bleach to one-half gallon of water (one to ten ratio--do not use dry or powdered bleach as it is caustic and not safe for this type of use) and pour this solution into the bucket. This will kill germs and insure adequate coverage. Though the bucket may be somewhat uncomfortable to sit upon, it certainly beats the alternative. For greater comfort you can

## Emergency Sanitation

remove the seat from the toilet and secure it to

### **Emergency Chemical Toilet**

- 5-gallon plastic bucket (with tight fitting lid)
- 2 large boxes of garbage can liners (30 gallon size)
- 1 gallon liquid chlorine bleach or other chemical
- pinesol
- 6-8 rolls toilet paper
- feminine sanitary supplies
- 2 boxes baking soda
- 2 boxes trash can liners (8-10 gallon size)
- paper towels

the top of the bucket.

After each usage replace the lid securely upon the bucket to keep insects out and to keep the smell contained. When the bucket is one-third to one-half full, tie the garbage bag liner shut and dispose of it appropriately (i.e., burying it, placing it inside a large covered metal garbage can for later disposal, or placing it in an approved disposal location). Put another liner inside the bucket and continue as above.

Other chemicals that can be used in place of liquid chlorine bleach are: HTH (calcium hypochlorite), which is available at swimming pool supply stores and is intended to be used in solution. Following the directions on the package it can be mixed and stored.

**Caution:** Do not use calcium hypochlorite to disinfect drinking water as it kills all the beneficial bacteria in the intestinal tract and thus causes mild diarrhea. Portable toilet chemicals, both liquid and dry, are available at recreational vehicle (RV) supply stores. These chemicals are designed especially for toilets which are not connected to sewer lines. Use according to package directions. Powdered, chlorinated lime is available at building supply stores. It can be used dry. Be sure to get chlorinated lime, not quick lime which is highly alkaline and corrosive.

**Caution:** Chlorinated products which are intended to be mixed with water for use can be dangerous if used dry. You may also use powdered laundry detergent, Lysol, Pinesol, ammonia, or other household cleaning and disinfecting products. Where radioactive fallout does not present a hazard, a temporary pit privy may be constructed in the yard for use by several families. This offers a good method of waste disposal over extended periods of time. The structure need not be elaborate, so long as it provides reasonable privacy and shelter. The pit should be made fly-proof by means of a tight-fitting riser, seat, and cover. A low mound of earth should be tamped around the base of the privy to divert surface drainage and help keep the pit dry. Accumulated waste should be covered with not less than 12 inches of earth when the privy is moved or abandoned.

Persons in city apartments, office buildings, or homes without yards should keep a supply of waterproof containers on hand for emergency waste disposal.

Homemade soil bags may also be used and are easily made by putting one large grocery bag inside another, with a layer of shredded newspaper or other absorbent material between. Apartment dwellers should have sufficient grocery bags on hand for possible emergencies.

If you have a baby in your home, it is best to keep an ample supply of disposable diapers on hand for emergency use. If these are not available, emergency diaper needs can be met by lining rubber pants with cleansing tissue, toilet paper, scraps of cloth, or other absorbent materials.

To help insure proper sanitation it is imperative that you store a sufficient supply of disposable diapers, disposable wipes, and plastic garbage can liners. Change infants and toddlers regularly and keep them clean. Dispose of the soiled diapers in the plastic garbage can liners and keep them tightly sealed when not in use to help prevent the spread of disease.

Be sure to wash your own hands regularly when working with infants (especially after each diaper change). Typhoid fever, amoebic dysentery, diarrhea, infectious hepatitis, salmonella and giardiasis are diseases that spread rapidly in times of emergency and threaten all, yet are all diseases that can easily be controlled by simply following the rules of good sanitation.

# Emergency Childbirth

When birth is imminent and medical help is unavailable, it is important to understand the normal course of labor and childbirth. The mother and anyone who is helping can make the birth easier and safer by knowing exactly what is happening and how best to help.

## Labor is Divided into Three Stages

**First Stage** - the womb contracts by itself to open and bring the baby down to the birth canal.

**Second Stage** - the mother pushes (bears down) with the contractions of the womb to help the baby through the birth canal and out into the world.

**Third Stage** - the afterbirth is expelled.

### First Stage

In this early part of labor it is often helpful for the mother to keep occupied as long as she does not get too tired. She should be patient and calm, relaxing as the contractions come and go and breathing slowly and deeply during the contractions as they become strong. Emptying the bowels and frequent urination will help to relieve discomfort. The mother will know she is in true labor if she has regular contractions of the womb which are prolonged and become strong and closer together. When she knows the baby is on the way, she should choose a place to have the baby that will be clean and peaceful. She should be able to lie down or sit in a leaning position (with her back well supported).

The following events occur as part of the first stage of labor and delivery.

1. The state of dilation: the first signs may be noticeable only to the mother, low-backache and irregular cramping pains (contractions) in the lower abdomen.
2. As labor progresses, the contractions become stronger, last longer, and become more regular. When the contractions recur at regular 3-4 minute intervals and last from 50-60 seconds, the mother is in the latter part of the first stage.

3. The contractions will get stronger and more frequent. The mother will often make an involuntary, deep grunting, moan with each contraction. The delivery of the baby is now imminent.

## What To Do During the First Stage

Those helping the mother should know how to time the contractions. This information will give them an idea as to how far into labor the mother is and how much time remains until the baby comes.

Place a hand on the mother's abdomen just above the umbilicus. As contractions begin you will feel a hardening ball. Time the interval from the moment the uterus begins to harden until it completely relaxes.

Time the intervals in minutes between the start of one contraction and the start of the next contraction. As labor progresses this time will decrease.

Walking or standing tends to shorten labor, so if that feels comfortable to the mother, let her. Also, if she becomes hungry or thirsty, let her eat or drink small amounts of food, fruit juice, or suck on ice chips.

## Don't Leave the Mother Alone

Make no attempt to wipe away vaginal secretions, as this may contaminate the birth canal. The bag of water may rupture during this stage of labor and blood tinged mucous may appear.

At the end of the first stage, the mother may feel tired, discouraged and irritable. This is often referred to as "transition" and is the most uncomfortable part of labor and such feelings are perfectly normal. The mother may have a backache, may vomit, may feel either hot or cold (or both at the same time), she may tremble, feel panicky or scared, cry or get very cross with her husband and birthing attendants. She may even announce that she has changed her mind and is not going through with it. At this time she needs plenty of encouragement and assurance that things are proceeding normally and that her feelings are normal.

Birth attendants, the husband, and others present at the labor and birth should have a cheerful, calm appearance. Nervousness,

## Emergency Childbirth

panic, or distressing remarks can have an inhibiting effect on a laboring woman. Comments on how long the labor is lasting, how pale or tired the woman looks can have a terrible effect on her morale. Even talking quietly can irritate a woman having an intense contraction because it is hard to concentrate on relaxing when there is noise in the room.

Relaxation is very important. A woman's husband or labor coach should instruct her to go limp like a rag doll and breath deeply, making her tummy rise and fall. This is called abdominal breathing. Begin each contraction with a deep breath to keep the tissues (of both mom and baby) oxygenated. Observe the kind of breathing you do when you are nearly asleep and try to simulate it. Help her to relax her hands, face, legs etc. if you see that they are tense. Tenseness in the body fights the contractions and intensifies the sensations of "pain." Relaxation helps a woman to handle the contractions easier and have a faster labor. Sometimes a woman will breathe too fast and get tingling sensations in her hands and feet. She needs to be coached to slow down her breathing. You can have her follow your breathing until the tingling goes away.

Firm hand pressure on the lower back by those attending the mother may help to relieve the back ache. Alternately, the mother may prefer to lean her back against a firm surface. Deep rhythmical breathing helps to relieve annoying symptoms. The discomfort seldom lasts for more than a dozen contractions.

When the womb is almost fully opened the baby will soon enter the birth canal, and there will be a vocalized catch in the mother's breathing when she has a contraction. This will signal the onset of the second stage.

### Second Stage

The contractions of the second stage are often of a different kind. They may come further apart and the mother usually feels inclined to bear down (push) with them. When she gets this feeling she should take a deep breath as each contraction comes, hold her breath and gently push. There is no hurry here. The mother should feel no need to exert great force as she pushes. She may want to push with several breaths during each contraction. After it passes, a deep sigh will help her recover her breath. She should then rest until the next

contraction. She may even sleep between contractions.

Some general instructions for the second stage of labor:

1. Be calm! Reassure the mother and be prepared to administer first aid to both the mother and baby. (Possible respiratory and cardiac resuscitation for the baby and hemorrhage control and prevention of shock for the mother may be needed).
2. Discourage onlookers from crowding around the mother.
3. Use sterile materials or the cleanest materials available. Clean towels or parts of the mother's clothing can be used. Place newspaper under the mother if nothing else is available. If she must lie on the ground, place a blanket or other covering under her.
4. In order to prevent infection, refrain from direct contact with the vagina.
5. Prepare for the delivery by assisting the mother to lie on her back with the knees bent and separated as far apart as possible. Remove any constricting clothing or push it above her waist.
6. When the baby's head reaches the outlet of the birth canal, the top of the head will first be seen during contractions but will then become visible all the time. The mother will now feel a stretching, burning sensation. She must now no longer push during the contractions, and to avoid this, should pant (like a dog on a hot day). This will allow the baby's head to slide gently and painlessly out of the canal. If possible allow the head to emerge between contractions. This will prevent the mother's skin from tearing and will minimize trauma to the baby's head. It is important that the mother pant instead of pushing until both of the baby's shoulders have emerged.

### Delivery of the Baby

As the baby is coming down the birth canal, keep the perineum red or pink by massaging with warm olive oil (if none is available simply massage the area with your hand). Any place that gets white will tear more easily so keep massaging and keep all areas red. Use olive oil on the inside too and pay special attention to the



## Emergency Childbirth

area at the bottom, as that is the most common place to tear. Do this massage during a contraction when it will not be noticed or it may irritate some women.

You can support under the perineum with your hand on top of a sterile gauze pad or washcloth. Do not hold it together, just support it so the baby's head can ease out. The other hand can gently press with the fingers around the baby's head so it won't pop out too fast causing tearing. As the baby's head is born, support it with your hand so the face doesn't sit in a puddle of amniotic fluid. Gently wipe the face with a clean or sterile washcloth. Check quickly around the neck for the cord. If you feel it, just hook it with your finger and pull it around the baby's head. Check again. Some are wrapped more than once. If the cord is so tight it cannot be slipped over the baby's head, just wait until the baby is born to untangle it. Most cords are long enough to permit this. IF the cord is too short to permit the baby to be born, it has to be cut and clamped and the baby delivered rapidly. In this situation the baby may be in distress because the oxygen supply was cut off prematurely. With the next contraction, one of the shoulders comes and then the whole body slips quickly out. IF several contractions have passed without a shoulder coming, you may have to slip two fingers in and try to find an armpit. With one or two fingers hooked under the armpit, try to rotate the shoulder counterclockwise while pulling out. Usually this does it.

As the baby's head emerges, it is usually face down. It then turns, so that the nose is turned towards the mother's thigh. Support the baby's head by cradling it in your hands. Do not pull or exert any pressure. Help the shoulders out. For the lower shoulder, support the head in an upward position. As the shoulders emerge, be prepared for the rest of the body to come quickly. Use the cleanest cloth or item available to receive the baby.

Make a record of the time and approximate location of the birth of the baby.

With one hand, grasp the baby at the ankles, slipping a finger between the ankles. With the other hand, support the shoulders with the thumb and middle finger around its neck and the forefinger on the head. (Support but do not choke). Do not pull on the umbilical cord when picking the baby up. Raise the baby's body slightly higher than the head in order to allow mucous and other fluid to drain from its nose

and mouth. **Be very careful** as newborn babies are very slippery.

The baby will probably breathe and cry almost immediately.

If the baby doesn't breathe spontaneously, very gently clear the mouth of mucous with your finger. Stimulate crying by gently rubbing its back. IF all this fails, give extremely gentle mouth-to-mouth resuscitation. Gently pull the lower jaw back and breathe gently with small puffs--20 puffs a minute. If there seems to be excess mucous, use your finger to gently clear the baby's mouth.

The mother will probably want to hold the baby. This is desirable. If the umbilical cord is long enough, let her hold the baby in her arms. If the cord is short, support the baby on the mother's abdomen and help her hold it there.

It is of benefit to the baby and makes the afterbirth come with less bleeding if the baby can be allowed to suckle at the breast as soon as it is born. The cord should not be cut until the afterbirth has completely emerged.

### Third Stage.

The placenta delivery or afterbirth is expelled by the womb in a period of a few minutes to several hours after the baby is born. No attempt should be made to pull it out using the cord. Immediately following the afterbirth, there may be additional bleeding and a few blood clots. The womb should feel like a firm grapefruit just below the mother's navel. If it is soft, the baby should be encouraged to nurse, and the mother may be encouraged to gently massage the womb. These actions will cause it to contract and lessen the chances of bleeding.

If hemorrhaging occurs, do the following:

1. The uterus should be gently massaged to keep it hard.
2. The woman should lie flat, and the bottom of the bed should be elevated.
3. Put a cold pack (such as a small towel dipped in cold water and wrung out) on the lower tummy to irritate the uterus to contract.
4. Put pressure on the perineum with several sanitary napkins and the pressure of your hand.

## Emergency Childbirth

5. Most importantly, have the baby nurse. Sucking stimulates the uterus to contract.

Another problem to be alert for is shock. Symptoms of shock are vacant eyes, dilated pupils, pale and cold or clammy skin, faint and rapid pulse, shallow and irregular breathing, dizziness and vomiting. If you notice any of these symptoms, keep the woman warm, slightly elevate her feet and legs, use soft lights, and talk softly and calmly to her.

The baby has some danger of getting an infection through the cut cord, so it should not be cut until sterile conditions are available. If there is a possibility of getting medical help within a few hours, do not cut the cord but leave it and the afterbirth attached to the baby. If there will be no medical help, wait until the afterbirth is out, or at least until the cord is whitened and empty of blood. The cord should not be cut until it quits pulsating so the baby can have a transition time before he absolutely has to breathe on his own. As long as the cord is pulsating, the baby is still receiving oxygen from his mother.

If the cord is long enough, the baby can be put on his mother's tummy so she can hold him and talk to him. If not, the father should touch him and talk to him. After the cord has stopped pulsating and has become limp it can be clamped or tied about one inch from the baby's tummy with a cord or sterile cloth and then cut.

As the placenta separates from the uterus, the cord will appear longer. Wait for the delivery of the placenta. It will usually be about 10 minutes or longer before the placenta is delivered.

Never pull on the cord. When the placenta appears, grasp gently and rotate it clockwise. Then tie the cord in two places--about six inches from the baby--using strips of material that has been boiled or held in a hot flame.

The placenta and attached membranes must be saved for a doctor's inspection. Leaving the cord and placenta attached to the baby is messy but safe. Save all soiled sheets, blankets, cloths, etc., for a doctor's examination. Check the amount of vaginal bleeding; a small amount (1 to 2 cups) is expected. Place sanitary pads or other sanitary material around birth areas. Then cover mother and baby but do not allow them to overheat. Continue to check the baby's color and respiration. The baby should not appear blue or yellowish. When necessary,

gently flick your fingers on the soles of the baby's feet; this will encourage it to cry vigorously.

The mother will probably need light nourishment and will wish to rest and watch her baby. She should keep her hand away from the area surrounding the birth outlet. If uncontaminated water is available, she may wish to wash off her thighs. She may get up and go to the bathroom or seek better shelter. All care should be taken to avoid introducing infection into the birth canal. The mother can expect some vaginal discharge for several days. This is usually reddish for the first day or so but lightens and becomes less profuse within a few days.

Stay with the mother until relieved by competent personnel. This is a relatively dangerous period for the mother, as hemorrhage and shock may occur. Almost all emergency births are normal. The babies typically thrive and the mothers recover quickly. It is very important when assisting with an emergency delivery that you continually reassure the mother and attempt to keep her calm.

# Earthquake

The actual movement of the earth in an earthquake is seldom a direct cause of death or injury. However, this movement causes collapse of buildings and other structures. Most casualties result from falling objects and debris, such as falling bricks and plaster, splintering glass, toppling furniture, collapsing walls, falling pictures and mirrors, rock slides on mountains and hillsides, fallen power lines, fire resulting from broken gas lines and spillage of flammables--a danger which may be aggravated by lack of water due to broken water mains, and drastic human actions resulting from panic.

## BEFORE AN EARTHQUAKE

1. Check your home for earthquake hazards. Bolt down or provide strong support for water heaters and other gas appliances. Use flexible connections whenever possible. Place large and heavy objects on the lower shelves. Securely fasten shelves to the walls. Brace or anchor high or top heavy objects. Install secure cupboard closures. In new construction and alterations or additions, follow building codes to minimize earthquake hazards. Conduct calm family discussions about earthquakes and other possible disasters. DO NOT tell frightening stories about disasters. Develop a plan for reunification of your family. This should include three meeting places (two are back-up). Review frequently so that everyone knows it well.
2. Hold occasional home earthquake drills to provide your family with the knowledge to avoid injury and panic during an earthquake.
3. Teach responsible members of your family how to turn off electricity, gas, and water valves and mains.
4. Take first aid training and provide for all others possible in your family to learn first aid procedures appropriate to their level of understanding.
5. Keep supplies and medications to provide for your family for at least 72 hours. This includes food, water, clothing, flashlight

and extra batteries, portable radio and extra batteries, first-aid kit, tools, soap, canned fruit juices or soft drinks, pots and pans, plastic knives, forks, spoons or old metal flatware, can opener, plastic cups (not glass), fire extinguisher, sleeping bags, toilet articles, candles and matches.

6. Keep metal box containing valuable papers (insurance policies, house inventory and pictures, wills, medical records, deeds, etc.) with emergency supplies. Store a duplicate copy outside of home, such as with a relative or in a safety deposit box.
7. Keep family auto in good repair and always at least half full of gasoline. Have a first aid kit and a two-day survival kit (for at least two people) in your car at all times.
8. Know how to properly dispose of garbage and human waste and have the materials on hand (see sanitation section).
9. Keep immunizations up-to-date for all family members.
10. Consult an engineer as to the structural stability of your home.

## DURING AN EARTHQUAKE

1. Remain calm. Think through the consequences of any action you plan to take. Try to reassure others.
2. If indoors, watch out for falling plaster, bricks, light fixtures, and other objects. Watch out for high bookcases, china cabinets, shelves, and other furniture which might slide or topple. Stay away from windows, mirrors and chimneys. If in danger, get under a table, desk, or bed in a corner away from windows, or in a strong doorway. Encourage others to follow your example. Do not run outside. Don't use candles, matches, or other open flames during the tremor. Douse all fires. Grab anything handy (coat, blanket, newspapers, cardboard box, etc.) to shield your head and face from falling debris and splintering glass. If nothing else is available cup your hands over your face for protection.
3. If outside, avoid high buildings, walls, power poles, and other objects that could fall. Do not run through streets. If surrounded by buildings, take shelter in the

## Earthquake

nearest strong one. If possible, move to an open area away from all hazards. If in an automobile, stop in the safest place available, preferably an open area. Stop as quickly as safety permits, but stay in the vehicle for the shelter it offers.

4. Special preparations for the elderly. Make every action count. Stay calm and take deep breaths. Keep away from windows or other glass. Brace yourself in a doorway or inside hallway, or lower yourself to the floor and slide under a sturdy table. If you aren't able to get to a safer area, just sit down wherever you are. Don't try to remain standing. If you can't move safely and quickly, **stay where you are** even if you are in bed. Try to protect your head and body with whatever is available--pillows, books, lap robe, your arms. If you are in a wheelchair, lock your wheel brakes. Do whatever you can to protect yourself until the shaking stops. If you have pets--particularly a guide or hearing dog--keep them securely harnessed or confined. When the quake seems over, call for help if you need it, and don't give up. Use your whistle or flashlight; pound on walls; go to a safe window and wave a brightly colored, highly-visible object. Do anything you can to attract attention, and **don't give up**.

### AFTER THE EARTHQUAKE

1. Check for injuries. Do not attempt to move seriously injured persons unless they are in immediate danger of further injury.
2. Check for fires and fire hazards.
3. Wear shoes in all areas near debris or broken glass.
4. Check utility lines and appliances for damage. If gas leaks exist, shut off the main gas valves. Shut off electrical power if there is damage to wiring. Do not use matches or lighters until it has been established that there are no gas leaks.
5. Do not turn light switches on and off. This creates sparks which can ignite gas from broken lines.
6. Clean up spilled medicines, drugs, and other potentially harmful materials immediately.
7. Draw a moderate quantity of water in case service should be disrupted. Do not draw a large quantity, as this could interfere with fire fighting. If water is off, emergency water may be obtained from hot water heaters, toilet tanks, melted ice cubes, and water packed in canned vegetables, or stored water. If water pipes are damaged, shut off the water supply at the main valve.
8. Check to see that sewage lines are intact before permitting continued flushing of toilet
9. Do not eat or drink anything from open containers near shattered glass, as they may contain glass particles. If their use is essential, such liquids may be strained through folds of a clean handkerchief or cloth.
10. Check chimneys for cracks and damage. Unnoticed damage could later lead to a destructive fire. The initial check should be made from a distance. Approach chimneys with great caution.
11. Check closets and storage shelf areas. Open closet and cupboard doors carefully to guard against objects falling.
12. Prepare for possible evacuation. Gather the 72-hour kit you have previously assembled. If your house and utilities are badly damaged, you may be living in your backyard or other neighborhood location for a few days.
13. Check your house or apartment building for structural damage and, if deemed necessary, evacuate your family until authorities declare it safe to return. Stay out of severely damaged buildings; aftershocks can topple them.
14. Do not heed or spread rumors. They often do great harm following disasters. Stay off the telephone, except to report an emergency. Turn on your radio and/or television to get latest emergency bulletins (AM 1160 or Channel 5).
15. Do not go sightseeing immediately in areas where buildings have collapsed or where electric wires may be down. Keep the streets clear for passage of emergency vehicles. Be prepared for additional earthquake shocks.
16. Respond to requests for assistance from police, fire fighting, and relief

organizations, but do not go into damaged areas unless your assistance has been requested. Cooperate fully with local authorities.

17. If power is off, check your freezer and plan meals to use up foods which will spoil quickly. Ice crystals remain in the center of food in a well-stocked freezer for up to three days. Plan WHAT to take out WHEN in order to limit the number of times the freezer is opened. Tape your plan on the freezer.
18. Use outdoor charcoal broilers, camping stoves, or fondue pots for emergency cooking. Be sure there is adequate ventilation.

## Winter Storms

# Winter Storms

The National Weather Service is responsible for the timely issuance of weather warnings to the public, including the approach of winter storms.

**Ice Storm.** Freezing rain or drizzle is called an ice storm. Moisture falls in liquid form but freezes upon impact. The term "heavy" is used to indicate an ice coating sufficiently heavy to cause significant damage to trees, overhead wires, and similar objects. Ice storms are sometimes incorrectly referred to as "sleet storms." Sleet is identified as frozen raindrops (ice pellets) which bounce when hitting the ground or other objects. Sleet does not stick to trees and wires but sleet in sufficient depth does cause hazardous driving conditions.

**Snow.** When used in a forecast, without a qualifying word such as "occasional" or "intermittent," snow means that the fall of snow is of a steady nature and will probably continue for several hours without letup.

1. "Heavy snow warnings" are issued to the public when a fall of six inches or more is expected in a 12-hour period, or a fall of 10 inches or more is expected in a 24-hour period.
2. Snow flurries are defined as snow falling for short durations at intermittent periods; however, snowfall during the flurries may reduce visibility to an eighth of a mile or less. Accumulations from snow flurries are generally small.
3. Snow squalls are brief, intense falls of snow and are comparable to summer rain showers. They are accompanied by gusty surface winds.
4. Blowing and drifting snows generally occur together and result from strong winds and falling snow or loose snow on the ground. Blowing snow is defined as snow lifted from the surface by the winds and blown about to a degree that horizontal visibility is greatly restricted.
5. "Drifting snow" is a term used in forecasts to indicate that strong winds will blow falling snow or loose snow on the ground into significant drifts.
6. Blizzards are the most dramatic and perilous of all winter storms, characterized

by low temperatures and by strong winds bearing large amounts of snow. Most of the snow accompanying a blizzard is in the form of fine, powdery particles of snow which are whipped in such great quantities that at times visibility is only a few yards.

7. Blizzard warnings are issued when winds with speeds of at least 35 mph are accompanied by considerable falling or blowing snow and temperatures of 20 degrees F or lower are expected to prevail for an extended period of time.
8. Severe blizzard warnings are issued when blizzards of extreme proportions are expected and indicate winds with speeds of at least 45 mph plus a great density of falling or blowing snow and a temperature of 10 degrees F or lower.

**Cold Wave Warning.** This term indicates an expected rapid fall in temperature within a 24-hour period which will require substantially increased protection for agricultural, industrial, commercial, and social activities.

**Hazardous Driving (Travelers) Warning.** These are issued to indicate that falling, blowing or drifting snow, freezing rain or drizzle, sleet, or strong winds will make driving difficult.

**Stockmen's Warning.** This alerts ranchers and farmers that livestock will require protection from large accumulations of snow or ice, a rapid drop in temperature, or strong winds.

**Wind Chill Factor.** Strong winds combined with low temperatures cause a very rapid cooling of exposed surfaces. Unprotected portions of the body, such as the face or hands, can chill rapidly and should be protected as much as possible from the cold wind. A very strong wind, combined with a temperature slightly below freezing, can have the same chilling effect as a temperature nearly 50 degrees F lower in a calm atmosphere. Arctic explorers and military experts have developed a term called the "wind chill factor," which states the cooling effect of various wind and temperature combinations. The Weather Service issues this information as the "wind chill index."

## Winter Storm Safety Rules

1. **Keep informed of winter storms** by listening to the latest National Weather Service warnings and bulletins on radio and television.
2. **Check battery-powered equipment** before the storm arrives. A portable radio or television set may be your only contact with the world outside the winter storm. Also check emergency cooking facilities and flashlights.
3. **Check your supply of heating fuel.** Fuel carriers may not be able to move if a winter storm buries your area in snow.
4. **Check your food supply.** Your supplies should include food that requires no cooking or refrigeration in case of power failure.
5. **Prevent fire hazards** due to overheated coal or oil-burning stoves, fireplaces, heaters, or furnaces.
6. **Stay indoors during storms** and very cold weather. If you must go out, avoid overexertion.
7. **Use moderation** when shoveling snow. It can be very exhausting for anyone not in good physical condition and may bring on a heart attack--a major cause of death during and after winter storms.
8. **Dress to fit the season.** If you spend much time outdoors, wear loose-fitting, lightweight, warm clothing in several layers; layers can be removed to prevent perspiring and subsequent chill. Outer garments should be lightly woven, water-repellent, and hooded. The hood should protect much of your face and cover your mouth to ensure warm breathing and protect your lungs from the extremely cold air. Remember that entrapped, insulating air, warmed by body heat, is the best protection against cold. Layers of protective clothing are more effective and efficient than single layers of thick clothing. Mittens, snug at the wrist, are better protection than fingered gloves.

## Use of Automobiles During Winter Storms

Your automobile can be your best friend--or worst enemy--during winter storms, depending on your preparations. Get your car "winterized" before the storm season begins. Everything on the checklist shown below should be taken care of before winter storms strike your area:

Ignition system	Lubrication
Defroster	Battery
Snow tires	Lights
Heater	Chains
Wiper blades	Antifreeze
Brakes	Fuel system
Cooling system	Winter-grade oil
Tight exhaust system	

1. **Winter Storm Car Kit.** Be equipped for the worst. Carry a winter storm car kit, especially if cross country travel is anticipated. The kit should contain blankets or sleeping bags, matches and candles, an empty 3-pound can with plastic cover, extra clothing, high-calorie nonperishable food, compass and road maps, knife, first aid kit, shovel, sack of sand, flashlight or signal light, windshield scraper, booster cables, two chains, fire extinguisher, and an axe.
2. **Winter travel** by automobile is serious business. Keep these points in mind, especially for severe storms:
  - a. If the storm exceeds or even tests your limitations, seek available refuge immediately.
  - b. Plan your travel and select primary and alternate routes.
  - c. Check latest weather information by phone or on your radio.
  - d. Try to travel with others along.
  - e. Travel in convoy with another vehicle, if possible.

## Winter Storms

- f. Always fill the gasoline tank before entering open country, even for a short distance.
  - g. Drive carefully and defensively.
3. **If you are trapped in a vehicle** by a blizzard, avoid overexertion and exposure. Exertion from attempting to push your car, shoveling heavy drifts, or performing other difficult chores during the strong winds, blinding snow, and bitter cold of a blizzard may cause a heart attack--even for persons in apparently good physical condition.

Stay in your vehicle. Do not attempt to walk out of a blizzard. Disorientation comes quickly in blowing and drifting snow. Being lost in open country during a blizzard is almost certain death. You are more likely to be sheltered in your car.

Don't panic. Keep fresh air in your car. Freezing wet snow and wind-driven snow can completely seal the passenger compartment. Beware of the "gentle killers"--carbon monoxide and oxygen starvation. Run the motor and heater sparingly, and only with a rear window open for ventilation.

Exercise by clapping hands and moving arms and legs vigorously from time to time, and do not stay in one position for long. Turn on the dome light at night to make the vehicle visible to work crews. Keep watch. Do not permit all occupants of the car to sleep at once.

### Hypothermia

Cold kills in two distinct steps:

Exposure and Exhaustion. The moment your body begins to lose heat faster than it produces it, you are undergoing exposure. Two things happen:

- You voluntarily exercise to stay warm.
- Your body makes involuntary adjustments (such as shivering) to preserve normal temperature in the vital organs.

Either response drains your energy reserves. The only way to stop the drain is to reduce the degree of exposure. The time to prevent hypothermia is during the period of exposure and gradual exhaustion.

Hypothermia. If exposure continued until your energy reserves are exhausted:

- Cold reaches the brain depriving you of judgment and reasoning power. You will not realize this is happening.
- You will lose control of your hands (they will become numb and you will not be able to grasp or hold onto things.) This is hypothermia. Your internal temperature is sliding downward. Without treatment, this slide leads to stupor, collapse, and death.

One of the most common types of hypothermia deaths is drowning while swimming in lakes and rivers. The swimmer is usually not aware of just how cold the water is. He tries to swim too far and the cold of the water zaps his energy, lowers his body temperature; he develops cramps and drowns. Swimming in lakes and rivers is not at all like swimming in heated swimming pools. Even on a hot summer day the water may be dangerously cold. Use extreme caution, especially when swimming in high mountain lakes or rivers or in reservoirs fed by melted snow.

Duck hunters and other sportsmen who hunt or fish from boats in fall and winter must use extra caution. If they fall into the lake or river they may not even have a chance to save themselves because the shock to the body's nervous system from being suddenly plunged into ice cold water can instantly cripple and drown them before they even know what happened.

### Your first Line of Defense: Avoid Exposure

- **Stay dry:** When clothes get wet, they lose about 90% of their insulating value. Wool loses less; cotton, down, and synthetics lose more.
- **Beware of the wind:** A slight breeze carries heat away from bare skin much faster than still air. Wind drives cold air under and through clothing. Wind refrigerates wet clothes by evaporating moisture from the surface. Wind multiplies the problems of staying dry.



- **Understand cold:** Most hypothermia cases develop in air temperatures between 30 and 50 degrees. Most outdoorsmen simply can't believe such temperatures can be dangerous. They fatally underestimate the danger of being wet at such temperatures. 50 degree water is unbearably cold. The cold that kills is cold water running down the neck and legs, cold water held against the body by sopping clothes, cold water flushing body heat from the surface of the clothes. Don't ask, "How cold is the air?" Ask instead, "How cold is the water against my body?"
- **Use your clothes:** Put on rain gear before you get wet. Put on wool clothes before you start shivering.

### Your Second Line of Defense: Terminate Exposure

If you cannot stay dry and warm under existing weather conditions, using the clothes you have with you, terminate exposure.

- **Be brave enough to give up** reaching the peak or getting the fish or whatever you had in mind.
- **Get out of the wind and rain.** Build a fire. Concentrate on making your camp or bivouac as secure and comfortable as possible.
- **Never ignore shivering.** Persistent or violent shivering is clear warning that you are on the verge of hypothermia
- **Make camp!** Forestall exhaustion. Make camp while you still have a reserve of energy. Allow for the fact that exposure greatly reduces your normal endurance.

You may think you are doing fine when in fact your exercising is the only thing preventing your going into hypothermia. If exhaustion forces you to stop, however briefly:

- Your rate of body heat production instantly drops by 50% or more.
- Violent, incapacitating shivering may begin immediately.

- You may slip into hypothermia in a matter of minutes.

Appoint a foul-weather leader. Make the best protected member of your party responsible for calling a halt before the least protected member becomes exhausted or goes into violent shivering.

### Your Third Line of Defense: Detect Hypothermia

If your party is exposed to wind, cold, and wet, **think hypothermia.** Watch yourself and others for symptoms.

- Uncontrollable fits of shivering
- Vague, slow, slurred speech
- Memory lapses. Incoherence
- Immobile, fumbling hands
- Frequent stumbling. Lurching gait.
- Drowsiness (in this state to sleep is to die)
- Apparent exhaustion. Inability to get up after a rest.

### Your Fourth and Last Line of Defense: Treatment

The victim may deny he's in trouble. Believe the symptoms, not the patient. Even mild symptoms demand immediate, drastic treatment.

1. Get the victim out of the wind and rain.
2. Strip off ALL wet clothes.
3. If the patient is only mildly impaired:
  - a. Give him warm drinks.
  - b. Get him into dry clothes and warm sleeping bag. Well wrapped, warm (not hot) rocks or canteens will hasten recovery.
4. If the patient is semi-conscious or worse:
  - a. Try to keep him awake. Give warm drinks.
  - b. Leave him stripped. Put him in a sleeping bag with another person (also stripped).
  - c. If you have a double bag, put the victim between two warm donors. Skin

## Winter Storms

to skin contact is the most effective treatment at this point.

- d. Build a fire to warm the camp.

## Think Hypothermia

If you are outdoors for recreation, you presumably do not intend to jeopardize your life. Hypothermia may be a new word to you but it's the ONLY word that describes the rapid, progressive mental and physical collapse accompanying the chilling of the inner core of the human body. Hypothermia is caused by exposure to cold, aggravated by wet, wind and exhaustion. It is the No. 1 killer of outdoor recreationists.

1. Take heed of hypothermia weather.
2. Watch carefully for warning symptoms.
3. Choose equipment with hypothermia in mind.
4. Think hypothermia.

## Flood

The National Oceanic and Atmospheric Administration (NOAA), through its Weather Service's River Forecast Centers and River District Offices, issues flood forecasts and warnings when rainfall is enough to cause rivers to overflow their banks and when melting snow may combine with rainfall to produce similar effects.

Flood warnings are forecasts of impending floods and are distributed to the public by radio and television and through local government emergency personnel. The warning message indicates the expected severity of flooding (minor, moderate, or major), the affected river or lake, and when and where flooding will begin. Careful preparations and prompt response will reduce property loss and ensure personal safety.

Flash flood warnings are the most urgent type of flood warning issued and are transmitted to the public over radio, television, and by other means established by local needs.

Area radio and television stations usually broadcast the latest flood information and warnings. However, more specific advice and instructions will be given through local media by local government.

### Before the Flood

1. Find out if your residence is located in a probable flood plain so you can determine if you may be flooded. This information may be obtained from the local City or County Engineering Department. Make advance plans (what to do and where to go) for a flood emergency.
2. Keep a stock of food which requires little cooking and no refrigeration; electric power may be interrupted.
3. Keep portable radio, emergency cooking equipment, lights, and flashlights in working order.
4. Keep first aid and critical medical supplies (prescriptions, insulin, etc.) at hand.
5. Keep your automobile fueled; if electrical power is cut off, filling stations may not be able to operate pumps for several days.

6. Keep materials like sandbags, plywood, plastic sheeting, and lumber handy for emergency waterproofing.
7. Keep your insurance policies and a list of personal property in a safe place, such as a safe deposit box. Know the name and location of the agent(s) who issued these policies.
8. Buy flood insurance. Protection against loss due to floods is not covered under a homeowner's policy. You should contact your property/casualty agent or broker about eligibility for flood insurance, which is offered through the National Flood Insurance Program (NfiP). Generally, there is a five-day waiting period for this policy to become effective, so don't wait until the last minute to apply. Generally, any contents contained in a walled and roofed structure can be covered. However, the contents must be insured separately. Flood insurance will not cover such things as gas and liquid storage tanks, landscaping, sidewalks, crops, pollutants, septic tanks, roads, motor vehicles, valuable papers (such as deeds, accounts, currency, etc.), livestock or pets.
9. Protect your valuables by transferring them to floors above projected flood levels and enclose them in polyethylene sacks.
10. Have 72-hour emergency supplies ready, in portable container. Store in location for easy access near main exit of home.
11. Stay tuned to your emergency radio station for instructions. (AM 1160 or KSL channel 5).

### When You Receive a Flood Warning

1. Store drinking water in closed, clean containers. Water service may be interrupted.
2. If flood is likely, and time permits, move essential items and furniture to upper floors of your house.
3. If time permits, before leaving home, cut off all electric circuits at the fuse panel or disconnect switch. If this is not possible, turn off or disconnect all electrical appliances. Shut off the water service and gas valves in your home. (Before making announcements on shutting off gas valves,

## Flood

local officials should check with the gas company.)

4. Turn off the main water valve to trap the maximum amount of uncontaminated water in your home.
5. If forced or advised to leave your home, move to a safe area before access is cut off by flood water.
6. Take 72-hour emergency kits with you plus extra blankets if possible.

### During the Flood

1. Avoid areas subject to sudden flooding.
2. Do not attempt to cross a flowing stream where water is above your knees.
3. Do not attempt to drive over a flooded road. You can be stranded and trapped.
4. If your vehicle stalls, abandon it immediately and seek higher ground. Many people drown while trying to rescue their car.
5. Listen for information on the location of emergency housing and public feeding stations.

### After the Flood

1. Do not use fresh food that has come in contact with flood waters.
2. Assume that the water is contaminated and purify it by boiling or use of chemicals until notified by local authorities. Wells should be pumped out and the water tested before drinking.
3. Do not visit disaster areas; your presence will probably hamper rescue and other emergency operations.
4. Do not handle live electrical equipment in wet areas; electrical equipment should be checked and dried before it is returned to service.

5. Use flashlights, not lanterns or torches, to examine buildings; flammable substances may be inside.
6. Report broken utility lines to police, fire, or other appropriate authorities. Telephone numbers of local agencies, as well as emergency numbers for our area, should be published and broadcast by the local media.
7. Keep tuned to radio and television stations for instructions on:
  - where to go to obtain necessary medical care in your area.
  - where to go for emergency assistance such as housing, clothing, food, etc.
  - ways to help yourself and your community recover from the emergency.

# Fire: Major Structural

According to the Red Cross, the third leading cause of accidental death in recent years has been fire. Most of these fires have occurred in the home, which is a particularly dangerous environment. Fire is always a possible danger, and a probable secondary disaster in the event of a major earthquake or flood. It is always important that you follow safety measures for fire prevention, detection, and escape. It is doubly important after an earthquake because regular fire fighters may not be able to get to you in time. Floods and other natural disasters will also spawn a large number of fires because of electrical shorts and severed gas lines.

## Prevention

Most accidental fires can be avoided with a little care. Firemen have a saying that "a clean building seldom burns." Good housekeeping is the first line of defense against home fires. Do you practice fireproof housekeeping?

There are several steps a family can take to minimize the possibility of a fire starting in their home and to minimize the effects of a fire should one occur.

- Install fire extinguishers in danger spots. The hand pump, inexpensive, 5-gallon, water type is preferred. Carbon Tetrachloride and other vaporizing liquid type extinguishers are NOT recommended for use in small enclosed spaces, because of the dangers of poisonous fumes.
- Make sure fire extinguishers are accessible and maintained.
- Keep a garden hose near the water faucet at all times, especially in the winter months when fire danger is greatest.
- Install adequate insulation at all heating locations. This is particularly important around wood and coal-burning stoves.
- Repair or replace defective or inadequate electrical wiring.
- Use only the proper size fuses.
- Replace frayed electrical cords or broken plugs.
- Do not run cords under rugs or hook cords over nails.

- Keep electric outlets safely loaded (no overloads). Keep appliances clean and in good repair.
- Perform required maintenance on heating systems.
- Dispose of trash immediately.
- Use only non-flammable cleaning fluids.
- Keep gasoline and other flammable liquids in tightly- closed metal containers.
- Do NOT use a combustible liquid to freshen a fire.
- Keep garage, basement, attic, closets, etc. free of rubbish.
- Keep the yard and garden well trimmed (no tall weeds, etc.).
- Use a fireplace screen.
- Install a spark arrestor on your chimney.
- Place curtains and drapes so that they won't blow into flames or touch hot surfaces from stoves, fireplaces, candles, etc.
- Supervise children playing near an open fire.
- Store matches in metal containers out of sight and reach of small children.
- Turn pot handles away from the edge of the stove.
- Keep important papers and documents in a fire-proof box or safe.
- Install and maintain home smoke detectors. More lives are saved each year by smoke detectors than all other fire fighting tools and equipment combined. A home without one is only inviting trouble or tragedy.
- Instruct babysitters in fire and other emergency procedures.
- Post emergency numbers for the fire department on ALL telephones.
- Each family should have a pre-arranged escape plan for getting out of their home in case of fire. There should be at least two exits from every room (doors or windows).
- Determine a pre-arranged meeting area that all family members should go to IMMEDIATELY when they leave the home if it is on fire. This could be a tree in the front yard, the neighbor's porch, etc. This will facilitate taking a "head count" and could save the life of a would-be rescuer who

## Fire: Major Structural

returns to a burning building to search for someone who has already gotten out.

- If a major fire develops near your home, refer to safety rules in **Fire: Forest and Wild Land** section.

### Detection

Statistics show that most FATAL fires occur while the family is sleeping. Smoke and toxic gases are the killers in most home fires rather than flames. **Smoke detectors** (either ionization types or photo-electric detectors powered by electricity or battery) can alert your family while the fire is still small, which may mean the difference between life and death.

For **minimum protection** there should be a smoke detector between the bedrooms or sleeping areas and the rest of the house, and/or a smoke detector at the head of each stairway. The amount of detection equipment needed in your home or apartment will be determined by the size and floor plan of your living space, your life style, and how much money your family is willing to spend. (Your local fire department can give you assistance in planning your fire detection system).

### Escape

If you are in a burning building, above all, **remain calm**. More people are killed each year through foolish actions caused by panic than by actual flames. If a fire does occur, your home might be saved if you know how to fight fires, act promptly, and have on hand some basic fire fighting tools. Give detailed fire fighting duties to each able family member so that you all learn to work as an efficient team. Be sure everyone in your home understands what starts fires, how they spread, and what can be done to control them. In a major earth quake, neighbors will have to work together to keep fires from spreading. When a fire breaks out **evacuate yourself and your family members first**, then call the fire department. If there is time and if you have the proper equipment to fight a fire and can do so without endangering yourself you may then begin to fight the fire the best way you can. Keep the following in mind to minimize dangers.

- Before opening an interior door feel the door, or the handle, to see if it is hot.

IF hot or warm, do not open it if there is any other means of escape.

- Before opening a door take a deep breath and hold it. Hot air on the other side of the door could sear your lungs causing instant death.
- IF you must open a door, brace your shoulder against it so that you can slam it immediately if the air on the other side is hot.
- Close doors behind you to prevent drafts and to slow the fire spread.
- Crawl along the floor on your stomach because the air will be cooler and fresher there; hot air and poisonous gases will rise.
- If trapped in a burning building do not panic. Stuff drapes or clothing into cracks around the door to prevent smoke from entering your room.
- Open or break the windows at the top to let out smoke and poisonous gases.
- Open or break the window at the bottom and breathe from this point.
- If there is a telephone in the room, call the fire department and report your exact location.
- If at all possible, **get out of the building fast**. Do not stop to dress, gather pets, valuables, or toys.
- **Once out--stay out!!** Smoke and toxic gases can kill you in minutes.

Meet at the established meeting place outside as soon as possible. When two people reach the meeting place, one should leave to notify the fire department. The second should stay to report to the rest of the family that the caller escaped and has gone for help.

### Fire Drills

Include fire escape procedures in your family earthquake drill, and hold separate fire drills on other occasions. Give special consideration for the very young, handicapped, and the elderly. Remember that smoke, some toxic gases, and heat rise. You can simulate fire conditions by crawling on hands and knees to the nearest wall and following it around to the

## Fire: Major Structural

door. Keep head about 18 inches from the floor and take short, small breaths while escaping. Never stand up! Cover mouth with a damp cloth if possible. Teach your family not to open doors if they are hot. Keep doors and windows closed to limit rapid spreading of the fire.

When staying in a hotel or motel, the key to survival is you! Before making reservations ask about fire prevention measures (sprinkler system and smoke detectors). Always know two ways to exit your room and the hotel (do not use the elevator). At first sign of fire, leave as fast as possible, taking room key. If you encounter smoke, take the second exit route or return to your room, close the door and call for help. Be sure to follow the steps outlined above.

For children, a fire drill should be a wise mixture of seriousness and a game--never a scary experience. Children who have had fire drill practice at home will almost automatically do the right thing in a real emergency. Without such practice, they all too often hide under a bed or in a closet, which can mean disaster. Instruct babysitters on what to do in case of fire.

### Fire Extinguishers

There are many types of fire extinguishers. It is best to read the labels and instructions. Not all types of extinguishers can be used on every kind of fire.

Pressurized water extinguishers (Class A) are good for trash, paper, cloth, and wood fires, but are normally not used for flammable liquid (Class B) or electrical (Class C) fires. To extinguish a flammable liquid fire, first smother it. Then use an extinguisher marked for Class B fires. The extinguishing agent should cover the extra flaming liquid surface.

Extra caution must be used when extinguishing electrical fires. Use a Class C extinguisher. This contains a non-conducting extinguishing agent that will prevent the user from getting shocked. A Class ABC extinguisher can be used on all three types of fires.

**Care of home fire fighting equipment.** Keep tools that can be used to fight fire where they can be easily reached. Don't put the garden hose, rake, and shovel out of reach just because the gardening season is over. Check the hose for leaks and damaged connections. Make

sure that faucet adapters are where they can be found quickly. Hang a ladder in a convenient location even when it isn't needed for painting or putting up window screens. Inspect the



rungs to make sure they are solid and clean. Store buckets where they can be found when needed and keep them free of trash.

### Extinguishing Fires

Under normal conditions, it is best to call the fire department immediately after evacuating the premises. While help is on the way, try to control the spread of the fire yourself if it is safe to do so. Always keep an open escape route between you and the fire.

Understanding fire can help a great deal in reducing fears about it. Three things must exist in order for a fire to occur. These are heat, fuel, and air, sometimes represented in a triangle. If any leg of the triangle is removed, there can be no fire. Most fires can be prevented by keeping one side of the triangle away from the other two.

Examples:

- Store flammable liquids away from water heaters, furnaces, and other heat and spark sources.  
Fuel + Air - No Heat
- Store oily rags in a sealed metal container.  
Fuel + Heat  
(spontaneous combustion)  
No Air.

## Fire: Major Structural

- Keep old rags, newspapers, and trash away from furnace.  
Air + Heat - No Fuel
- Most fires can be extinguished by the quickest means possible, using whatever tools are available.  
Remember the three basic ways to put out a fire:
- Take away its fuel.
- Take away its air (smother it).
- Take away its heat by cooling it with water.

**Know how to fight a fire.** When a fire is noticed, get the building's occupants out first, notify the fire department, then fight the fire. Assume that help will not be available immediately and go to work with whatever equipment is at hand. Don't stop fighting the fire until it is out or until it becomes too big for you.

All fires destroy by heating and burning, but all fires are not put out by using the same method. The method for extinguishing a fire depends on what is burning and what caused it to burn. It is important to know the difference because the wrong method of fighting a fire can increase the danger.

**Using water to fight a fire.** The type of water stream that is used on a fire is important, especially when the amount of water available is limited. Water should be applied to the fire as closely as possible. If the fire is small, the best method is for a person to get close enough to use a spray on it. A spray cools the fuel more quickly. A fire that is too hot for close approach may have to be fought with a solid stream of water. IF this is the case, be sure to keep the stream moving over the base of the fire.

**Ordinary combustible fires.** Ordinary combustibles are the materials that are usually found in and around the home such as paper, wood, and cloth. Fires that are burning ordinary combustibles can be put out by cooling or smothering. A stream of water from a garden hose or a fire extinguisher or splashes from a pail of water will cool the burning object so that it will stop.

When using a hose or fire extinguisher, aim the stream at the base of the fire, not at the smoke

or flame. Make sure it is completely out and that there are no smoldering embers left to rekindle the fire.

If a person's clothing catches on fire, don't let the victim run but force him onto the ground. Smother the flames with a coat or blanket, or roll the person up in a rug. Simply rolling the victim without a covering will help. Try to prevent the person from inhaling the flames. Immediately treat them for shock and bathe them in cool water. Get medical attention immediately.

To protect a house from catching fire due to flying sparks or heat radiation from another fire, remove all rubbish that is near the house, close the windows, and wet down the house and yard with a hose.

**Flammable liquids and gas fires.** Flammable liquids are those liquids which give off flammable vapors, including gasoline, oil, kerosene, and paint. Be very careful when fighting this kind of fire because it is not like an ordinary combustible fire. A flammable liquid fire must be smothered. Use a foam, dry chemical, or carbon dioxide (CO<sub>2</sub>) extinguisher. These fire extinguishers are marked for Class B fires. When using the extinguisher, avoid splattering as this could spread the fire. If the burning liquid is spread out and is not deep, the fire can be put out by throwing sand or dirt on it.

Never use a solid stream of water on this type of fire. The flammable liquid will splatter and will also float on top of the water. The fire will not be smothered and the fire can spread as the water and flammable liquid flow away. A water spray can later be used to cool the fuel and completely extinguish the fire.

If the fire is in a confined area, such as an oil drum, paint bucket, or kitchen skillet, it can be put out by covering the container with a lid. Small cooking fires can be smothered by turning off the gas, covering a pot, closing the oven door, or dousing it with salt or baking soda.

**Note:** If burning gas is the cause of the fire, turn off the gas supply valve. Don't try to extinguish burning gas without turning off the supply valve, otherwise the result may be an explosion. IF the flow of gas cannot be stopped, allow the gas to continue burning and protect the surroundings. This type of fire is very likely after an earthquake.



**Electrical fires** are caused by the shorting of electric wires or the overheating of electrical equipment. There is always the danger of electrical shock while fighting this type of fire. First, try to unplug the appliance or shut off the main electric switch at the fuse box. Then fight the fire with dry chemical, carbon dioxide, or any other Class C fire extinguisher. The fire extinguishing agent in these extinguishers will not conduct electricity, and the user will not get an electrical shock. Never use water on an electrical fire unless you are absolutely sure that the power has been shut off; otherwise you can get a shock that could kill you. Don't turn the power back on or reconnect the appliance until the cause of the fire has been found and corrected.

## Fire: Forest and Wildland

Though forest and brush fires can start without warning, federal and state governments maintain a system of watch towers or surveillance aircraft manned by the U.S. Forest Service and state forest services to ensure that the location of fires can be determined, warnings issued, and necessary emergency actions taken in prompt fashion.

### Safety Rules

#### When a forest or major brush fire threatens:

1. Keep posted on the progress of fires by listening to radio and television stations (AM 1160 and KSL Channel 5). Instructions for local citizens will be issued over these stations by the mayor and Civil Defense personnel.
2. To know what to do when a forest or brush fire threatens may mean the difference between life and death. If you spot a fire, report it immediately by telephone to the local police department, fire department, or county fire marshal (post the telephone numbers of these officials in a convenient location). Do not use the telephone to receive information and instructions--depend on radio or TV as indicated above.
3. If you are burning trash or debris, immediately put the fire out.
4. If you are home and have a fire in the fireplace or in other structures, put it out immediately.
5. Make certain your own property is clear of combustibles, particularly brush, that may be hazardous to your home or other structures. Do not store combustible items next to your home such as wood.
6. Hook up garden hoses and prepare to wet down your roof if sparks from the fire threaten. (Due to water pressure this may not apply in some areas).
7. If time permits and it is required, remove and clear away flammable vegetation up to 30 feet on each of your homes or other structures.
8. Close all windows (cover if possible, and remove combustibles near windows and other openings. Protect and secure pets and stock animals. Double pane windows are an excellent barrier against the external heat of fire.
9. After your own home is prepared, be ready to assist in constructing community fire breaks if asked to do so.
10. IF area evacuation is called for, get full information on exit routes and relocation areas.

If your community is involved in a forest or brush fire:

11. Cooperate with local authorities; keep posted on the progress of the fire by listening to radio and television broadcasts.
12. Follow evacuation directions.
13. Do not use fire fighting entrance routes. These are reserved for emergency vehicles only.
14. Assist in community fire fighting operations if you are between ages 18 to 50 and are able-bodied. All others should keep clear of the fire area.
15. Make certain you are under the supervision of designated fire fighters. Follow their instructions, since they know how the fire is being fought and where you will be of most value to the operation.
16. Follow safety precautions to prevent getting trapped. Ground winds and fuels are tricky. Follow instructions. Keep informed. Know where the fire is in relation to you. Know your escape route. Keep calm. Maintain communication with your supervisor. Don't find yourself alone.

# Damaging Winds

### Precautionary Measures (after warning has been received).

Keep your radio and/or television on (AM 1160 and Channel 5) and listen for the latest weather reports and advisories. If power fails, use portable battery-powered radios or your car radio. Check your battery-powered equipment. Your radio may be your most essential item. Emergency cooking facilities and flashlights should also be checked.

**Board up windows** or protect them with storm shutters or tape. Danger to small windows is mainly from wind-driven debris. Larger windows may be broken by wind pressure. To relieve wind pressure, open windows about one inch at opposite ends of the home.

**Secure outdoor objects** that might be blown away or uprooted. Garbage cans, garden tools, signs, porch furniture, and a number of other harmless items become missiles of destruction in gale-force winds. Anchor them or store them inside before the storm strikes.

**Store drinking water** in clean, closed containers, such as jugs, bottles, etc.; these may be needed if water supplies become contaminated due to wind damage.

**Keep your car fueled.** Service stations may be inoperable after the storm strikes due to interrupted electrical power.

If you live in a mobile home or other nonpermanent dwelling, **prepare to evacuate** to a designated shelter.

**Remain indoors** during the storm itself, (staying away from windows) and in the most reinforced area of the home. Travel can be extremely dangerous during high winds.

### Safe Measures (after passage of damaging winds)

**Remain at home or in shelters** until informed by local officials that it is safe to leave.

**Keep tuned to your radio or television** for instructions on; Where to go to obtain necessary medical care in your area.

- Where to go for necessary emergency assistance for housing, clothing, and food.
- Ways to help yourself and your community recover from the emergency.

**Use extreme caution in entering or working in buildings** that may have been damaged or weakened by the disaster; they may collapse without warning. Also, there may be gas leaks or electrical short circuits.

**Don't take lanterns, torches, or other flame sources into buildings** that have been damaged by wind; there may be leaking gas lines or flammable material present. Use battery-powered flashlights, spotlights, etc.

**Stay away from fallen or damaged electric wires;** these may still be dangerous. Notify the utility company, the police, or the fire department.

**Check for leaking gas pipes** in your home. Do this by smell--don't use matches or candles. If you smell gas:

1. Open all windows and doors.
2. Turn off the main gas valve at the meter. A tool for this purpose should be stored chained to or near the gas meter.
3. Leave the house immediately.
4. Notify the gas company or the police.
5. Don't re-enter the house until you are told it is safe to do so.

If any of your electrical appliances are wet, first turn off the main power switch in your house, then unplug the wet appliance, dry it out, reconnect it, and turn on the main power switch. Do not do any of these things while you are wet or standing in water. If a fuse is blown when the electric power is restored, turn off the main power switch again, then inspect for short circuits in your home wiring, appliances, and equipment.

**Check your food and water supplies before using them.** Foods that require refrigeration may be spoiled if electric power has been off for some time. Also, do not use fresh food that has come in contact with flood waters.

## Damaging Winds

**Stay away from disaster areas.** Sightseeing could interfere with first-aid or rescue work and may be dangerous as well.

**Don't drive unless necessary,** but if you must, drive with caution. Watch for hazards to yourself and others and report them to local police or fire departments.

**Report broken sewer or water mains** to the local water department.

# Chemical and Radiological Accidents

The likelihood of a community suffering a major disaster caused by a chemical accident has greatly increased because of the increase in everyday use of chemicals by all segments of our population as well as the movement of chemicals by all types of transportation. These guidelines are designed primarily for communities like Magna which do not presently contain chemical plants but might be affected by a transportation accident or by an accident at a chemical plant in a neighboring community.

## Citizen Response

### Cooperate with Authorities

1. Prompt reporting of a chemical accident is every citizen's responsibility. Local authorities, and particularly emergency services personnel (police, fire, medical, and public works) need factual information in order to make base decisions on how to respond to the accident. Authorities must also be able to correctly answer questions from the news media so that erroneous reports are prevented.
2. A citizen should not spread rumors. If you are a witness but not a casualty, you should tell the authorities exactly what you saw. If not a witness, you should keep posted via radio or television but not rush to the scene, since this causes serious obstructions to those professionals who are attempting to save lives and property. The curious bystanders at the scene are needlessly exposing themselves to injury, particularly if dangerous chemical reactions are involved.

### Emergency Treatment of Casualties

You may find it necessary to administer emergency first aid to a victim of a chemical accident or to yourself if you have been injured. The treatment described in this section is limited to emergency procedures which anyone can administer. The first aid measures

## Chemical and Radiological Accidents

suggested rely heavily on the use of running water since it is usually readily available and will remove chemicals by solution, dilution, and mechanical action. These measures cover four of the principal types of chemical threats to people:

- inhalation
- skin exposure
- swallowing
- eye exposure

### Inhalation

1. Remove the person to an uncontaminated atmosphere. If the person has been overcome and is unconscious, do not attempt a rescue without the protection of proper respiratory equipment, preferably some form of self-contained breathing apparatus. Remember, a gas mask does not protect against atmospheric oxygen deficiency, nor is it effective in high concentrations (two percent by volume is the usual limit) of chemical vapors. Also, even though a self-contained air supply mask is worn, injury can occur through exposed skin surfaces if the air contaminant is an irritant or can be absorbed through the skin.
2. Have the person lie down and keep him or her warm. If breathing is difficult, a sitting position may be more comfortable. If the person is unconscious, see that the tongue does not fall back and obstruct breathing. If vomiting starts, turn the person on his/her side or face downward to prevent inhalation of vomited material.
3. If breathing has stopped, send for help and begin artificial respiration. Continue until breathing is restored or a physician arrives to take charge. Mouth-to-mouth breathing is the most effective method of artificial respiration. The back pressure-arm lift method is also very efficient.
4. If breathing becomes difficult or the color of the victim becomes blue-gray, check for obstructed airway. If the airway is clear, oxygen may be given by face mask, but only by someone familiar with the use of the equipment and authorized to do so.

## Chemical and Radiological Accidents

5. Call a physician as soon as possible or send someone to do this. Make sure the physician knows where the victim is and what the need is.
6. Never leave an unconscious person unattended.
7. Never attempt to give an unconscious person anything by mouth.

### Skin Exposure

1. Small exposures of skin should be promptly flooded with water and followed by thorough, gentle scrubbing with soap and water.
2. Contaminated clothing should be removed and the underlying skin washed with running water, followed by soap and water.
3. If extensive skin or clothing contact occurs, the person should be hurried to the nearest shower and clothing removed while standing in the shower. The skin should be thoroughly washed with water, followed by gentle scrubbing with soap and water.
4. Contaminated clothing should not be worn again until laundered.
5. A physician should be consulted in those cases which show skin effects from chemical exposure or in which symptoms of systemic illness appear.

### Swallowing

1. Induce the victim to vomit as quickly as possible. This may be done by having him/her drink several glasses of water, then sticking a finger down the throat. Another effective means for producing vomiting is to have the victim drink a glass of warm water in which a tablespoon of salt has been dissolved. **Caution:** If strong, caustic chemicals have been swallowed, vomiting may rupture damaged tissue and should NOT occur. Also, never give an unconscious person anything by mouth.
  2. Call a physician at once.
- Keep the victim lying down and as warm and comfortable as possible.

### Eye Exposure

1. Take the victim immediately to the nearest water fountain or other source of clean running water.
2. Spread the lids with the fingers and allow the water to flood the eye.
3. Roll the eye about so that the water may contact all eye surfaces.
4. Continue such emergency washing for 15 minutes.
5. Take the victim to a first aid station or to a physician as soon as possible after the emergency washing period.



# Emergency Communications

## Emergency Communications

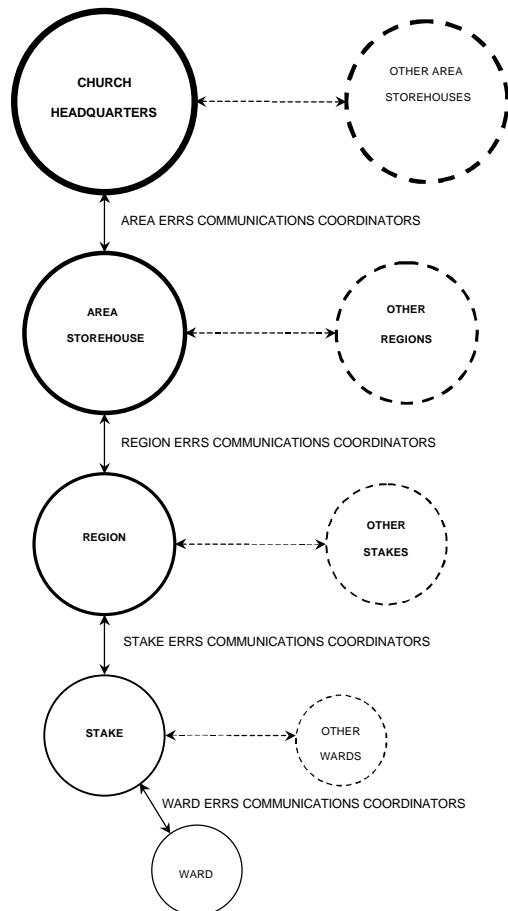
In times of disaster, normal means of communications may not be available. Telephone systems, computer networks even cellular phones are highly susceptible to failure in the event of an emergency. Knowing, understanding and planning for just such an emergency can save lives.

### ERRS

ERRS is the acronym for the "Emergency Response Radio System". This Amateur Radio communications network has been organized under the direction of the LDS Church Welfare Department to provide a means of reporting the critical information necessary to provide

emergency assistance in times of local, regional or national disaster. It is a specialized and dedicated network for Priesthood communications.

The ERRS network is staffed by skilled and licensed Amateur radio operators, called and set apart by the appropriate authority, at each level of the network. The title given to these communicators is [Unit designation] ERRS Communication Coordinator. At the Ward level the Bishop extends the call to the Ward ERRS Communication Coordinator. At the Stake level the Stake President extends the call to the Stake ERRS Communication Coordinator. At the Stake level the Stake President extends the call to the Stake ERRS Communication Coordinator. Each ERRS Communication Coordinator works directly with the associated unit leader at the level he/she is called to. Thus, at the Ward level, the callings full title is "Ward ERRS Communication Coordinator" and he/she is in essence the Bishops telephone during an emergency when no telephone service is available. The Diagram to the left will aid you in understanding the structure of the ERRS.



In an actual emergency, when the telephone system is no longer operational or useable, the ERRS is activated. Each ERRS Communication Coordinator, after securing the immediate welfare of his/her family, reports to a predetermined location and checks into the ERRS net as specified by net operating procedures. All emergency as well as assistance and health and welfare messages from the unit leader are then given a priority and entered in to a standard message format by the ERRS Communication Coordinator and transmitted to the next higher level in the network following standard net message handling protocol. Depending on the severity of the emergency and the priority of the messages, the messages flow through the network to the appropriate level (Stake, Region, Area and Church Headquarters in Salt Lake City) where the needed emergency response is determined and the necessary action taken. See the gray Supplement to the Welfare Manual, page 14 under the Leadership and Reporting section for a list of information unit leaders will need to be prepared to report. Some messages may only require acknowledgement as the response. This acknowledgement (or any other verbal response) will be sent back through the network to the appropriate unit ERRS Communication Coordinator originating the message. The ERRS Communication Coordinator will then relay the response message to the unit leader. All ERRS

members and their families the needed



## Emergency Communications

Communication Coordinators activated in the emergency will staff their respective posts until released by the Net Control Operator for their respective net.

In order for the ERRS network to function effectively in time of emergency, there must be a trained ERRS Communication Coordinator at each level. The LDS Church Welfare Department has appointed ERRS Communication Coordinators in the Utah North Area to establish a leadership and training program for all Region ERRS Communication Coordinators in the Utah North Area. This training has been in effect for the last several years and is held every six months. The March training is held at the Ogden Bishops Storehouse. In September the Utah North Area leaders are available to assist Regional Communicators with training in each region. The Region ERRS Communication Coordinator establishes training for the Stake ERRS Communication Coordinators in their region. Stake ERRS Communication Coordinators establish training for Ward ERRS Communication Coordinators in their Stakes. Training at each level is patterned after the training at the Area (Storehouse) level. Since this program is relatively new, many ERRS Communication Coordinator positions remain to be filled, especially at the Ward level. It is important that these positions be filled as soon as possible in order for the needed training to take place prior to an emergency.

### Amateur Radio

Amateur radio (sometimes called HAM radio) is one of the most versatile options available to private citizens. It provides tens of thousands of channels for local communications and thousands more for long distance communications.

By using hand held amateur radios it is possible to communicate hundreds of miles using linked repeater systems. One such system - the Evergreen Inter-tie, covers from central Vancouver Island, in British Columbia, Canada, south to almost the California border, and eastward to central Montana. There are also satellites, amateur television, data networks, and many more facilities. Hams also volunteer to help community and public safety agencies.

Local repeaters also have what are called "autopatch" systems, or a telephone

interconnection which allows the amateur radio operator to make telephone calls over the radio.

These repeaters are available to all licensed amateurs. Most repeaters welcome visitors, but it is common to join with the group which runs the repeater(s), that you most commonly use, to help defray costs via annual dues (usually \$10-\$20/year).

The license to operate these radios does require that you pass a test, but in recent years a license has been made available which **no longer requires a knowledge of the morse code**. The test is 55 questions long, in two parts. The questions are published so that a student can study the exact questions that will be asked. Classes are frequently taught to help with this test preparation.

### CB Radios

The Citizens Band Radio Service (CB) is a private, two-way, short-distance voice communications service for personal or business activities. The CB Radio Service may also be used for voice paging.

One of the nice things about CB Radio is that you do not need a license to use one.

Channel 9 is the Emergency Assistance Frequency- however you may use any channel to ask for emergency assistance Below are the channels, frequencies and common uses of each CB Channel.

#### Channel Frequency Common Use

<u>Channe</u>	<u>Use</u>	<u>MHz</u>
1		26.965
2		26.975
3	Unofficial Marine Channel	26.985
4		27.005
5		27.015
6		27.025
7		27.035
8		27.055
9	Emergency/Traveler Assistance	27.065
10		27.075
11	Formerly the Official Calling Channel	27.085
12		27.015

# Emergency Communications

13	Unofficial Marine Channel	27.115
14	Common Walkie-Talkie Channel	27.125
15		27.135
16	Old SSB Channel (23 channel days)	27.155
17		27.165
18	Old SSB Channel (23 channel days)	27.185
19	Truckers/Highway Channel	27.185
20		27.205
21		27.215
22		27.225
23	Shared with Remote Control Devices	27.255
24		27.235
25		27.245
26		27.265
27		27.275
28		27.285
29		27.295
30		27.305
31		27.315
32		27.325
33		27.335
34		27.345
35	SSB Channel (Regional)	27.355
36	SSB Channel (Regional)	27.365
37	SSB Channel (Regional)	27.375
38	SSB Channel (Regional)	27.385
39	SSB Channel (Regional)	27.395
40	SSB Channel (Regional)	27.405

- Common SSB channels by informal agreement. All modes (AM & SSB) are permitted on any frequency.
- On January 1, 1977, the FCC expanded the Citizen Band from 23 to 40 channels.
- Maximum RF Output Power - 4 watts  
Amplitude Modulation - 12 watts peak envelope power Single Side Band

## Walkie-Talkie

Walkie-Talkie radios may be used over short distances. Many of the walkie-talkie type radios

are used in sets. To speak to others they must have a similar radio or have their radio set to the frequency you are broadcasting on.

Walkie-Talkie radios may be useful for short distance communication between family members or neighbors Walkie-Talkies may not be useful for long distances and care should be taken when choosing this form of communication equipment.

## Cellular Phones

Cellular Phones have become very popular over the last few years. They can be very handy in many emergency situations where you may need assistance but are not near a phone. They may be very useful in personal or family emergency situations such as having car trouble or an accident and you need assistance quickly.

Keep in mind that Cellular phones may not be available in some disaster situations where much of the telephone grid is knocked out.

## Communication Power

No matter what form of communication equipment you use, they all use some type of electrical power. Whether it is from a wall plug or small batteries you should prepare so that in times of emergency you have adequate power to operate your equipment.

If your communication equipment runs off of 110 AC/DC, how are you going to run your equipment in the case of a power failure? Does your equipment run off a battery? Do you have backup batteries? Many people use solar power to run their radio equipment and charge their batteries.

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