

What To Do When 911 Can't Come

DISASTER

FIRST AID

Disaster Preparedness Training at citizen and community level. Emergency care for yourself and others in the first minutes and hours of a catastrophic emergency, and for the days that follow.

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Northridge Freeway collapse, USGS photo



Be a part of the help instead of the helpless

This is **NOT** "Standard First Aid"

In medical emergencies what happens in the first minutes often makes the difference between life or death, between loss of a limb or active recovery. These are some crucial things anyone can do that could make the critical difference.

In a major disaster, 911 Emergency Services will be overwhelmed with calls, far more than they can respond to all at once. For the majority of us the wait for Medical help or Rescue is expected to be from 24 hours to 3 days. Will you know what to do When 911 Can't come?

What People Say About Disaster First Aid

"If you are serious about preparing yourself or your neighborhood for a major disaster like an earthquake, you need to buy this book: a tightly-focused, no-nonsense "How-To" guide that includes everything you need to know and nothing you don't need to know."

-David Baum, citizen neighborhood organizer, Bellevue Washington.

"Our Instructors really like the content of Disaster First Aid. We're also working on our First Aid Kits, and these (books) will be a part of each kit. The classes are very well received. We've had very positive feedback and plenty of volunteers offering to help."

-Jeannette Fleetwood, Employee Safety, Premera Blue Cross, Mountlake Terrace, Washington

"It's common-sense things that would save lives, but most people don't know them. Knowing Disaster First Aid would definitely benefit anyone."

-Steve Sornsins, M.D. Emergency Room Physician, Berkeley California

"The manual is concise, comprehensive and easy to follow information that anyone will find valuable, whether an experienced Emergency Room Nurse or someone with no First Aid experience at all."

-Debbie Grigg Morikawa, RN, BSN, E.R. Nurse, Santa Rosa California

"Your course went over very well. It looks like this class will continue into next year with this School District, as they were quite impressed with it."

-Kim Desch, BSN, NP, Teacher, Poway California,

"I ordered your Instructor Kit. It is fantastic. I am so impressed with the way you lay out the information. I am presenting it at the American Camp Association New England Conference."

-Juanita A. Allen, Director, Community Health and Wellness, Century Health Systems, Natick Massachusetts

"This DFA course empowers and encourages our students to take responsibility for the safety of their communities. The format is user-friendly, and the materials are clear, concise and a joy to present."

-Judy Harrod, Teacher, faculty sponsor of "The A-Team" student Disaster Response Team, The

The Disaster First Aid® book & Instructor Kit are used by many Police and Fire Department C.E.R.T. Public Education Training Programs for citizen's Disaster Preparedness. If your city doesn't use this Disaster First Aid course yet, ASK FOR IT.

About the author: The creator of Disaster First Aid is both a teacher and emergency caregiver. A former firefighter, Training Officer, Emergency Medical Services Officer and California CFSTES registered Regional Fire Instructor, Program Director of Fire Med a California EMSA approved Continuing Education program for EMTs and Paramedics, EMSA #01-0022, and a currently practicing Hospital ER Technician with more than 20 years of Hospital and Field experience.

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Dedication

We wish to thank
the Fire Departments of California.
Every Firefighter, EMT, and Paramedic
has contributed
to the creation of this book
either in fact or in spirit.
For what you do day in and day out,
from the heart, Thank you.

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DISASTER FIRST AID

What To Do When 911 Can't Come

Created in response to the urgent need for Disaster Preparedness Training at the citizen & community level. Includes *START* Rapid Triage and Emergency Care for yourself and others in the first minutes and hours of a catastrophic emergency and a Guideline for the days that follow.

Victoria Chames

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Information and techniques in this course are standard protocols used by Disaster Response Public Safety Agencies in California and the United States, adapted to the citizen level of ability and resources. They are intended for use in situations where massive emergency makes normal emergency and rescue services unavailable or seriously delayed. This course is not a substitute for professional medical care or rescue at any time when that is available.

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Introduction:

This is NOT "Standard" First Aid

In a catastrophic large-scale emergency, normal 911 resources will be overwhelmed and there will not be enough help for everyone immediately. For the majority of us, the wait for medical help and rescue is expected to be from 24 hours to several days.

Standard First Aid will not be much help in a large-scale disaster because it is built on the assumption that ambulance or Emergency Room services will be available quickly. For the great many, that will be impossible in a disaster.

Disaster First Aid covers the injuries and conditions expected to occur in large numbers in a severe medical emergency such as major earthquake, terrorist attack, massive explosion, or structure collapse. The course focuses on the critical first actions that are necessary to save lives and prevent the worsening of injury. These actions can be done by the average person, with emphasis on the rescuer / helper's own safety.

This course teaches you S.T.A.R.T. Rapid Triage and the most essential life-saving and limb-saving skills in a simple clear plain-language manner. It follows the basic protocols used by all California Public Safety agencies: Police, Fire Department, EMT and Paramedic, adapted to the private citizen level. These are the critical first-actions which have been proven to save lives. But they must be done soon, within the first minutes of "the Golden Hour."

Our primary goal and the purpose of this Handbook is to enable ordinary citizens to keep themselves and others alive and viable until professional help comes, even when faced with a large-scale disaster in which normal 911 resources are overwhelmed and unable to respond immediately to all of the areas needing immediate help.

What's In This Book

Rapid Triage and First Aid for Traumatic Injury & Shock

1. How to prioritize the urgency of injuries by Rapid Triage.
2. How to recognize life-threatening signs and take action.
3. How to control bleeding.
4. How to splint and immobilize fractures and joint injuries.
5. How to connect with the disaster-response network.

and important disaster-related information

1. Action Outline for the First 24 hours.
2. Techniques for lifting and moving injured persons, with emphasis on the safety of the helper / rescuer.
3. What to do in the next few days: Infection Control, and protecting yourself from environmental hazards such as exposure to heat & cold.

This course can be self-taught, learned as a group, taught by your community's Disaster Preparedness Team Leaders, by professional instructors in First Aid, ambulance EMS, Fire Department and/or Police Department CERT programs.

How To Use This Book

This course is intended for citizens, individuals and groups in the community or the workplace. These common-sense techniques can be learned and practiced by anyone from age 14 to seniors. Although Disaster First Aid is completely different from “Basic” or “Standard” First Aid it can be used effectively with any First Aid courses you may have already taken.

Have Fun Doing the Skills

Hands-on practice is essential and also a lot of fun. It’s possible to learn these techniques by reading the book and practicing them yourself, but learning is more effective if you do it with a group. Set aside an evening or Sunday afternoon, invite your neighbors and friends. Practice doing the Head-to-Toe Exam, controlling bleeding, and splinting each other’s “broken bones.” It’s important to follow the written information with the actual physical actions. Read, discuss, then get up and practice the things you talked about. That’s what makes the learning “stick” permanently in the mind. It also creates a variety of activity that is enjoyable and interesting.

Get Body Wisdom

Doing the steps, whatever the outcome today, helps lock the knowledge into the neuro-motor pathways of your body. Even when the conscious mind forgets, the body remembers. In a crisis, as soon as the body starts moving, it knows what to do and the mind will soon catch up.

Use What You Have

Another key element in this course is the resourceful use of common items in the home or office. In a disaster, you may not have medical supplies available. You need not feel helpless or intimidated by the lack of them, because you can improvise with whatever you do have.

Some suggestions are: clean handkerchiefs, bandanas, neckties (for tying splints), towels, cardboard, rolled-up newspapers (for splint materials.) Clean sheets torn in strips, sanitary napkins, or other absorbent clean material make good dressings and bandages. Pillowcases and even T-shirts can make good slings.

We encourage “outside the box” thinking. Learn to use whatever you have, and you will always find what you need, no matter where you are. In the back of the book are more suggestions, as well as a First Aid Supplies list and a diagram for making a Roll-Your-Own First Aid supplies kit/bag.

Plan a Class for your Community, Workplace, or School

Plan your class for the age and experience level of your group. Adults can benefit from group discussions. Teens usually do better with a more structured approach– stick to the book. In community groups, usually there will be a wide range of ages in the same class. This works just fine. Everyone helps each other.

A complete “**Instructor Kit**” with Powerpoint slides, easy-to-follow Teaching Outline, and Instructor Guide is available at the website www.disasterfirstaid.com. Or inquire by Email to: disasterfirstaid@earthlink.net or write to: Darkhorse Press, P.O. Box 21223, Oakland CA 94620.

Questions that may come up:

About S.T.A.R.T. Rapid Triage for example, in regard to having to “Tag” anyone, especially with a Black/White “Deceased” or “Unsalvageable” tag or marker. People sometimes think that THEY are making decisions about someone’s medical care or even their life. It should be made very clear that THEY / YOU ARE NOT.

Thousands of Medical and Rescue professionals have worked together developing and using the S.T.A.R.T. Rapid Triage System for more than 20 years. You are simply following that system, knowing that this is the best chance we have to save the most lives. Statistics prove that this system is highly effective, and no special medical knowledge or training is needed to use it.

How Much Should You Do ?

You are not expected to do any action beyond what you feel safe, able, and willing to do. It’s normal to be frightened in a hazardous situation, and you should never feel that you MUST do anything. Just do what you feel you can, and remember to keep yourself safe.

What about CPR ?

CPR by itself usually cannot save the life if someone has no heartbeat. Although there are rare instances of recovery, normally CPR must be followed with the “Chain of Survival” which includes defibrillation, Hospital ER, intravenous medications and cardiac monitoring in ICU. This process should start within minutes, and usually the person must get hospital medical care within 10 to 20 minutes in order to have a good chance of survival. That probably will be impossible in a massive disaster when hospitals are overflowing and there are not enough ambulances available to respond immediately to all of those who may need immediate help.

You should certainly attempt CPR if you believe help might be available. And ALWAYS open the airway to assist breathing. Sometimes that may be all that’s needed to save a life. Unfortunately, some things are beyond our human limits, and the harsh reality is that there may be some we cannot help.

Author/ Publisher Disclaimer and Statement of Intention: The information and techniques in this course are standard protocols used by Disaster Response Public Safety Agencies, adapted to citizen-level use. They are NOT a substitute for professional medical or emergency care at any time when that is available.

This course is intended for non-professionals and citizen volunteers and is not a certification course. No cards or certificates shall be issued other than a “Recognition of Course Completion” issued under the name and responsibility of the organization, group or agency which teaches the course.

Disaster First Aid[©] does not qualify, license, monitor, approve or sanction individual instructors or teaching agencies, and does not accept any liability for the use or misuse of this training program.

All instructors are assumed to be sincere and well-intentioned, and are expected to follow these guidelines and teaching materials in good faith to the best of their ability. This means adhering to the plan and use of the information in this course as-is, without any changes, additions or deletions.

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A Whole New Kind of First Aid

Designed for ordinary citizens, Disaster First Aid will enable anyone to respond to a major emergency with the same essential first-actions that Firefighters and Paramedic First Responders use, scaled-down to the citizen's level of ability and resources.

Disaster First Aid contains **ONLY** essential skills and information, things you need for saving the saveable lives. It's written in clear plain language, with no medical words, and no unrealistic expectations. Anyone can save lives and limbs, if they know these simple but critical things to do, and do them quickly.

Recognizing life-threatening conditions and applying simple techniques can save lives and limbs. In this book and course you will learn how to identify those conditions and perform those techniques.

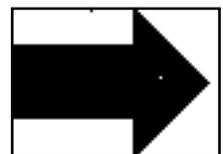
Disaster First Aid is used by schools & universities for their students, faculty, and staff, by businesses and corporations for their Employee Safety programs, by city and county Fire and Police Departments for their CERT (Citizens Emergency Response Training) Programs, and by neighborhood groups of all kinds for their Community's Disaster Preparedness.

ACTION OUTLINE: THE FIRST 24 HOURS

This is a standard system of Disaster Response that is used by Public Safety agencies such as Emergency Medical/ Paramedic and Fire Department/ Rescue. In this Disaster First Aid course, this same system has been simplified and scaled down to the citizen's level of ability and resources. When you take these basic first-actions even before professional help arrives, you will save time and may save lives.

- 1 SIZE-UP** the area and situation. Check YOURSELF for injuries. DON'T RUSH IN, Stop and LOOK. What hazards are there? Are YOU safe? Move into the open and look for a Safe Area.
- 2 TAKE CHARGE** Say in a loud voice "EVERYONE WHO IS ABLE TO WALK, GET UP AND MOVE TO (your chosen safe area). These are the "Walking Wounded." You will now rapidly TRIAGE all the ones who DID NOT WALK. Use the "walking wounded" (people with minor injuries or none) as helpers to assist you.
- 3 RAPID TRIAGE and TAG** Use the S.T.A.R.T. Triage system. Begin with the hurt person nearest to you, and move from one to another. Do not enter areas that seem unsafe. You will do only the specific treatments of the S.T.A.R.T. Triage System. As you Triage, you will MARK the injured: Red-Immediate or Yellow-Delayed or Black/White-Unsalvageable or Deceased.
- 4 REQUEST HELP** Send a messenger to the nearest Fire Station with this information:
 - A. Your exact location (including nearest cross-street)
 - B. Any Hazards, such as fire, gas leaks, or building collapse.
 - C. How many Serious, Moderate, and Minor injured you have.
 - D. The approximate total number of people at your location.Later you will send more information. Right now, do not wait to gather more than this basic information. Access the Communications Network and get on the list for help.
- 5 HEAD-TO-TOE EXAM** Go back to the injured that you have Triaged and marked or tagged. Start with the worst first (Red-tag/ Immediate) and do a thorough exam of each person. Write down their names and what their injuries are. Also write health information such as any pre-existing medical conditions, medications they take regularly, and any allergy to medications. Next you will do the Yellow-tag/Delayed ones.
- 6 TREATMENT** Now you can treat injuries as time allows before help comes. Treat for shock, clean and bandage wounds, splint and immobilize suspected fractures.
- 7 GATHER and PLAN** Make provisions for water, shelter, bedding, food, and sanitation.
- 8 IN THE DAYS THAT FOLLOW** Protect yourself and others from the dangers of infection, disease, and "exposure" hazards of heat and cold.

That's the WHAT – Now let's look at HOW



TRIAGE: To do the most good for the most people

S.T.A.R.T. stands for "Simple Triage And Rapid Treatment." This simple formula quickly detects potentially life-threatening conditions. The S.T.A.R.T. rapid triage system was created by Emergency Doctors, E.R. Nurses and Paramedics in 1984 and has become the standard for Emergency Rescue in the United States. It was designed for multi-casualty situations, and intended to be used by both professionals and non-professionals.

The purpose of Triage is to quickly identify those who need help first and give the most critical and/or life-supporting treatments as soon as possible to prevent worsening or death.

Professional Rescuers use a special Triage Tag to identify the injured by color-code and category which is easily recognized by other Rescuers when they arrive. The injured persons marked "Immediate" or having a RED tag will be looked at first for treatment and transport to a medical facility; the YELLOW tag "Delayed" people will be helped next.

You can buy Triage tags or tapes, or use the homemade Triage Tag in this book. (p.43) Or you can use whatever you have, to mark each individual as you triage them. You can use plain colored tags or tape (red, yellow, green, black) or write the word "Immediate" "Delayed" "Minor" or "Deceased" in an obvious place, such as on the forehead.

To begin your Rapid Triage

Speak in a loud voice. Tell everyone who is able, to Get Up and Walk to a safe place you direct them to. Those who DO get up and move, have now identified themselves as "Minor" not needing immediate urgent treatment. These "Walking-Wounded" will not be tagged until later. For now, they can act as your helpers.

Now Triage all who did NOT get up and

WHAT THE CATEGORIES MEAN:

"I" for "Immediate" category (Red tag)

Means rapid treatment is necessary because of possible life-threatening injuries or conditions, such as shock, breathing problems, uncontrolled bleeding, serious head injuries, etc.

"D" for "Delayed" category (Yellow tag)

Means these injuries are more than minor but are not life-threatening. Examples might be sprained ankles, possible broken arm, bruises, minor bleeding that has been controlled/stopped.

"M" for "Minor" category (Green tag).

These are the "Walking Wounded" with only minor injuries or none, and will be tagged last after triage is done. You will use them to assist you as Helpers and Messengers.

"U" for "Unsalvageable" /deceased (Black / White tag, or write "DECEASED" on any tag.)

These will be massive irreversible injuries, or else not breathing after you open their airway.

Here are several kinds of Triage tags and tapes.
Or you can use colored sticky labels or if you have nothing else, use a "Magic-marker" or even a lipstick to mark on the forehead or arm of an injured person "IMMEDIATE"
"DELAYED" etc.



As soon as all are triaged & marked, you will Send your messenger to the nearest Fire Station

Simple Triage And Rapid Treatment

ONLY 3 TREATMENTS:

1. OPEN the AIRWAY
2. CONTROL visible BLEEDING

3. POSITION
 - Recovery Position: Turn the person on their SIDE and prop in position. •Sho
 - Position: Raise legs & feet 10 to 20 inches above heart level.
 - Head Injury: Raise the head -not the legs. (See Positioning p.27)

S.T.A.R.T. Rapid Triage identifies critical factors only, so they can be treated quickly. As soon as you find a Failed Checkpoint, TAG, TREAT, & MOVE to the next person. If possible, wear rubber gloves, or protect yourself from blood or body fluids as much as you can.

ONLY 3 CHECKPOINTS:

1. BREATHING

- ✓ Does breathing seem normal ? (12 to 24 breaths per min.)
If MORE than 30 breaths per minute- Red-tag "Immediate"
and move to the next person.
If NOT BREATHING - OPEN the airway
If breathing now STARTS - Red-tag Immediate.
If it DOES NOT - Black/White-tag "Deceased"
and move to the next person
IF BREATHING OKAY - Do Checkpoint #2

2. CIRCULATION

- ✓ If NO PULSE can be FELT at wrist- Red-tag "Immediate"
Control any bleeding. Elevate the legs quickly if possible,
and move to the next person.
If PULSE OKAY - Do Checkpoint #3

3. MENTAL STATUS

- ✓ Can they Follow simple commands ? as "Squeeze my hand" or "Blink your eyes."
Can they answer simple questions as "What year is it?"
IF NOT- or if unconscious - Red-tag "Immediate"
Turn them onto their side (Recovery Position)
and move to the next person.
**IF THEY PASS ALL 3 Checkpoints - Yellow-tag "Delayed"
*and move to the next person.***

RED tag (Immediate) should be given at the FIRST FAILED checkpoint. Once a person is Red-Tagged, no more Check points are done at this time. Move to next person.

YELLOW tag (Delayed) only given after the person has passed ALL 3 Checkpoints.

BLACK/WHITE tag (unsalvageable/Deceased) NO BREATHING even after opening the airway.

GREEN tag (Minor) and walking-wounded. Treated after the more serious injured are Tagged and treated first.

TRIAGE:

checkpoint 1–Breathing

Breathing is always highest priority. In any encounter with an injured person, always check the airway and breathing **FIRST**. If breathing cannot be established and maintained, nothing else and no amount of effort can save that person without the ability to breathe.

Head injuries often cause temporary unconsciousness. Because an unconscious person becomes completely limp and loses their “gag reflex” it’s possible for the tongue to fall back into the throat and block the air passageway. By quickly opening the airway and keeping it open so the person can breathe, you may save a life. When someone is breathing okay, but is unconscious, turn them on their side and prop them. The tongue will fall naturally away from the throat and fluids or secretions can drain away. That way the person will not choke or suffocate or inhale fluids into their lungs.

If any injured person is **NOT** breathing, **OPEN THE AIRWAY** with the head-tilt/ chin-lift method. Place the palm of one hand on the person's forehead, and the fingers of your other hand under the bony part of the chin. To open the airway, tilt the chin upward while pressing back on the forehead. (illustration below.) Check for breathing - look, listen, and feel.

To CHECK- ask yourself 2 questions:

1. Is the person breathing?
2. Is the breathing normal - and enough?

- Normal breathing **QUALITY** is relaxed and effortless, quiet and without pain.
- Normal breathing **RATE** for adults is 12 to 24 complete breaths per minute.
(in and out = one) Children & infants normally breathe faster than adults.

if NOT BREATHING: **OPEN THE AIRWAY.** If breathing **STARTS**, Red tag “Immediate” turn the person onto their side **and move to the next person.** IF BREATHING DOES NOT START white/black tag /Deceased **and move to the next person.**

NOISY or DIFFICULT BREATHING If conscious, place them in their position of comfort. Sitting up or reclining may make breathing easier. Loosen tight collar or pants. Red-tag “Immediate.”

VERY FAST or VERY SLOW BREATHING should be Red-tagged/Immediate.

GURGLING SOUNDS mean fluid in the air passage. Turn the person on their side to allow fluids to drain. Red-tag “Immediate.”

SNORING or CROWING SOUNDS mean obstruction such as the tongue, or swelling in the air passage. Re-open the airway. Turn them on their side. Red-tag “Immediate.”

CHANGES IN SKIN COLOR very pale, or blue, or mottled may indicate lack of oxygen.
OPEN THE AIRWAY. Red-tag “Immediate.”

and move to the next person.



TRIAGE:

checkpoint 2– Circulation

We check Circulation to look for early signs of shock. Normal blood circulation carries oxygen and nutrients throughout the body, brain, and vital organs. Every cell of the body must receive this constant oxygen supply in order to live. (The medical term for this is *perfusion*.)

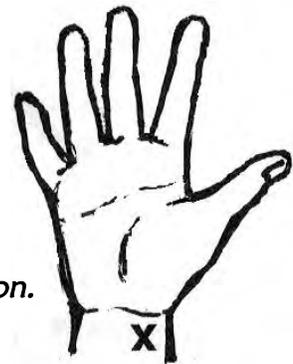
When shock begins to occur, the body tries to survive by shifting circulation away from the arms and legs, and toward the internal organs, heart, and brain, where it's needed most. This is why the arms, hands, and feet become very cool or "clammy" and skin color becomes pale or "ashen." The heartbeat becomes fast and the wrist pulse very weak. That's why we check circulation by feeling for a wrist pulse in START Rapid Triage (NOT the neck, as in CPR.).

Blood loss is one cause of shock. In an adult, loss of about one quart of blood is life-threatening. Children and infants have much less total volume of blood than adults. Loss of a much smaller amount (such as a cup) could be serious. Always control visible bleeding. (p.19)

Another cause of shock may be internal bleeding with injuries from blunt objects, falls, or crush injuries. Injuries of the abdomen or chest, or suspected fractures of large bones could have serious invisible blood loss internally. Anyone with such injuries should be treated for shock. Always treat any suspicion of shock to prevent or decrease it before it takes hold. (p.26)

To CHECK - Feel the WRIST Pulse

1. If you CAN FEEL a strong pulse at the wrist, this person has passed checkpoint #2 – **Go on to checkpoint #3**
2. But if you can NOT FEEL a pulse, or pulse is very weak or too rapid to count, this may be an early sign of shock. Red-tag "Immediate," Do START treatments **–and move to the next person.** (Do not do any more checkpoints at this time)



Your Rapid Triage Treatment for shock is:

1. Control any visible bleeding.
2. Have them lie down. Elevate the person's legs 10 to 20 inches higher than their heart level.
3. Have someone sit with them if possible to calm and reassure them.
4. If they are unconscious or semi-conscious, make sure their airway is clear and open. Turn them on their side (to drain secretions or possible vomiting) and prop them in position.

–and move to the next person.

TRIAGE: checkpoint 3 – Mental Status

Altered or abnormal mental states can be caused by many different things. Some are not life-threatening, but sometimes an altered mental state can be a sign of an unseen serious problem.

Some causes are: Shock (of any origin) head injury, lack of oxygen, hyperventilation, (which means breathing too fast and getting too much oxygen) too high or too low blood-sugar (sometimes found in individuals with diabetes) or other imbalances of blood chemicals, including overdose (or lack of) drugs or medications.

In Rapid Triage Checkpoint #3 we are checking for possible life-threatening conditions such as head injury, spinal injury, or shock. For Rapid Triage, we do not need to know exactly what the injury is, just recognize the signs and take action.

What do Altered Mental States look like?

Altered Mental States in adults will be unusual or inappropriate for the situation – such as rage, strange silence, unusual aggression, confusion, forgetfulness, repeating the same phrase over and over, or semi-consciousness, or complete loss of consciousness and coma.

When a child or infant is hurt or frightened, their normal response is crying. When an injured infant or young child is very silent, or strangely groggy or sleepy, or seems "not like themselves" these may be altered mental states which may be a clue to head injuries or shock. Infants and small children are more vulnerable to head injuries than adults.

To CHECK for Normal vs. Altered

1. **ASK QUESTIONS** For example, "What day is this?" "Where are you right now?" "What year is this?" "Is it morning or evening?"
2. **GIVE SIMPLE COMMANDS** such as "Squeeze my hand." "Open your eyes." or "Blink your eyes if you can hear me."
3. With children or infants **NOTICE** whether they are behaving in their usual way.

If the person is awake and alert enough to answer such questions correctly, or to carry out simple commands, they have now passed Checkpoint #3 and can be Yellow-tagged or marked "Delayed." This means they are second-priority for care and transport to a medical facility when that becomes available. Tag them –***and move to the next person.***

But if the person is UNABLE to pass this checkpoint, (or any previous checkpoint) or if you believe their mental state is altered or not normal for them they should be Red-tagged or marked "Immediate." This means they will be first-priority for transport to a medical facility when that becomes available. Tag them –***and move to the next person.***

You will return to those who need more help AFTER you have Triage-checked ALL of the injured.

TRIAGE: Summary

S.T.A.R.T. Rapid Triage & Treatment does two crucial things:

1. It discovers and marks those persons whose injuries are most serious or at-risk, so that you and all other helpers, rescuers, and emergency medical personnel can quickly know who needs care first.
2. It gives you (as the helper/rescuer) the opportunity to quickly do the actions and treatments that have been proven to save the most lives, the S.T.A.R.T. Triage treatments:
 - A. Opening/assisting Airway and Breathing
 - B. Controlling Bleeding and Preventing or Recognizing & treating Shock
 - C. Positioning injured person for their safety.

These are the actions that must be done quickly, soon after the injury occurs. In a disaster, very large numbers of people will be injured. The normal 911 Emergency Medical Services cannot possibly get to everyone immediately. *But you are already there.*

You can help wherever you are, because you can do these same first-actions that they would do. All Public Safety (Police, Fire and EMS) personnel in California and most of the United States use this same S.T.A.R.T. Triage system. When they do arrive, they will recognize your markings, re-check all the injured, and follow through with the rest of the appropriate emergency medical care.

only 3 checkpoints (Do every time)

1. Breathing
2. Circulation
3. Mental State

only 3 treatments (Do as needed)

1. Open the Airway
2. Control Bleeding, elevate legs for shock
3. If unconscious turn onto side in the "coma/recovery" position to protect the airway.

As soon as you find a Failed Checkpoint, TAG, TREAT, & MOVE to the next person.

If possible, wear rubber gloves, or protect yourself from blood or body fluids as much as you can.

Of course, many of the injured will need more continuing care than you can give them, but you definitely can do the most crucial things in the first most critical minutes.

After you have done RAPID TRIAGE on all of the injured and given the Rapid Triage treatments to those who needed them, you will send a FIRST REPORT for help with that information. Then you and your helpers (or "walking-wounded") will return to the red-tagged "Immediate" individuals to do a HEAD-TO-TOE exam of their injuries and give further treatments as needed. Then you'll do the same for the Yellow-tagged. The "walking wounded" (green tag) will be looked at last, but everyone should be looked at for injury.

REVIEW OF CATEGORIES

Minor: At the beginning of Triage, this group of patients are moved to a separate area by rescuers ordering "Anyone who can walk..." followed by directions to go to a specific area.

Immediate: WHEN Breathing is faster than 30 breaths per minute,
OR Breathing only starts after opening the airway,
OR wrist pulse cannot be felt,
OR the patient is unable to correctly answer simple questions and follow simple commands.

Delayed: This group, due to injury or other reason, did not walk to the area for minor injuries when directed to, but they passed all 3 Triage checkpoints.

Deceased: No Breathing is present, even after opening the airway.

(from Alameda County California Emergency Medical Services Policy & Procedures Manual, policy #8073 S.T.A.R.T. Triage)

THIS SIDE FIRST

RED-TAG / immediate IF - - -

- At Checkpoint **1-BREATHING** is Faster than 30 breaths per min. OR stopped breathing then re-started. OR:
- At Checkpoint **2-CIRCULATION** No pulse at wrist, but still breathing. OR
- At Checkpoint **3-MENTAL STATE** unable to follow simple commands, answer questions, or unconscious. OR
- ANY INJURY YOU BELIEVE TO BE LIFE-THREATENING

YELLOW-TAG / Delayed IF - - -

This person **PASSED ALL 3 CHECKPOINTS** and although injured, does not appear to be life-threatened. (When in doubt, use RED tag)

AFTER all injured are TRIAGED & MARKED
GO BACK to each one, do HEAD-TO-TOE exams,
and fill out the other side of this Tag.

THIS SIDE FIRST

RED-TAG / immediate IF - - -

- At Checkpoint **1-BREATHING** is Faster than 30 breaths per min. OR stopped breathing then re-started. OR:
- At Checkpoint **2-CIRCULATION** No pulse at wrist, but still breathing. OR
- At Checkpoint **3-MENTAL STATE** unable to follow simple commands, answer questions, or unconscious. OR
- ANY INJURY YOU BELIEVE TO BE LIFE-THREATENING

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- ANY INJURY YOU BELIEVE TO BE LIFE-THREATENING

YELLOW-TAG / Delayed IF - - -

This person **PASSED ALL 3 CHECKPOINTS** and although injured, does not appear to be life-threatened. (When in doubt, use RED tag)

AFTER all injured are TRIAGED & MARKED
GO BACK to each one, do HEAD-TO-TOE exams,
and fill out the other side of this Tag.

Head to Toe EXAM

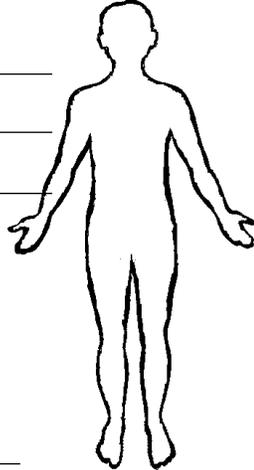


PUNCH HOLE

NAME _____

MALE FEMALE Date of Birth _____ or Age _____

MARK locations of injuries on this outline and describe below:



BREATHING?

YES NO FAST SLOW OK

BLEEDING? YES NO

CONTROLLED NOT-CONTROLLED

LOST-CONSCIOUSNESS?

YES NO HOW LONG? _____

NOTES: Medicines they take, pre-existing or ongoing medical problems such as Diabetes, Heart condition, Stroke, other.

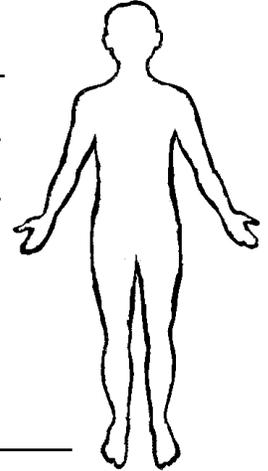
Head to Toe EXAM



NAME _____

MALE FEMALE Date of Birth _____ or Age _____

MARK locations of injuries on this outline and describe below:



BREATHING?

YES NO FAST SLOW OK

BLEEDING? YES NO

CONTROLLED NOT-CONTROLLED

LOST-CONSCIOUSNESS?

YES NO HOW LONG? _____

NOTES: Medicines they take, pre-existing or ongoing medical problems such as Diabetes, Heart condition, Stroke, other.

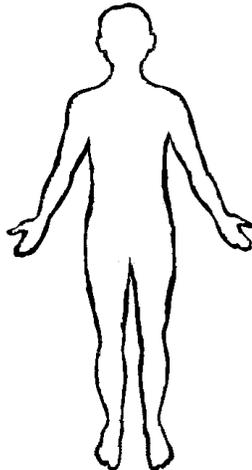
Head to Toe EXAM



NAME _____

MALE FEMALE Date of Birth _____ or Age _____

MARK locations of injuries on this outline and describe below:



BREATHING?

YES NO FAST SLOW OK

BLEEDING? YES NO

CONTROLLED NOT-CONTROLLED

LOST-CONSCIOUSNESS?

YES NO HOW LONG? _____

NOTES: Medicines they take, pre-existing or ongoing medical problems such as Diabetes, Heart condition, Stroke, other.

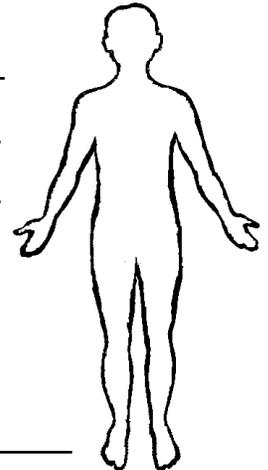
Head to Toe EXAM



NAME _____

MALE FEMALE Date of Birth _____ or Age _____

MARK locations of injuries on this outline and describe below:



BREATHING?

YES NO FAST SLOW OK

BLEEDING? YES NO

CONTROLLED NOT-CONTROLLED

LOST-CONSCIOUSNESS?

YES NO HOW LONG? _____

NOTES: Medicines they take, pre-existing or ongoing medical problems such as Diabetes, Heart condition, Stroke, other.

GET HELP: connect with Disaster Response Systems

There is a Disaster Plan at every level of government. FEMA is the Federal agency and O.E.S. (the Offices of Emergency Services) are set up at state, county, and city levels.

It takes time to organize, gather, and distribute needed supplies and services. The needs and numbers of injured persons will be much larger than the normal amount of 911 supplies and services kept on hand. Therefore all help, personnel, and resources will be prioritized through an E.O.C. (Emergency Operations Command Center) and sent first to the areas where the need is greatest.

Help may not arrive in your area for a period of several hours, and in some areas, the wait may be several days or longer. As soon as your Rapid Triage is done, it is essential to get your information to this Disaster Response Network.

as soon as your Rapid Triage is done, send a “runner” (messenger)
to the nearest **FIRE STATION**

As part of the local Disaster Response plan, “Ham” radio operators will go to Fire Stations and set up a radio communications network. They will relay the information to the Emergency Operations Command Center about what types of resources are needed in each area.

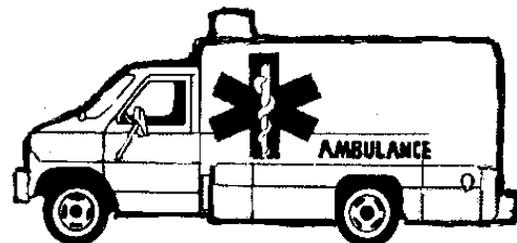
Local O.E.S. agencies will mobilize their Disaster Response plan and start the process of organizing and distributing the needed services and supplies. Your message to the Fire Station is the fastest and most reliable link to these services. **DON'T CALL 911** to report a major emergency such as explosion or earthquake – They know. And Never call 911 for information.

STAY OFF THE TELEPHONE !

Cell-phones and land-line phones may not be working, and even if they are, they will be needed for emergency Police and Fire operations communications. If you must use your cell phone, use text instead of voice messaging. That is more likely to transmit, because it is a smaller electronic file.

Have a pre-arranged Contact Person outside of your area, and make ONE phone call to them. They will make any other calls to family members, etc. to let them know you're okay. Outgoing phone lines from inside the area will be blocked for Emergency Agencies to use, but calls originating from outside the disaster area, coming in, will be much more likely to get through.

Have a portable radio with extra batteries.
Pre-set the dial to the Emergency Radio station
in your area.



*Make a copy of this form to keep in your First Aid Bag, along with pens and markers.

FIRST REPORT FORM

As soon as your Rapid Triage is done
send a messenger to the NEAREST FIRE STATION
with this information :

Our LOCATION is _____
The CROSS STREET
(or nearest Major
street or Landmark) is: _____

The CONTACT PERSON at this site is: _____

The number of RED-tag (immediate) SERIOUSLY injured: _____

The number of YELLOW-tag (delayed) MODERATELY injured: _____

The approximate TOTAL number of people at our location: _____

HAZARDS at our location are:

- | | | |
|---|---|---------------------------------------|
| <input type="checkbox"/> Building collapsed | <input type="checkbox"/> People trapped | <input type="checkbox"/> Fire burning |
| <input type="checkbox"/> Gas leaking | <input type="checkbox"/> Other (Describe Below) | <input type="checkbox"/> None |

HEAD-TO-TOE: Looking for injuries

After Rapid Triage is completed and you have sent for help, go back to fully examine and treat everyone. First the Red-tagged "Immediate" then the Yellow-tagged "Delayed" people. Finally, check the Walking Wounded. Do the exam BEFORE moving the person if it is SAFE to do so. Get enough people to help you before attempting to move someone. (p.28, 29, 39)

Avoid handling blood or body fluids. Wear gloves if available. Examine the injured person from head-to-toe without stopping to treat injuries or apply splints until you've got the "whole picture."

EXCEPT:

**If you find an AIRWAY problem, uncontrolled BLEEDING, or SHOCK,
Treat these immediately, just as you did in your Rapid Triage steps.**

Then set up your Treatment Area and carefully move the injured there. Choose a place that's safe, in an open area that is accessible for ambulances and Rescue vehicles.

How to do the Head-to-Toe Exam

1. TELL THE PERSON what you're going to do. *"I'm going to examine you for injuries."*
2. START AT THE HEAD and work your way down to the feet in a systematic way. Ask first "Where does it hurt?" You will be looking at and "palpating" (feeling) all areas for pain response, or other signs of possible injuries.
3. LOOK before palpating. Try to give the person as much privacy as you can, but if you suspect an injury, you should open, remove, or cut away clothing if necessary so you can see all of that area.
4. LOOK FOR bleeding, bruising, bumps, dents, or deformities. On limbs compare both the right and left. Also look for Medic-Alert bracelet or necklace.
5. To PALPATE Gently feel and/or press on each part as you examine it. Don't pull or twist. Feel for lumps or deformity; watch and listen for signs of pain.
6. FEEL for PULSE and warmth at both wrists and both feet. Notice whether pulses are: (1) present (2) strong or weak (3) fast or slow (4) equal on both right & left sides.
7. MAKE NOTES of what you find as you examine. Get the person's name and any medical information and write it on the "Triage & Treatment Record" Second Report Form (or a plain piece of paper) and also on the Triage Tag or other note that stays attached to the person.

After you have determined what the injuries are

you can do more treatment, such as cleaning and bandaging wounds,
immobilizing and splinting suspected fractures,
and making the injured persons more comfortable.

DISASTER FIRST AID®

2nd REPORT - Triage and Treatment Record

Make 10 or more copies of this form and keep them in your First Aid bag with pens or markers.

DATE _____

LOCATION _____

TEAM LEADER or FIRST AIDER _____

NUMBERS OF INJURED	
RED immediate =	_____
YELLOW delayable =	_____
GREEN minor =	_____
BLACK or WHITE dead =	_____



PAGE#

PRIORITY	NAME + DATE OF BIRTH	AGE	SEX	PROBLEM OR INJURY		NOTES	TIME
<input type="checkbox"/> Immediate <input type="checkbox"/> Delayable <input type="checkbox"/> Minor			M F	<input type="checkbox"/> Breathing <input type="checkbox"/> Bleeding-Circulation <input type="checkbox"/> Mental State	<input type="checkbox"/> Shock <input type="checkbox"/> Fracture <input type="checkbox"/> Other	Medications they take, any allergies to medicines, their medical history.	
<input type="checkbox"/> Immediate <input type="checkbox"/> Delayable <input type="checkbox"/> Minor			M F	<input type="checkbox"/> Breathing <input type="checkbox"/> Bleeding-Circulation <input type="checkbox"/> Mental State	<input type="checkbox"/> Shock <input type="checkbox"/> Fracture <input type="checkbox"/> Other	Medications they take, any allergies to medicines, their medical history.	
<input type="checkbox"/> Immediate <input type="checkbox"/> Delayable <input type="checkbox"/> Minor			M F	<input type="checkbox"/> Breathing <input type="checkbox"/> Bleeding-Circulation <input type="checkbox"/> Mental State	<input type="checkbox"/> Shock <input type="checkbox"/> Fracture <input type="checkbox"/> Other	Medications they take, any allergies to medicines, their medical history.	
<input type="checkbox"/> Immediate <input type="checkbox"/> Delayable <input type="checkbox"/> Minor			M F	<input type="checkbox"/> Breathing <input type="checkbox"/> Bleeding-Circulation <input type="checkbox"/> Mental State	<input type="checkbox"/> Shock <input type="checkbox"/> Fracture <input type="checkbox"/> Other	Medications they take, any allergies to medicines, their medical history.	
<input type="checkbox"/> Immediate <input type="checkbox"/> Delayable <input type="checkbox"/> Minor			M F	<input type="checkbox"/> Breathing <input type="checkbox"/> Bleeding-Circulation <input type="checkbox"/> Mental State	<input type="checkbox"/> Shock <input type="checkbox"/> Fracture <input type="checkbox"/> Other	Medications they take, any allergies to medicines, their medical history.	
<input type="checkbox"/> Immediate <input type="checkbox"/> Delayable <input type="checkbox"/> Minor			M F	<input type="checkbox"/> Breathing <input type="checkbox"/> Bleeding-Circulation <input type="checkbox"/> Mental State	<input type="checkbox"/> Shock <input type="checkbox"/> Fracture <input type="checkbox"/> Other	Medications they take, any allergies to medicines, their medical history.	

LACERATIONS are open cuts. They may be minor or severe, shallow or deep. Avulsions are a type of open cut where skin or tissue has been torn away and is either missing or hanging as a flap. All of these wounds usually bleed freely. Use the bleeding control techniques of direct pressure and elevation on page 19. After the bleeding has been controlled (usually 10 to 15 minutes) clean and bandage the wound. (If bleeding starts again, use direct pressure and elevation again.)

PUNCTURE WOUNDS are made by a penetrating object such as a nail, sharp stick, or by a projectile such as flying glass or other sharp object. Punctures usually have a small opening at the surface, but may be deeper than they appear. They may have little or no external bleeding, but may be bleeding on the inside. Any puncture wound found on the belly, chest or neck should be given high priority. Anticipate shock and treat for it. (More about shock on page 26.)

ABRASIONS are scrapes. Though usually not serious, they can be very painful, and since the skin is broken, they are open to infection. Clean and bandage the wound.

CONTUSIONS are bruises. They can be minor or major. Bruising often accompanies other injuries, though the "black and blue" color may not appear till later. Elevate the injured area and apply ice pack if available. If bruises and scrapes are found on the belly, chest, or neck, be suspicious of deeper injury and treat for shock. (More about shock on page 26)

Dangers:

The main dangers of OPEN WOUNDS are excessive bleeding and possibility of infection. Punctures have less danger of external bleeding but higher risk of infection. All scalp and facial wounds normally bleed more freely than other areas, but bleeding can usually be controlled with direct pressure. (p.19)

With a HEAD INJURY watch out for changes in mental state, and always consider the possibility of brain injury, neck injury, or spinal injury. Any loss of consciousness makes this person high priority. Secure and support the neck if you can. (p.29) If conscious, carefully elevate the upper body NOT the legs. If NOT conscious place in "coma/recovery position" on their side. (p.27)

What to do, When:

As always, quickly check breathing and circulation first.

If possible, wear rubber gloves, or protect yourself from blood or body fluids as much as you can.

1. During Rapid Triage: Control external bleeding. Anticipate shock and treat for it.
2. After Head-to-Toe Exam: Clean and dress wounds, splint suspected fractures.
3. In the days that follow: Re-clean wounds, and re-bandage at least once a day.

Over the next few days, watch for **SIGNS of INFECTION** such as: redness, heat, swelling, pus, fever, increasing pain, red streaks starting up the arm or leg. **INFECTION RAISES THE PRIORITY.**

To Control Bleeding

ARTERIES carry blood from the heart and lungs to supply the body with oxygen. VEINS return the blood from the body back to the heart and lungs. Recirculation goes on continuously. Most surface bleeding is venous, because the arteries are deeper in the body where they are more protected. Bleeding from veins flows smoothly or seeps. Bleeding from arteries comes in spurts at the rhythm of the heartbeat. Arteries carry higher pressure, so arterial bleeding is usually harder to control.

If possible wear rubber or vinyl gloves. Always protect yourself from blood or body fluids as much as you can.

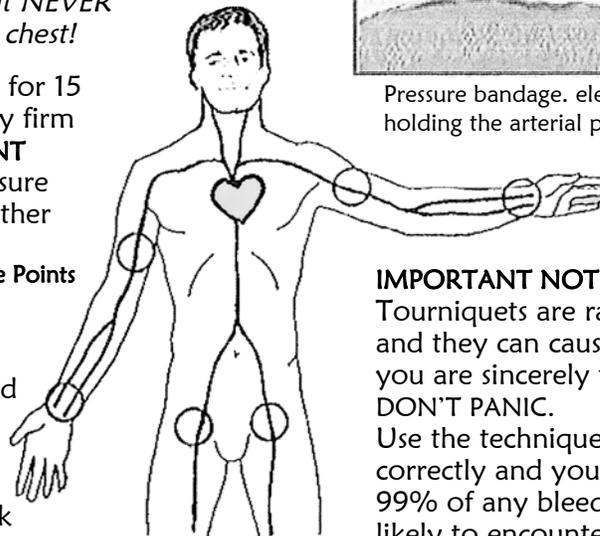
1. With a clean cloth, apply **DIRECT PRESSURE** to the wound. This stops the bleeding and helps the blood to clot (the body's way for sealing leaks in its circulation system). Raising the wound higher than the person's heart-level decreases blood flow to it, which also aids the clotting function.

2. Hold pressure firmly and continuously for 10 to 15 minutes. **DO NOT TAKE THE CLOTH OFF** to see if bleeding has stopped! That will start the bleeding all over again. If blood soaks through the cloth, don't remove it, just add more cloth on top. If holding continuous pressure is not possible (i.e. you are doing S.T.A.R.T. Rapid Triage) get a helper to hold the pressure, or tie a pressure bandage.

3. **PRESSURE BANDAGE:** tie a snug band around the cloth and limb to hold pressure. *But NEVER tie anything tightly around the neck or chest!*

4. If continuous pressure and elevation for 15 minutes do not control bleeding, apply firm pressure to an **ARTERIAL PRESSURE POINT** while you continue holding direct pressure on the wound also. Hold both for another 10 to 15 minutes.

Arterial Pressure Points



WHAT ABOUT TOURNIQUETS ?

A tourniquet shuts off almost ALL blood flow to a limb. If medical help is not available within 30 to 45 minutes, everything beyond the point of the tourniquet without blood flow is at risk for permanent damage. A tourniquet should be used **ONLY** when there is severe major bleeding that cannot be controlled and no medical help can be gotten. The choice of using a tourniquet means that we risk sacrificing a limb in order to save the life of the person.



Pressure bandage, elevation, and holding the arterial pressure point.

IMPORTANT NOTE:

Tourniquets are rarely needed and they can cause harm while you are sincerely trying to help. **DON'T PANIC.**

Use the techniques above correctly and you will control 99% of any bleeding you're likely to encounter. You can't know for sure how serious the situation is, but consider blood loss of a "quart" for an adult, or "half a cup" for an infant as potentially life-threatening.

With any severe bleeding, Send for help immediately.



Fractures, Sprains

These may appear very similar, with pain or tenderness, swelling, and painful movement. When there is loss of movement or severe pain during movement, always take fracture precautions: immobilize and splint the injury. This decreases pain and helps avoid further injury. The splint should support the limb at the point of injury and also at the joints above and below the injury.

Fractures are more serious than sprains or strains. They have the potential for more internal bleeding, swelling and damage to nerves and tissues, especially fractures of large bones such as the thigh, hip, or pelvis. It's not possible to know the exact injury without an X-ray, but the First Aid treatment is essentially the same.

What To Do

Handle the part gently with as little movement as possible. Immobilize it with well-padded splints, leaving the fingers (if an upper limb injury) or toes (if a lower limb) exposed to allow for periodically re-checking circulation. Raise and prop or support the injured part (if it's practical to do so) to reduce swelling and pain. Apply cold packs if possible.

Make sure that circulation is not being impaired by your splint. Splint-ties should be re-checked, and may need to be loosened or adjusted over a period of time, since swelling may increase. Make the person as comfortable as you can, have them rest quietly, and prevent them from becoming chilled.



Dislocations

An odd-looking, distorted limb may indicate either a fracture or a dislocation. Dislocations occur at joints (a bone forced out of its normal position) while a fracture may show itself as an unnatural lump, bend, or distortion at any point on a bone, including joints. Compare both right and left sides of the body for sameness vs. distortion. Many fractures are not visible at all from the outside.

What To Do

If you suspect either a dislocation or a fracture, carefully immobilize and splint the injury with well-padded splint materials. **DO NOT** try to straighten it. A dislocation is usually very painful and the injured person will be holding or guarding it, and may not allow anyone to touch it. A good splint for a dislocation is a pillow or folded blanket, secured with tape, cloth wraps, or a sling.

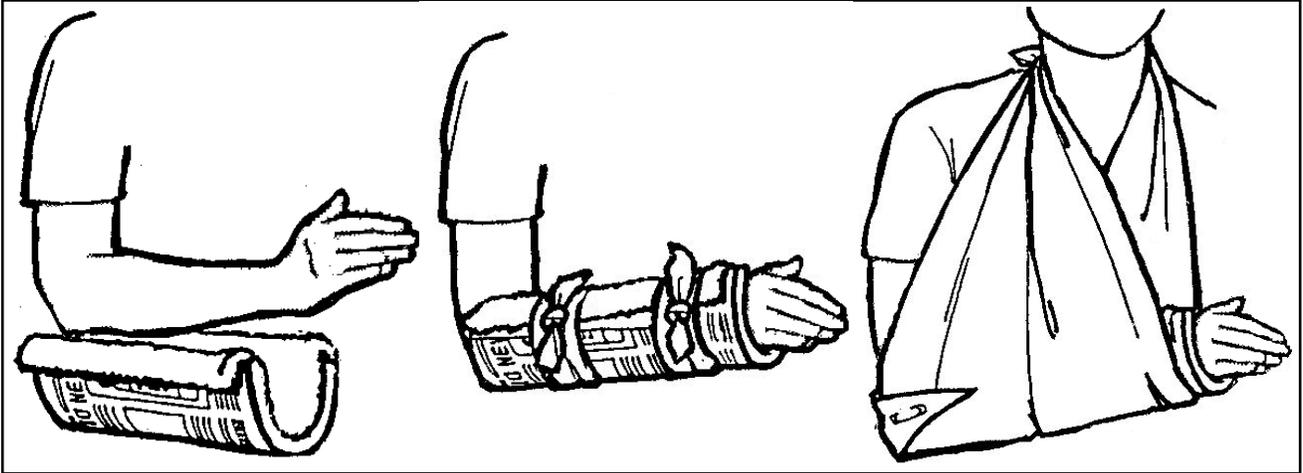
If the injury is to a hand, place a soft object such as a roll of cloth in the palm to hold the fingers curved in a natural relaxed position if possible (not stiff and straight) and wrap the whole hand very gently with a bulky bandage. It will look like a mitten.

In general: Leave the fingertips (or toes if a lower limb injury) exposed so you can periodically re-check circulation (by color, numbness, or coldness). Make the person as comfortable as you can, have them rest, and prevent them from becoming chilled.

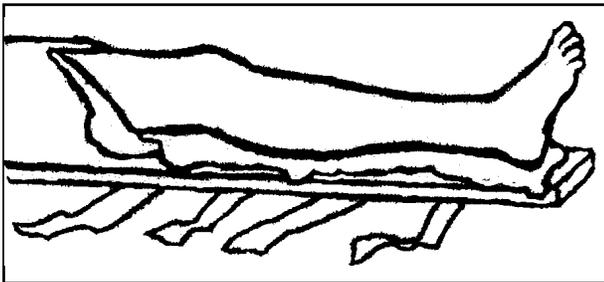
* COMMON INJURIES

Splinting & Immobilizing

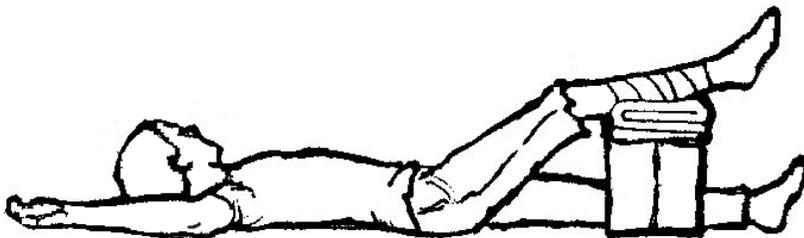
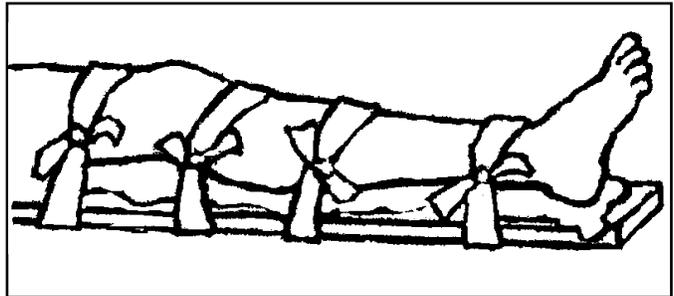
ARM or WRIST. Magazine or newspaper splint. Use a small towel or any soft material for padding the splint wherever it touches the skin. Finish by elevating the limb and securing it with a triangle sling or improvised sling. (pg.37-38) Re-check circulation to the fingers after splinting the injury.



LOWER LEG or KNEE. Use a board, heavy corrugated cardboard folded over 3 times, large mailing tube, or whatever suitable material you find available. Be sure splints are well-padded where they touch the skin.



Remember to re-check circulation to the toes after splinting the injury.

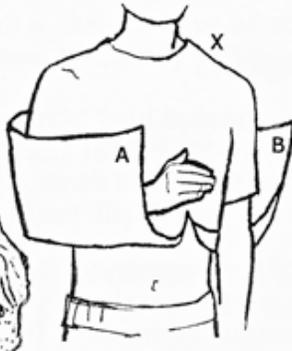


GENERAL for most closed injuries: If available, apply ice packs to the injured areas 15 to 20 minutes at a time for the first 2 days. Elevate injured limbs if practical to do so.

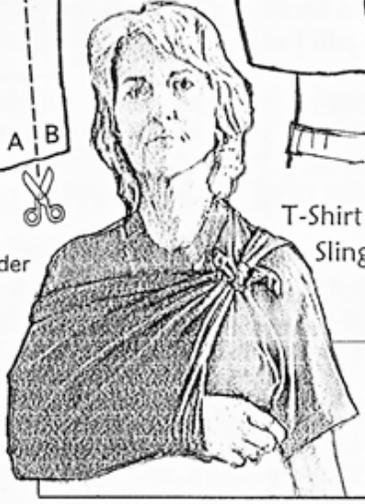
More Splints and Slings



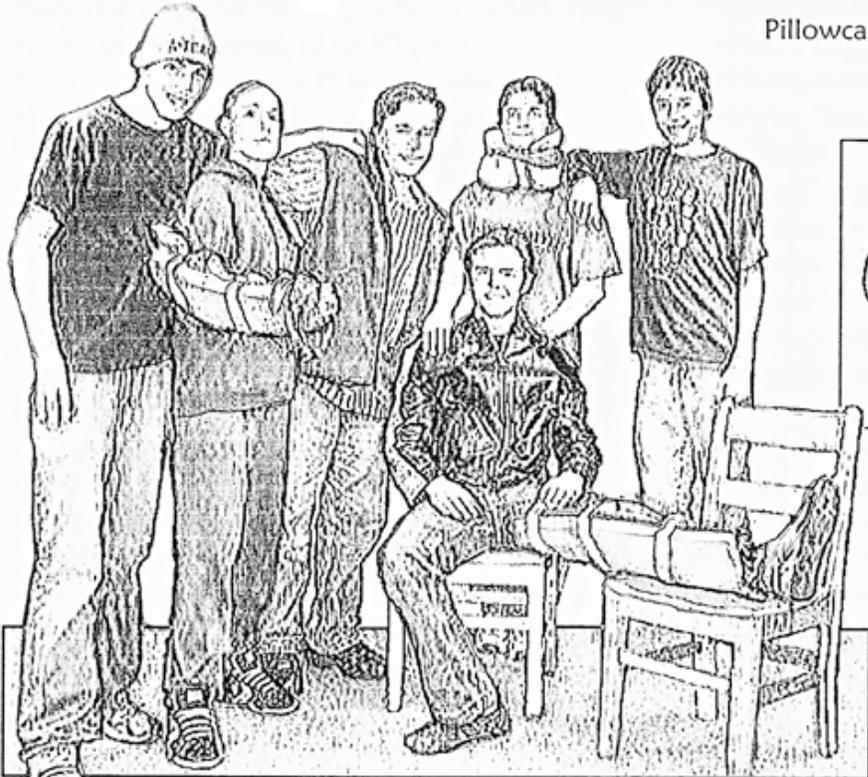
Tie A and B over the shoulder



T-Shirt Sling and Swath

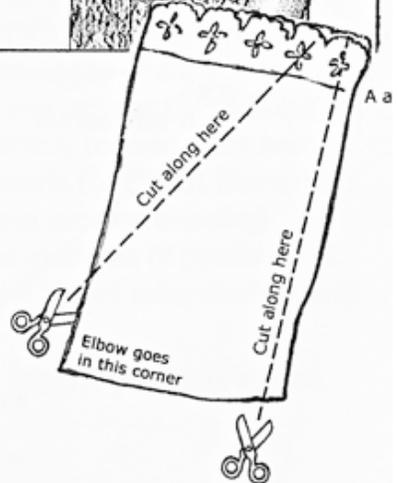


Wrist or Forearm Splint



Arm Splint - Neck Stabilizer Collar - Leg Splint

Pillowcase Sling
Tie A and B Behind the neck



FIRST DEGREE or "superficial" burns look like a bad sunburn. The skin is red, hot and dry. This type of burn is usually not serious in adults but can be dangerous or even life-threatening to small children and infants if large areas of skin are involved.

SECOND DEGREE burns are the most painful. There will usually be blistering, and if the skin is broken the burns will seep watery fluid. If there are blisters that have not broken, **DO NOT** open them. Try not to break them, because keeping the skin intact helps prevent infection.

The most serious are **THIRD DEGREE** burns. The skin may feel hard and leathery. These burns may look white and ashy, or dark and charred. Severe burns may extend through all layers of skin, to muscle, even bone. These burns may actually be less painful than some second-degree burns because the feeling nerves have been destroyed. Third degree burns are always high priority.

Dangers

SMOKE INHALATION: If someone has been in a closed area with smoke or fire and they develop coughing or hoarseness, swelling in the throat and air passages could cause serious breathing problems. They should be Red-tagged "Immediate" as high priority. Watch carefully for worsening.

OTHER HIGH PRIORITY SITUATIONS: Burns to the face, hands, feet, or genitals are high priority. Burns to children and infants are high priority because they are at greater risk than adults for shock, hypothermia, and dehydration from fluid loss.

ELECTRICAL BURNS are often more serious than they look. When an electric current has passed through a part of the body, there will be an entrance wound and an exit wound with deep tissue damage between the two. Electrical burns are high priority.

With an electrical burn - DO NOT TOUCH the person
until you are absolutely sure
the electrical source is shut off and completely removed from them.

What to do

As always, quickly check breathing and circulation first.

If possible, wear rubber gloves, or protect yourself from blood or body fluids as much as you can.

1. Halt the burning process by applying clean cool water, or water-soaked cloths for 10 to 20 minutes. Be careful not to over-chill the person.
2. Cut away and remove burned clothing. Remove jewelry before swelling starts.
3. **DO NOT** break blisters.
4. **DO NOT** apply oils, lotions, or disinfectants.
5. Cover the burns with dry sterile or clean dressings and bandage loosely.

When you tie anything around a limb always use a quick-release knot such as a bow or half-bow.

This allows you to easily loosen and re-check bandages and splint-ties. Many kinds of injuries will swell over a period of time. Ties and bandages can become too tight and may strangle the circulation to the limb. Periodically re-check the circulation signs: sensation, color, warmth, and movement. (see signs of trouble, below)

Remove all rings, watches, bracelets from any injured areas before they swell. Place them on the other hand (if it's not injured) or put them in the person's pocket or a plastic bag and safety pin it to their clothing. (Tell them where these items are being placed, and why you're doing this.) Also loosen clothing or anything else that is tight around any injured limb or around the chest or neck.

When splinting immobilize the joints above and below the suspected injury, or wrap securely in a pillow to immobilize and protect (for example an ankle or wrist). Always leave fingers (or toes if a leg or foot injury) visible or accessible so you can re-check circulation.

Use a sling for most wrist, arm, shoulder, or collar-bone injuries. Adding a swath gives more stability to prevent movement. If you don't have a sling or material to make one, you can sometimes use the person's own clothing, tied or safety-pinned to secure and support the limb. (p.38)

Clean and dress open wounds before splinting. Write on the outside of the splint "open wound."

Signs of Trouble

White, blue, purple, or mottled skin color in extremities. May be losing circulation.

Injured Limb is colder than the other. May be losing circulation.

Numbness or tingling. May be losing circulation, or possible nerve injury.

What to do

Release and loosen ties, adjust and re-tie. Check for adequate padding inside splints.

Re-check circulation in fingers or toes, etc.

Poor or absent circulation becomes high priority for immediate medical help.

Signs of Trouble

Limb red or hotter than the other, or unexplained fever. May be infection.

What to do

Needs medical attention. If none is available yet, continue to clean and re-dress wounds at least once each day. Infection raises the priority.

Suspect crush injuries whenever someone has been squeezed or caught between hard surfaces or under heavy objects. If the chest or abdomen are involved, there may be damage to vital organs with internal bleeding. Even when only a limb is involved, there may be extensive damage to bones, tissue, and blood vessels.

What does a Crush Injury look like? There may be cuts, scrapes or surface bleeding in addition to deeper damage, OR there may be swelling, bruising, purple or mottled coloring, with or without any surface bleeding, OR the crush-injured person may show little or no visible sign on the outside.

Often the best indicators of possible crush injury are severe pain and "Mechanism of Injury" (what happened to them that caused the injury).

Dangers of crushing injuries include tissue damage, possibility of nerve damage, loss of circulation to some areas, possibility of internal blood clots which can get stuck in a major vein or artery cutting off circulation, and/or possibility of internal bleeding and shock. Always suspect shock and treat for it preventively: keep the person quiet, lying down, and maintain adequate body warmth. (p.26)
Multiple injuries, severe pain or signs of shock make this person high priority.

Crush Syndrome

This becomes a factor when someone has been crushed or trapped for a period of time. The pressure of the crushing object itself may be blocking-off circulation and bleeding. Then when the pressure of the object is removed, the backed-up circulation starts again, with greater force.

Problem:

Sudden release of the pressure can release serious bleeding internally, externally, or both. BEFORE attempting to free the person from entrapment, prepare. Gather what you will need to control bleeding (p.19) and treat for shock. (p.26)

Problem:

Normal blood circulation filters and removes toxins and waste products from the body. Crush injury interferes with this process. Over a period of time, toxins from damaged tissue collect and build up to dangerous levels. When circulation is restored, large amounts of toxins and wastes from the injured areas begin to travel to the heart, lungs, liver and kidneys, which can cause organ failure. Exertion will speed up that process, so the crush-injured person should be kept very quiet, calm, and still.

What to do - Basic:

Handle a crush-injured person very gently and carefully. Do not allow a crush-injured person to get up and move around. Anticipate shock and take preventive treatment measures.(p.26) Even if they look okay have them sit or lie down and remain quiet. Keep them comfortably warm. Do not allow them to assist with other rescue efforts. Have someone stay with them.

What to do for Crush

Keep the person quiet, warm enough, and as comfortable as possible. Anticipate the possibility of shock and treat for it, especially if there is bruising or injury to the chest or abdomen. Control any external bleeding, clean and dress wounds. Persons with large or significant crush injuries or extreme pain should be Red-tagged "Immediate."

If the injury is to a limb, immobilize and elevate it to decrease swelling and pain. Apply cold packs if possible. Be very cautious about anything that wraps around the injured part because crush injuries are at high risk for swelling,

Re-check the person periodically, to prevent strangulation of the limb by bandages or splints getting tighter as the injury continues to swell. Loosen and re-tie as needed.

Releasing an injured person from crushing objects

If people are entrapped under rubble or debris, you must first make the decision whether or not to try to free them yourself, with only other citizens to help. Sometimes it's better for untrained persons not to attempt a complex rescue.

If you decide to attempt rescue, several things must be considered, such as the amount of difficulty, time, tools, and strength needed to do the job. Get trained Search and Rescue help if possible. If that is not possible and you decide to attempt rescue, take care for your own safety, and follow these basic guidelines.

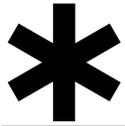
Priorities: Help the most-helpable first, the easiest to reach, with the best chance of success. In disaster the rule-of-thumb is: *"Do the most good for the most people."*

Preparation: Get enough help – personnel and equipment BEFORE you begin. Plan your actions. Assemble the supplies you will need, so that you can treat wounds and shock immediately when the person is freed. *Above all, Don't get hurt yourself.*

Actions: Start at the top of the debris and work your way down, piece by piece. Large pieces that can't be removed entirely **MUST** be shored-up or secured in place to prevent falling and further injury to the person or to rescuers.

- Locate all limbs before moving. **DO NOT PULL** on any part you can't see all of, because you might accidentally do more damage to an entangled limb. Handle the person very gently.
- If possible, splint or support all of the body and limbs before moving the person. Use a plank, shutter, door, coffee table, or ironing board as a makeshift stretcher.

Follow-up: Carry the person carefully to a safe area. Treat for shock. Treat surface wounds and splint any suspected fractures. Calm and reassure. Have someone stay with this person continuously to monitor their condition and inform you of any changes. Be alert for signs of Shock. (p.26)



Recognizing Possible Shock

Early signs of shock begin quietly – they are easy to miss. Always be on guard for signs of shock, and treat preventively. Don't be distracted by blood or broken bones. Anticipate shock with any major injury, severe bleeding, crush injuries, or when there is pain or bruising to the chest, abdomen, pelvis, or large areas of limbs. Shock is always high priority.

Shock can be worsened by pain or fear. However when recognized and treated in the early stages, shock can sometimes be reversed or decreased in severity by simple measures. Elevating the legs and calming and reassuring the injured person may prove to be a life-saving technique.

What Does Shock Look Like?

In various stages of shock a person may show several or any combination of these signs.

- Fast shallow breathing
- Pale or ashen gray complexion
- Cool, "clammy" skin, cold sweats
- Very fast pulse, very weak pulse or you cannot feel a wrist pulse
- Unresponsive infant or silent pale child
- Weakness, feeling faint
- Nausea or vomiting
- Extreme thirst
- Restlessness or agitation
- Mental state altered or inappropriate
- Decreasing level of consciousness or loss of consciousness

What to do

1. Have the person lie down.
2. Elevate the legs to above their heart level. If there is a head injury, elevate their head also.
3. Conserve body heat with a sleeping bag or blankets over and also under them. Cover their head with a hat or towel. Insulate them from cold ground or floor with a layer of bedding, rugs, cardboard, crumpled newspapers, dry leaves, or whatever you have available.
4. Protect the airway, especially if the person is nauseous, vomiting, or loses consciousness. If so, turn them onto their side in the "Coma / Recovery Position"
5. Calm and reassure them. Have someone stay with them. They may be very thirsty, but do not give them anything to eat or drink (to prevent vomiting).
6. SEND FOR MEDICAL HELP immediately. Anyone who is in shock or appears to have serious blood loss or severe injury is **HIGH PRIORITY**.



Positioning the Injured

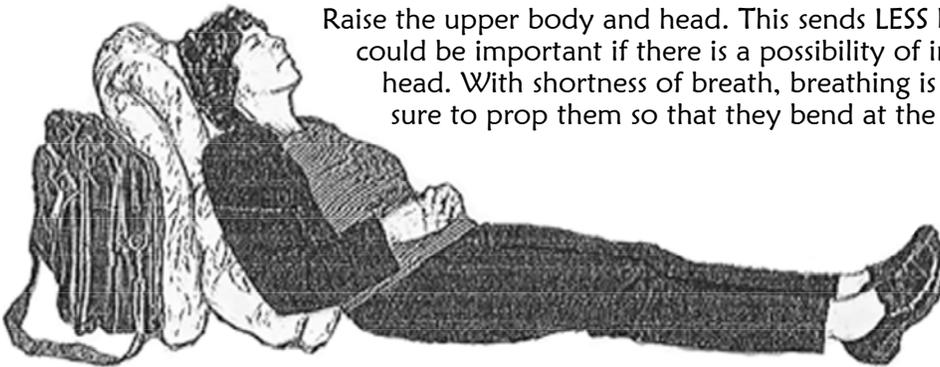
One of the important Rapid Triage Treatments is POSITIONING. Use whatever you have available to prop and stabilize the position – such as boxes, an overturned chair, backpack, sleeping bag etc.

For FAINTING or SIGNS OF SHOCK elevate the legs. This sends more blood flowing to the brain and vital organs. Cover the person to preserve normal body warmth.



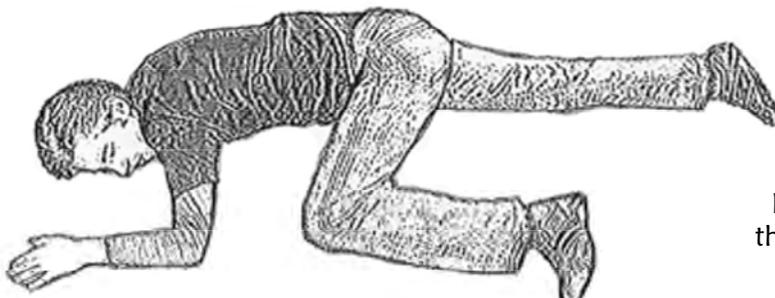
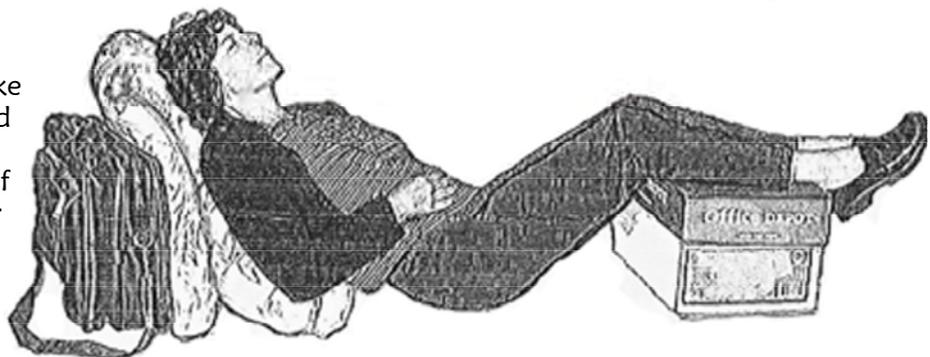
For HEAD INJURY, SHORTNESS of BREATH, or DIFFICULTY BREATHING:

Raise the upper body and head. This sends LESS blood to the brain, which could be important if there is a possibility of internal bleeding inside the head. With shortness of breath, breathing is often easier sitting up. Be sure to prop them so that they bend at the HIP, not at the chest or neck



**Sometimes you must let them find their own best position, the one they feel helps the most. That might be reclining, sitting up, or leaning forward.*

If there are MIXED SIGNS, like Shortness of breath combined with signs of shock, or Head injury combined with signs of shock, raise both – the upper body and the legs.



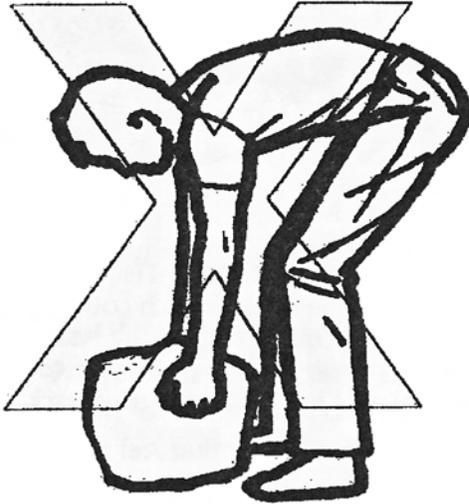
If the person is SEMI-CONSCIOUS, UNCONSCIOUS or VOMITING use the “Recovery/Coma” position. (On their side and propped in place) This will drain fluids naturally, keep the breathing passage open, and help protect the lungs from inhaling harmful fluids.



Lifting Safely

DON'T HUMP YOUR BACK

DANGEROUS TO YOUR SPINE !



KEEP YOUR BACK STRAIGHT

Bend your knees and lift with your hip and LEG MUSCLES. These are the largest and strongest muscles of your body.



You can create your own "arm chair" by locking arms with another rescuer. Or you can place the injured person into a sturdy metal or wooden chair, then lift and carry the chair. *Caution - Do not use a folding chair.*





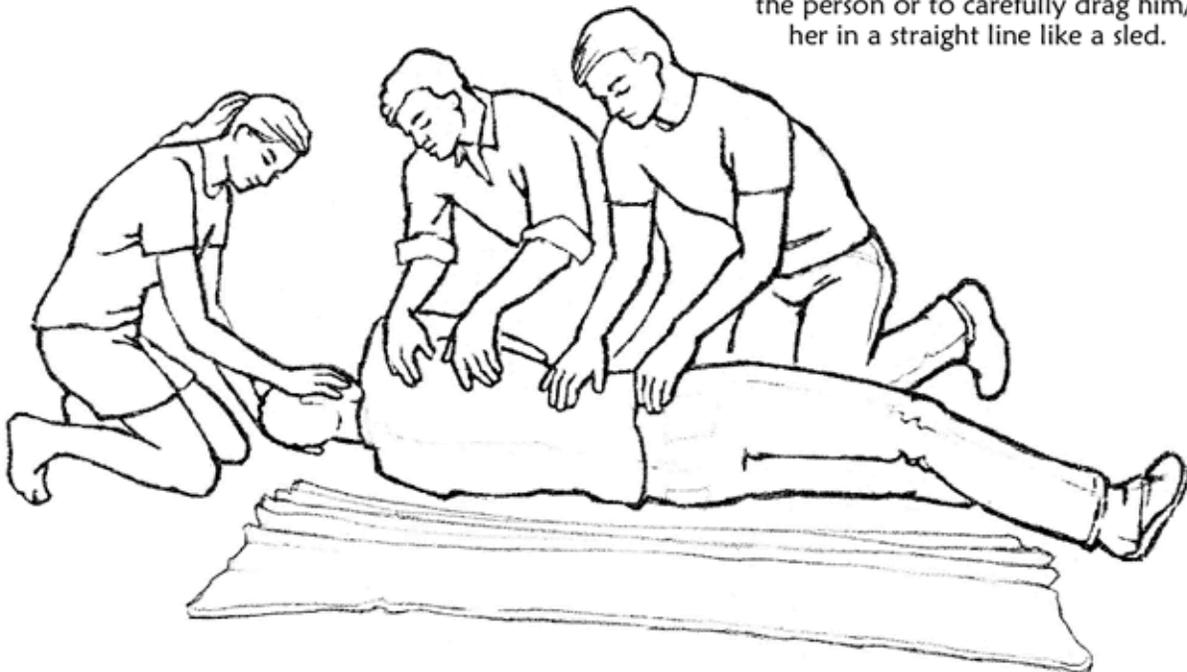
Moving the Injured

If a NECK or SPINAL injury is suspected, or if the person is unconscious or has a serious head injury: One rescuer holds the head and neck in a straight alignment with the body and spine. The second rescuer or helper carefully slips a folded towel (or some other FIRM material) beneath the neck to make a wide supportive collar, and tapes it securely in place.

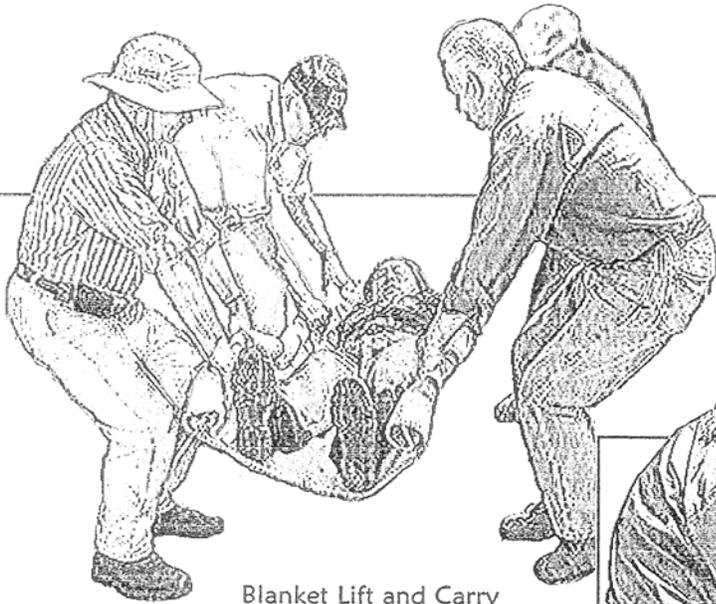


LOG-ROLL: First rescuer continues to support the head and neck in a straight line with the body and spine. On signal (such as "Move on three – Ready? One, two, three.") all helpers as a team, ROLL the injured person onto his side, while keeping the spine straight like a log. A board or blanket can now be placed next to the injured person. Then carefully roll him back onto it, still maintaining a straight neck and spine at all times.

Secure the injured person to the board with tape or strong ties. Then it can be lifted and carried like a stretcher. If no board is available, a blanket can be used to carry the person or to carefully drag him/her in a straight line like a sled.



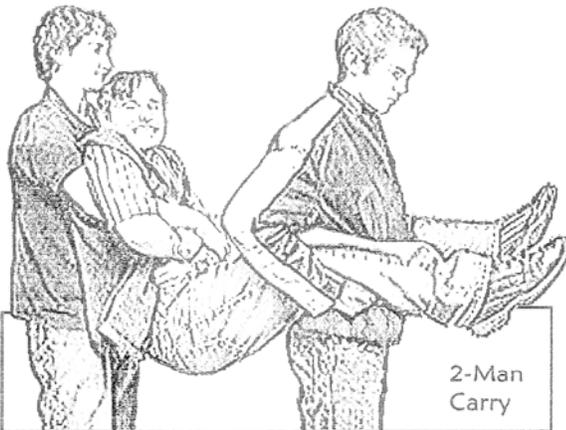
More Lifts and Carries



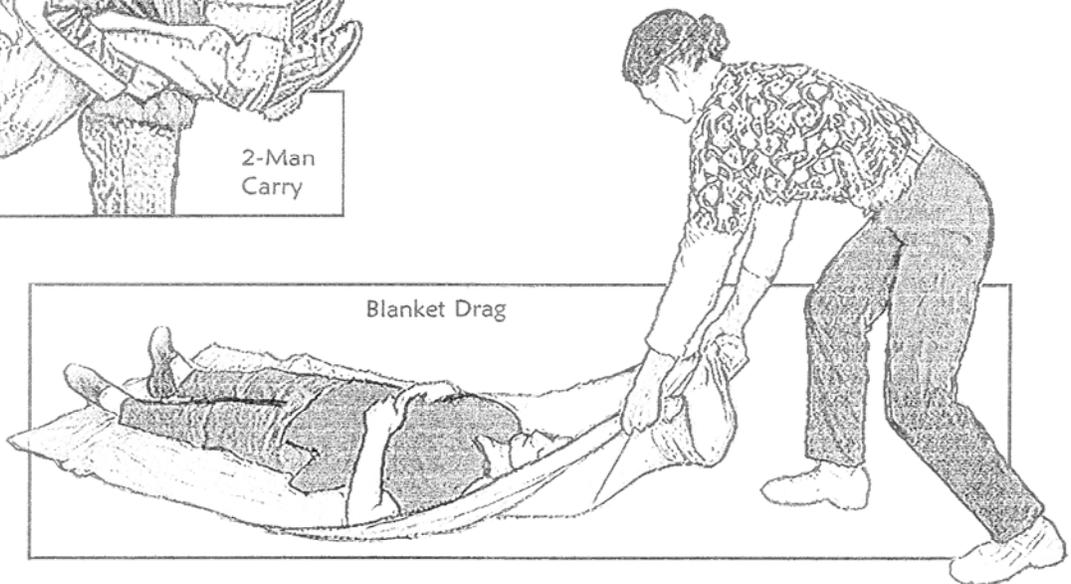
Blanket Lift and Carry



Chair Carry



2-Man Carry



Blanket Drag



Quick-Reference Guide

GENERAL

Most closed injuries should be treated with cold packs if possible (off and on about 10 to 20 minutes for the first 2 days.) Cold packs and elevation help to decrease bleeding, swelling, and pain.

OPEN INJURIES, CUTS, ABRASIONS

Control bleeding with direct pressure (p.19). Elevation also helps. Then wash, dry, and bandage the wound. If combined with a fracture or sprain, clean and bandage the wound before applying the splint or sling. (p.21) Write on the outside of the sling "open wound." *If possible wear rubber or vinyl gloves, always protect yourself from blood or body fluids as much as you can.*

BRUISES

Cold packs help decrease swelling and pain. NOTE: If bruising is found on the neck, chest, or abdomen, suspect deeper injury and treat preventively for shock. (p.26)

CRUSH INJURY

Keep the person quiet, not active. If the crush injury is to a limb, elevate it and apply cold packs if possible. If there is injury to the chest, abdomen, or large areas of limbs, also treat for shock. (p.26) Remember to WATCH OUT for your own safety in dangerous areas.

POSSIBLE SHOCK

Have the person lie down. Elevate the legs to higher than their heart level. If there is a head injury, elevate the head also. Conserve normal body heat, including the head. Protect the airway. If the person is partially or completely unconscious, turn them on their side to keep the airway open, not blocked by the tongue, and to prevent choking on fluids especially if nauseous. Do not give them food, fluids or anything by mouth. (p.26) Send for medical help.(p.14)

FRACTURES AND SPRAINS

Stabilize the injured area with splints or wraps to prevent movement and decrease pain. Use soft materials next to the skin, and stiff materials for splints or support. (p.21) For ARM, SHOULDER, or COLLARBONE use a sling and swath. For LEG or HIP support with board splints, or if none are available, place padding between the legs and secure both legs to each other for support. The unhurt leg acts as a brace for the injured one.

HEAD, NECK, AND BACK

Do not move the injured person unless there is immediate danger such as fire or hazard. Be careful not to twist or bend the neck or back. After stabilizing the neck (p. 29) Get enough help, (at least three people) and LOG-ROLL the injured person onto a board/stretchers (door, shutter, ironing board) before moving them. Be sure to stabilize the neck and back in a straight line, prop with rolled towels, and secure the entire person onto the board with tape or straps to be sure they don't fall off when the board is lifted and carried.

BURNS

Stop the burning process by cooling with clean water or wet cloths for 10 to 15 minutes. After cooling, remove the wet cloths and cover the burns loosely with clean dry bandages. If there are blisters, DON'T break them. DON'T apply oils or ointments. (p. 22)

Electric Burns: DO NOT TOUCH the person until you're absolutely sure the electric source has been turned OFF AND REMOVED from them.

CHECK FOR BREATHING

In The Days That Follow

The injured have now been identified and treated in your Medical Area, and some of the "Walking Wounded" (people with minor injuries or none) are attending them. Now you should sit down with your group and make some plans for water, shelter, food, and sanitation.

Clean drinking water is the most essential necessity for sustaining life. Shelter from heat and cold is next in importance. Food is third. It is possible to live without food for several weeks, but human beings can only survive for a few days without water. Shelter helps prevent medical complications from environmental exposure, such as heat stroke, heat exhaustion, or hypothermia (serious loss of core body warmth).

Things to do in the days that follow

Set up shelters outside if houses are unsafe. Make a shared cooking area out in the open in a fire-safe area. Arrange for some method of hand-washing before handling food. NEVER use charcoal or camp stoves inside a house or tent or any enclosed space. There is the double danger of carbon monoxide poisoning as well as fire.

Arrange for sanitation and infection control. Set up a toilet area separated from the living areas. Dispose of wastes properly and carefully to avoid disease.(p.32) Set up a Morgue area if needed, and notify Police Dept. or City authorities if there are any deceased at your location.

Re-check, clean, and re-bandage wounds at least once each day. Or teach your helpers or the injured persons how to do it for themselves. Re-check circulation in all limbs that you have bandaged or splinted. Adjust splints and ties as needed.

Things to do NOW, before the emergency comes

Organize your household or workplace resources. Store some extra water and food. Have a sleeping bag and two gallons of water per day (for about 3 days) for each person. Make up a First Aid Kit and keep it in your car, your home, your office, where it will be easily available at all times.

Organize a neighborhood group or a school or workplace Rescue Team. A group can work together in gathering the essential supplies, equipment, and medical materials. Meet with your neighbors or coworkers. Take some Disaster Preparedness classes from your city or county Fire Department or Police Department. Many are free.

Gather information from your city, county, and state Offices of Emergency Services, Fire Departments and public libraries. Customize your planning to fit your specific needs and situation. You cannot predict every possibility, but being basically prepared will make a positive difference when an emergency comes. In the meantime, having some knowledge gives you a degree of confidence and peace of mind.

Infection Control & Sanitation

As soon as practical after the event, fill some containers with tap water. It's likely that a major quake or explosion will rupture water mains and pipes and the water supply may become contaminated and unsafe. The water in your water heater is safe to drink, but turn off the inlet pipe so no new (contaminated) water will enter. Water in your toilet tank (not toilet bowl) can be used for pets.

Use your cleanest (or bottled) water for drinking and wound cleaning. If you have clean but somewhat less-certain water, it can be disinfected with chlorine bleach. Use about **one half teaspoon per gallon** of water or about **4 drops per quart**. This can be used for hand washing in a bucket set aside for this purpose. Don't use standing water or runoff water.

Hands carry bacteria that spread infection and disease. Wash your hands before and after each injured person you treat, before handling any food, and after using the latrine or toilet.

Avoid direct handling of blood or other body fluids and secretions. Wear gloves if possible to protect yourself from blood-borne infectious diseases such as hepatitis, staph, strep, HIV, and others. Unbroken skin is a fairly good barrier, but rubber or vinyl gloves are better.

You should have gloves in your First Aid kit, but if none are available, you could use plastic bags like mittens for some protection. If you have nothing else, even non-porous paper or tinfoil may give some protection. Disposable rubber or vinyl gloves can be bought in most drugstores, hardware stores, and grocery stores. Or heavier household rubber gloves can be worn and washed off with soap and water before and after treating each injured person.

Basic Sanitation

Normal sanitation services may be damaged or shut down. Improper disposal of human waste and fluids can create serious health problems and cause an epidemic of disease.

Set up a toilet area that is some distance from your living area and Medical Aid area. It must be either **LEVEL** with these areas or **DOWNHILL** from them— Not uphill – otherwise, rain or underground seepage will carry waste products down into your living area.

One method to handle the problem of human waste is to make a latrine. Dig a rectangular trench that's at least 2 feet long, 6 inches wide, and a minimum of 2 feet deep - deeper if possible. After each use of the latrine, take a small scoop of dry powdered household bleach or powdered agricultural lime (available in garden supply and hardware stores) and sprinkle it directly over the waste. Then sprinkle a scoop of dirt on top. Lime is caustic,(can cause chemical burns) so avoid getting it on your hands or clothing. When done, wash your hands.

Infection Control & Sanitation

Or you can make a temporary toilet from a sturdy small trash can with a tight fitting lid. Line the container with two heavy-duty plastic bags, one inside the other. Then place a layer of absorbent material such as shredded newspaper or Kitty-litter into the inside bag. After using the toilet, sprinkle dry powdered bleach or lime onto the waste. Use minimal toilet paper and put it into the bag also. Replace the cover carefully so that nothing leaks or spills.

When the container is two-thirds full, twist and tie the inner bag, then twist and tie the outer bag. Then remove the bags from the container and bury them in a latrine that is away from, downwind, and level or downhill from your living and medical care areas.

Morgue

Unfortunately but realistically, some lives may be lost due to circumstances beyond your control. If you have any deceased at your location, report this to your communications point (nearest Fire Station) as early as possible. They may be able to arrange for the proper removal of the deceased. If not, they can give you instructions for what to do.

Generally it is appropriate to cover the deceased respectfully and leave them where they were found if you know that authorities are coming soon. Your primary concern at this time is for the living, and what you can do to help them.

However if no help will be available for a period of hours or days, the deceased should be moved to a morgue area that is some distance from your living area and medical area. Plan the placement of the morgue area carefully, taking into consideration elements such as weather and privacy. An appropriate location would be a place that is as cool and dry as possible, downwind and level or downhill from your living area, and accessible by Emergency vehicles.

Environmental Hazards - HEAT

After an explosion or earthquake, many buildings may be unsafe. You may have to live, work, and sleep outdoors, at risk for dangers such as Exposure to heat and cold. The risk of HEAT EXHAUSTION or HEAT STROKE is increased by strenuous work, hot weather, or humidity.

The injured are most at risk for HYPOTHERMIA (dangerous LOSS of body heat) especially if they must sit or lie on the ground. The best plan is to avoid the complications of both heat and cold exposure by taking preventive measures.

PREVENT Heat Exhaustion and Heat Stroke

- **DRINK WATER** about every 15 to 20 minutes before, during, and after physical activity. Avoid dehydration by replacing fluids often. Don't wait until you are thirsty.
- **WEAR A HAT.** Cover the back of your neck and shoulders. Avoid sunburn. Wear loose-fitting, light-colored clothes. Rest in the shade when you get tired or become overheated.
- **RECOGNIZE SYMPTOMS** of heat illness and take action promptly.

Heat Exhaustion Looks like this:

- Skin is sweaty, may be pale, cool, and clammy.
- Weakness and fatigue, muscle cramping.
- Pulse rapid at first, may become weak or thready.
- Headache, often with nausea.
- Dizziness, impaired judgment.
- May or MAY NOT feel thirsty.

What to do

1. Move the person to shade or a cool place.
2. Check breathing, circulation, and mental status.
3. Remove clothes and sponge body with cool (not cold) water.
4. If fully conscious, give cool water to sip.
5. **DO NOT GIVE SALT** or salty water. Okay to give sports drinks diluted 50-50 with water.
6. **DO NOT** give full-strength fruit juices or soft drinks. These will delay the absorption of water into the system.

Heat Exhaustion may progress to Heat Stroke:

Skin appears red, feels either hot and dry, or hot and damp. In late stages, sweating may stop. Mental status is altered. May be confused, disoriented or irrational. May seem groggy, or may become unconscious. Heat Stroke may be accompanied by seizures.

What to do - GET MEDICAL HELP

1. Move the person to shade or a cool place.
2. Remove clothes and sponge their body with cool water and fan continuously.
3. Apply ice packs to head and neck, armpits, and groin (pulse points).
4. Stop aggressive cooling when oral temperature drops below 102 degrees.
5. If fully conscious and not vomiting, give sips of cold water. **DO NOT** give fruit juice, colas or sports drinks. **DO NOT GIVE SALT!**

Environmental Hazards - COLD

HYPOTHERMIA is a dangerous loss of adequate body-core heat. It can occur without very cold weather. Being outdoors for long periods of time, wearing wet clothing, sitting or sleeping on the ground can cause rapid loss of essential body heat. Infants and children, the elderly, and the ill or injured are at greatest risk.

PREVENT Hypothermia

- **PROTECT THE INJURED** from direct contact with the ground. Place plastic sheet, then a layer of cardboard, crumpled newspapers or leaves, then blankets or sleeping bags.
- **DRESS IN LAYERS.** Add on or take off as weather conditions change.
- **STAY DRY.** If the inside layer of clothing gets wet with sweat, replace it with dry.
- **WRAP UP** to minimize body heat loss. Have a lightweight water repellent jacket, hat and gloves. Army surplus wool hats and gloves are excellent. (Wool and silk will still keep you warm even when wet.) Cover the heads of the injured.
- **WEAR HARD-SOLED SHOES OR BOOTS** with wool socks if possible, to protect your feet from broken glass, metal, etc. and help maintain body heat.

MILD Hypothermia Looks like this:

Shivering, sleepy, slow or slurred speech, fumbling, staggering, or unsteady walk.

What to do

1. Remove wet clothing and place the person in a dry warm sleeping bag, well insulated from the ground in a wind-proof shelter if possible.
2. If conscious, give sips of warm fluids.
DO NOT Give alcohol, coffee, tea or cola.
3. Handle gently. Do not rub or massage.

SEVERE Hypothermia Looks like this:

Cold to the touch, shivering stops, skin looks waxy or blue, mental status is altered, confused, unresponsive or unconscious.

What to do - GET MEDICAL HELP

1. Check breathing, circulation, and mental status. Use the neck artery to check for pulse, and take more time, because the pulse is likely to be very slow and faint.
2. Handle the person very gently. Carefully avoid any bumping while moving them to a warm sheltered area.
3. Warm the person gradually. Remove their clothes and place them in a warmed sleeping bag, or get into the sleeping bag with them and warm them with your body heat.
4. Do not use high heat devices such as electric blankets. But you can heat some dry towels and place them at the head, neck, armpits, and groin pulse points.
5. DO NOT attempt to give anything by mouth unless the person is fully conscious and able to sit up and swallow without choking. DO NOT give alcohol, coffee, tea, or cola.

Epilogue

DISASTERS ARE HAPPENING ALL OVER THE WORLD

There are major earthquake faults in the U.S. and all over the world. Essentially wherever there is a mountain range, there is a fault line, as well as offshore beneath the oceans. The National Geological Survey states there is a 70% probability of a massive earthquake in California that could occur at any time. All over the world there is increasing mass-casualty violence from terrorism. A major emergency is a real possibility, right now, and even right where you are.

In a major disaster there may be hundreds or even thousands of people injured. There will not be enough medical help and rescue for everyone. Most of us should expect to be "on our own" for at least 24 hours to 3 days until help can be brought from other areas. Yet we may need to take action immediately, to save ourselves and others. In the first minutes, hours, and days, we will have to rely upon our own common sense and our own two hands.

NOW YOU HAVE THE BASIC TOOLS

In this book you learned the essential information and skills needed to be able to prevent the preventable deaths, and to care for and prevent worsening of injuries while waiting for medical help. Now you have a foundation of knowledge: What To Do, When, and How. You know how to think "outside the box" and how to improvise actions and materials if you need to.

KNOWLEDGE IS POWERFUL

Ultimately what's in your mind will be much more important than what's in your First Aid Kit. And what's in your mind is always with you anywhere and any time, even in unimaginable situations. Even when you are not expert at the task at hand, having this essential knowledge enables you to make sound decisions and take appropriate actions,

Time Is Life

A Study by the American College of Trauma Surgeons researched three types of trauma deaths:
Type 1 –Death in minutes from overwhelming damage to body & vital organs. (cannot be saved)
Type 2 –Death within several hours from severe bleeding or shock. (might have been saved if...)
Type 3 –Death in days or weeks from infection, organ failure, shock.(might have been saved if...)

This study estimated that of those who had a chance to survive but died, as many as 40% could have been saved by simple First Aid measures, IF they received them EARLY.

In a medical crisis, time is often the deciding factor between life or death.

With the information and skills you have learned, you can make the critical difference.

***NEXT: FIRST AID SUPPLIES AND KITS -
HOW TO SET UP YOURS***

First Aid Kits & Supplies

No “store-bought” First Aid kit is likely to have what you need because they are intended for minor quick-fix or temporary situations. It’s usually better to put together your own kit if possible.

We examined dozens of commercial (and expensive) First Aid kits on the internet and found that NONE of them would be adequate for a disaster. So-called “Survival Kits” contained mostly water (not nearly enough) candy bars, small band-aids, and aspirin. Advertising and fancy packaging are common and although they are not illegal, they can be very misleading.

Your First Aid Kit for Earthquake and Disaster must be more than the ordinary kit. It should have bigger-sized materials and more of them. Your kit should be compact, well stocked, kept up to date, and easy to reach quickly. Here’s a list of basic essentials to get you started. Add your specific personal or group needs to the list.

Get a sturdy nylon or canvas bag that’s big enough, water-resistant, and has lots of easy-to-get-at pockets. (A bright color is good.) Or “roll-your-own” using the diagram on p.40-41. Then stock it with the materials you actually need and can really use.

Suggested Supplies for your Disaster First Aid Kit

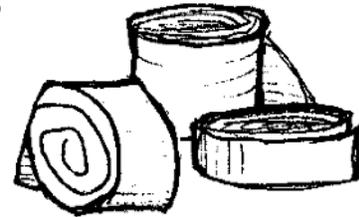
- This Disaster First Aid Handbook
- Colored Tags and marking pens for START Triage
- Latex or vinyl gloves, 12 to 30 pairs
- Cloth and plastic tapes 1” and 2” wide
- Large & Medium sterile gauze dressings
- Extra-Large band-aids 2”x 4” or larger
- Box of sanitary napkins (these make good absorbent dressings or splint padding)
- 1 or 2 Large packs (100) non-sterile 4”x4” gauze (good for controlling bleeding & misc.)
- Rolled bandages like Kling or Kerlix, or make your own (from strips of washed, bleached, old sheets)
- Triangle “cravat” slings (or make your own)
- Tongue depressors and/or cotton swabs
- Lots of extra-large safety pins
- Liquid disinfectant soap (such as “Green Soap” or Betadine scrub)
- 2% Hydrogen Peroxide (to be diluted with water)
- Antibiotic ointment (Polysporin, Bacitracin, etc.)
- Sterile saline 500cc (wound cleaning or eye flushing)
- Large waterproof Magic Markers
- Small tablet and pens
- Plastic baggies and heavy garbage bags
- Plastic sheeting ground cover 12 x 25 ft roll
- Mylar “space blankets” (6 or more)
- clothesline-type rope or sash-cord
- “Duck” Tape (good for everything)
- Blunt-ended or “EMT” scissors 2 pairs
- Kitchen rubber gloves for general mess
- Pocket knife or folding lock-blade knife
- Also consider things like a clean plastic squirt bottle or spray bottle for cleaning wounds with a forceful spray of water.
- Keep 2 weeks supply of any prescription medications you or your family usually take (changed monthly to keep them fresh)
- Tylenol or aspirin for FEVER (Remember that aspirin can increase bleeding)
- Anti-Diarrhea medicine (if possible seek medical advice before using medications).

Then add whatever else you think you’ll need for yourself, your family, or your workplace.

Throw a Bandage-Rolling Party

Clean Out the Linen Closet and Have Fun Making Your Own First Aid Supplies

We encourage “outside the box” thinking. Learn to use whatever you have, and you will always find what you need, no matter where you are.

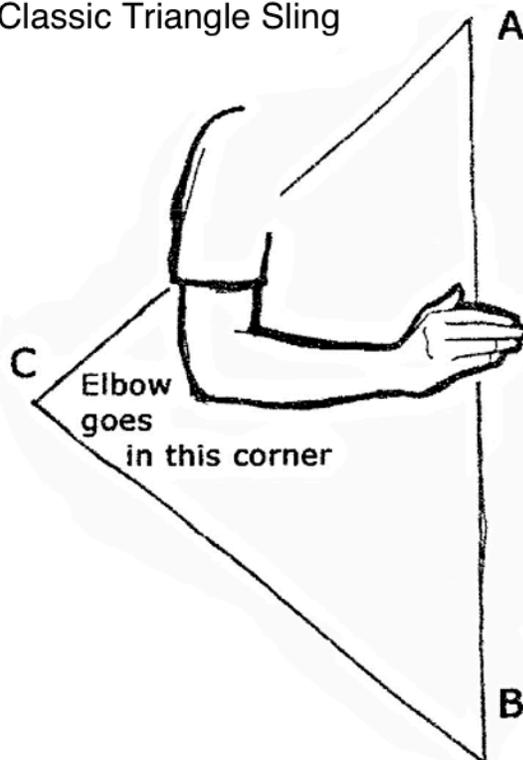


Old towels make excellent padding for splints. Rolls of bandages can be made from strips of old sheets. Since these are going to be the outer wrapping that doesn't touch the actual wound, they don't have to be sterilized. Just wash them in hot water with a good dose of chlorine bleach (an effective disinfectant).

Have a party, a potluck, or a neighborhood meeting and enjoy some socializing while you tear the sheet material into strips of different widths, then roll them up into convenient sized rolls. Store them in ziplock baggies for your individual or neighborhood first aid kits. They are very good (superior to gauze) for splint ties, bandage wrapping, and many other uses for all sorts of things from controlling bleeding to repairing tents.

Also, cut some triangles of material for arm slings. Pillow cases also make great arm slings. Make up lots of bandages and slings and put them into your group or individual First Aid Kits. Meanwhile, get to know your neighbors a little better. In an emergency that involves many people, you will need them, and they will need you.

Classic Triangle Sling

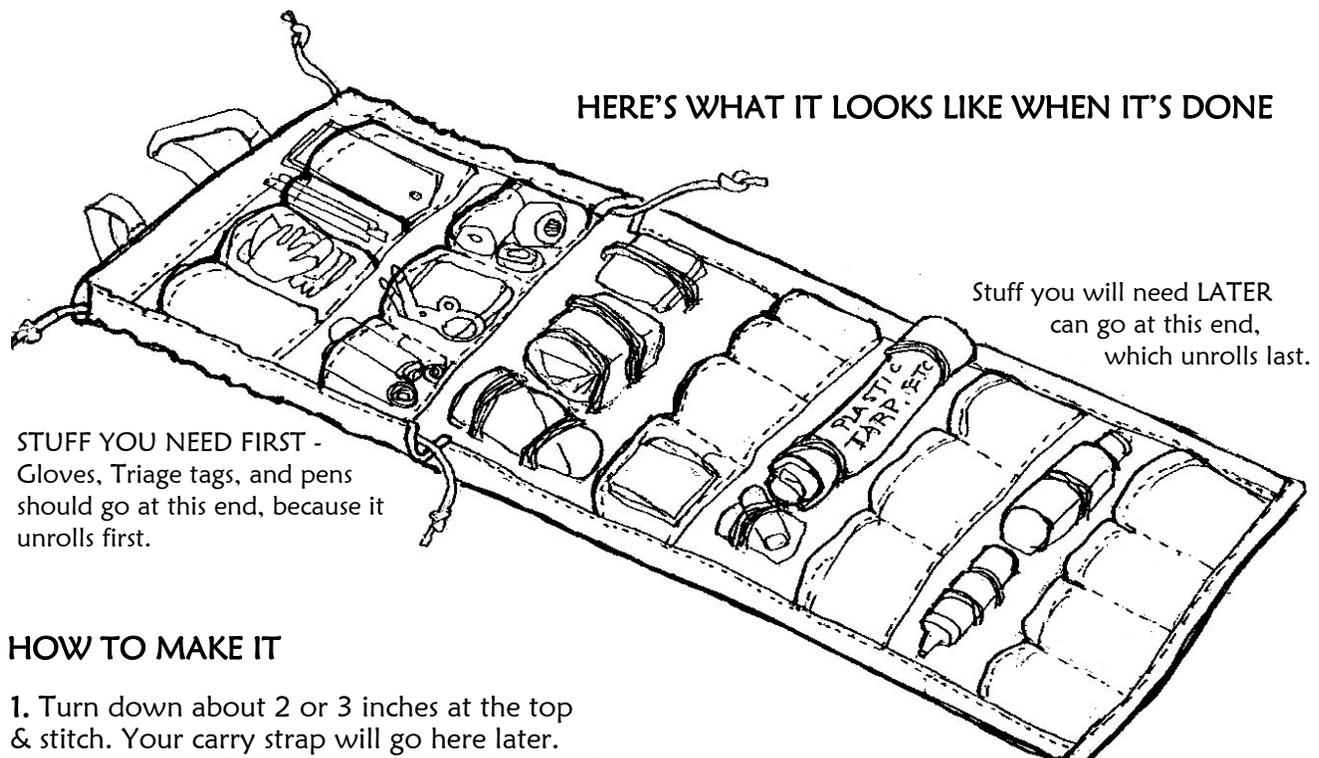


Fold this end up.
Tie A and B
behind the neck.



Roll Your Own First Aid Kit Bag

The bag should be about 2 ft. by 4 ft. or a maximum of 3 ft. by 5 ft. Any bigger becomes awkward to handle. Fabric for the outside should be heavy gauge water-resistant backpack material. Inside pockets should be clear vinyl or mesh see-through material. Straps are nylon webbing. Sew with nylon thread, or waxed thread if you can get it. This is not a precise pattern, but a rough diagram to get you started. You're welcome to adapt it and develop your own best design.



HERE'S WHAT IT LOOKS LIKE WHEN IT'S DONE

Stuff you will need LATER can go at this end, which unrolls last.

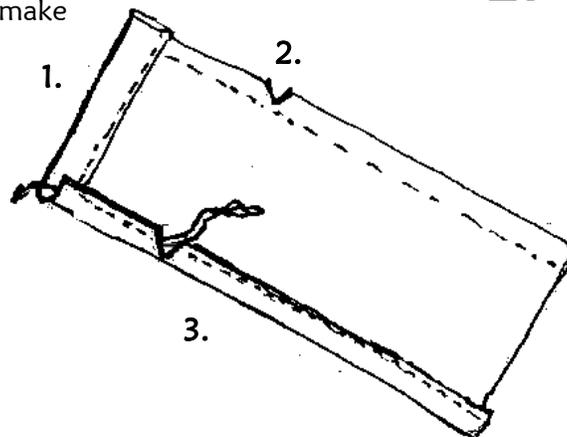
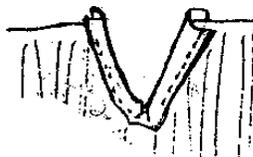
STUFF YOU NEED FIRST - Gloves, Triage tags, and pens should go at this end, because it unrolls first.

HOW TO MAKE IT

1. Turn down about 2 or 3 inches at the top & stitch. Your carry strap will go here later. You're going to fold this over again (3) to make the drawstring tube.

2. Make a notch about 18 to 24 inches below the top edge, (on each side) for the drawstring to exit.

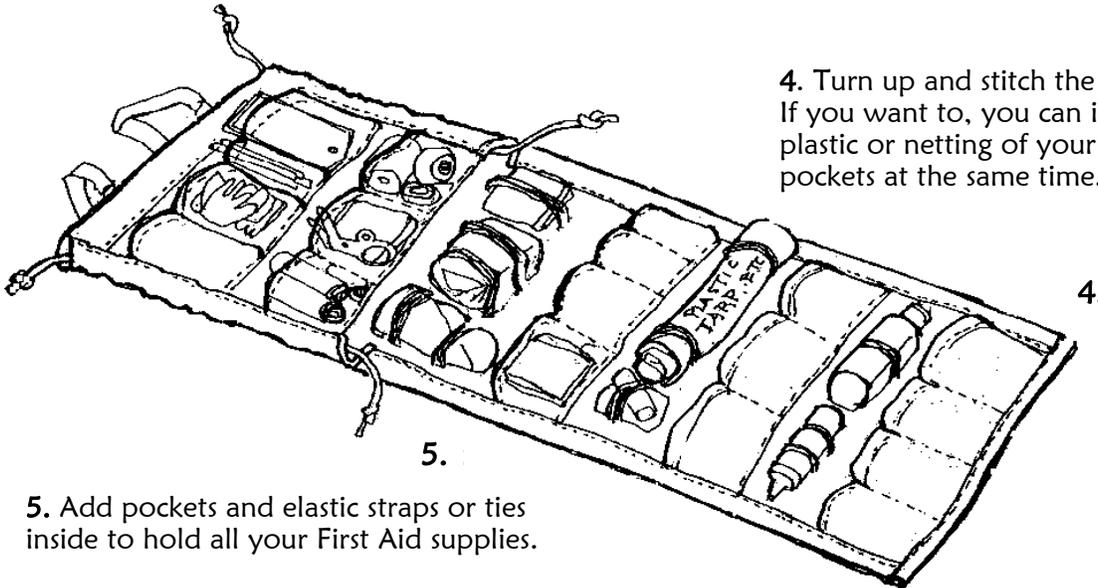
Sew a border of extra material around the notch to strengthen it. It will look like this.



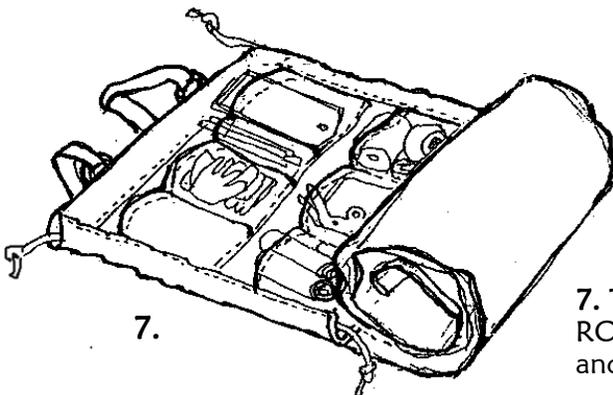
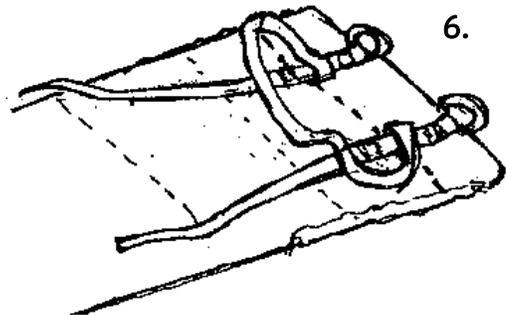
3. Turn down about 1 inch and stitch, each side. With a little skill you can stick the drawstring cord into the fold before you sew. or you can run it thru later. Now it looks like this.

Roll Your Own First Aid Kit Bag

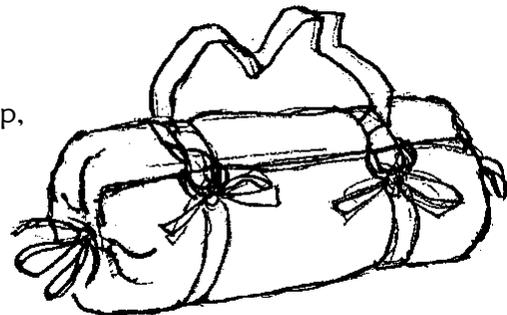
This type of First Aid kit has several advantages. You can drag it behind you like a sled if you have to go some distances between injured people you're helping. With the straps at the top you can hang it on a tree or tent in your Medical Area, and all your supplies will be visible and easy to get to.



6. Add your carrying strap, roll-up straps and rings.



7. Then Fill it up, ROLL it up, and GO.



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There is more you can do...

Ask for Disaster First Aid© from your City's Disaster Preparedness Program

This one-day Disaster First Aid course is used by many C.E.R.T. programs on the East and West Coasts of the United States and Canada. This unique copyrighted course was originally designed to be used with Fire and Police Department Public Education programs. Disaster First Aid© is based on the standard protocols used by public safety agencies for multi-casualty emergencies, simplified and scaled-down to citizen level.

Ask for it at your School

Many schools teach Disaster First Aid to their faculty and administrators. Others teach it to high school and middle school students. This is a condensed course of life-saving information and skills anyone can learn in one day, and yet it has more of what you actually need to know for disaster than any existing Standard or Advanced First Aid course that takes weeks or months.

Disaster First Aid is completely different from "Basic" or "Standard" First Aid. DFA is focused on only the most crucial information - and nothing else. However, any other First Aid courses you have already taken can be used effectively along with it.

Teach Disaster First Aid Yourself in your neighborhood or your Employee Safety Program

These common-sense techniques can be taught by non-professionals and learned and practiced by anyone from age 14 to seniors. You don't have to be a professional teacher to teach Disaster First Aid. Citizen Disaster Team Leaders can teach it in their own neighborhoods. Employers can teach it in the workplace.

EMTs, Paramedics, Nurses, and others can teach it as a Small Business. For more information, see the website: www.disasterfirstaid.com or write: disasterfirstaid@earthlink.net

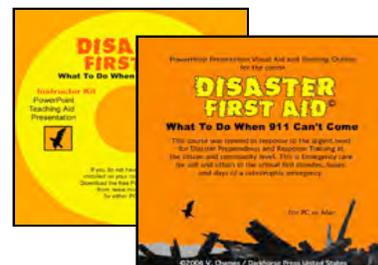


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Course-writer's personal Footnote:

We all hope that man-made disasters and catastrophic earthquakes won't happen in our lifetime, but the odds are, they will. When we prepare, then we are able to do all that can be done.

When an emergency happens to you or near you, you are already there where the need is. And so for better or for worse, you actually are the first crucial step in the overall Disaster Response Operations network.

The actions described in this book are the same first-actions and Disaster protocols practiced by Public Safety officers and Emergency Medical Field Rescue crews in California, the United States, and many countries of the world. Your early actions will fit directly into your state and local Disaster Response Plans.

There are a number of other, non-medical topics that are also very important, such as Search and Rescue, Fire Safety, Disaster Logistics (family and community planning for food, shelter, sanitation) and Neighborhood Organization for Disaster Response.

*Most cities, counties, and other local Public Safety agencies provide courses in these topics. These courses are often free of charge. Call your city or county Office of Emergency Services or your Police & Fire Services Office to ask about Citizens' Emergency Response and Disaster Preparedness training courses in your area.
We thank you for caring enough to prepare, and to help yourself and others. Now more than ever before, we need to care, and we need each other.*

About the Author:

The creator of Disaster First Aid is a state of California Fire Service Training and Education System (CFSTES) registered Regional Fire Instructor, a former firefighter, Fire Training Officer and Emergency Medical Services Officer, Program Director of Fire Med, a California approved Continuing Education Program for EMTs and Paramedics, Provider #01-0022, and is a currently practicing Hospital Emergency Medical Technician with more than 20 years of Hospital and Field experience.

Visit the website: www.disasterfirstaid.com
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References and Information Sources

Alameda County California Emergency Medical Services
Policy and Procedures Manual
Policy #8070 Medical Management of Multi-Casualty Incidents
Policy #8073 S.T.A.R.T. Triage
Policy #8210 Trauma Patient Evaluation

Multi-Casualty Incident Scene Management Plan
Alameda County Fire Chiefs' Association EMS Section

Basic Trauma Life Support, 2nd Edition
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