



# Journal of Civil Defense™

**Fall/Winter 2007**  
Volume 40, Issue 3



# Triage!

**Maximize Survivors**



# WE WANT YOU TO SUBMIT TO THE TACDA JOURNAL OF CIVIL DEFENSE



## Suggested Topics for Submissions:

- Psychology of Civil Defense
- Nuclear Weapons Effects
- All Hazard Sheltering
- Chemical/Biological Warfare
- EMP and Power Failure
- Radiation
- Natural Disasters
- Food Storage
- Water Purification
- Cold Weather Survival
- Evacuation & 72-Hour Kits
- Communication
- Alternative Energy & Fuel
- Medical Preparedness
- Triage
- Post Event Survival

## Civil Defense Related Advertising Available

The Journal of Civil Defense is published quarterly by The American Civil Defense Association (TACDA) as the primary publication for the distribution of reliable civil defense and disaster preparedness information and resources to TACDA Members, their families and communities.

**For more information, or to submit to the TACDA Journal of Civil Defense, email: [info@TACDA.org](mailto:info@TACDA.org).**

### DISCLAIMER

Statements and opinions expressed in this, or any, publication of the Journal of Civil Defense™ are those of the author(s) and do not necessarily reflect the official position of The American Civil Defense Association (TACDA™), the editors, the publishers, the Board of Directors, or any organization with which the author(s) are affiliated. The editors, the publishers, and TACDA™ in general disclaim any responsibility or liability for any material and do not guarantee, warrant or endorse any product or service mentioned. Official positions of TACDA™ are established only by The American Civil Defense Association (TACDA™) Board of Directors.

©2007 TACDA™

All Rights Reserved. No part of this, or any, publication may be reproduced, deposited in any storage device, or transmitted by any means electronic, digital, mechanical, or otherwise, without permission in writing from TACDA.





# Journal of Civil Defense™

**The American Civil Defense Association (TACDA)**

11576 S. State St. Suite 502, Draper, UT 84020

(800) 425-5397 (800) 403-1369 (Fax)

[www.TACDA.org](http://www.TACDA.org) [info@TACDA.org](mailto:info@TACDA.org)

**Fall/Winter 2007**  
Volume 40, Issue 3

## **Focus On Public Safety:**

Traing Signs & Symptoms of STROKE (page 4)

## **Spotlight:**

Triaging a Localized, Neighborhood Disaster (page 6)

## **METTAG: Maximize Survivors**

by Trey Edwards - METTAG Director of Operations (page 8)

METTAG MT-137 Instructions (page 11)

START with METTAG (page 12)

## **Living A Sheltered Life:**

Triage in a Full Scale Nuclear Attack - by Sharon Packer (page 14)

## **Keeping Up With The Joneses:**

EMP - Ready or Not? (page 17)

## **"Radio" Active:**

Shortwave Radio Emergency Frequencies (page 20)

## **Board of Directors**

Jay Whimpey, PE  
(President)

Dr. Mary Pernicone  
(Vice-President)

Kylene Jones  
(Secretary)

Dr. Gary Sandquist  
(Treasurer)

Dr. Gerald Looney

Dr. Arthur Robinson

Bronius Cikotas

William Perkins

Jonathan Jones

## **Advisors**

Kevin Briggs

Paul Seyfried

Dr. Jane Orient

Dr. David McKalip

## **Office Directors**

Sharon Packer  
(Executive Director / Editor)

Trey Edwards  
(Director of Operations / Creative)

# **Triage!**

## **Maximize Survivors**



## Triaging Signs & Symptoms of STROKE



A new National Stroke Association study shows most Americans do not treat stroke as an emergency.

When a stroke -- or brain attack -- first hits, many people don't even recognize the symptoms and do not immediately call 9-1-1.

In fact, a recent National Stroke Association survey reports 1 in 3 Americans cannot name a single symptom a person might experience while having a stroke.

Every minute counts for stroke patients and acting F.A.S.T. can lead patients to the stroke treatments they desperately need.

The most effective stroke treatments are only available if the stroke is recognized and diagnosed within the first three hours of the first symptoms. Actually, many Americans are not aware that stroke patients may not be eligible for stroke treatments if they arrive at the hospital after the three-hour window.

If you think someone may be having a stroke, the National Stroke Association urges you to act F.A.S.T. and do this simple test:

## Act F.A.S.T.

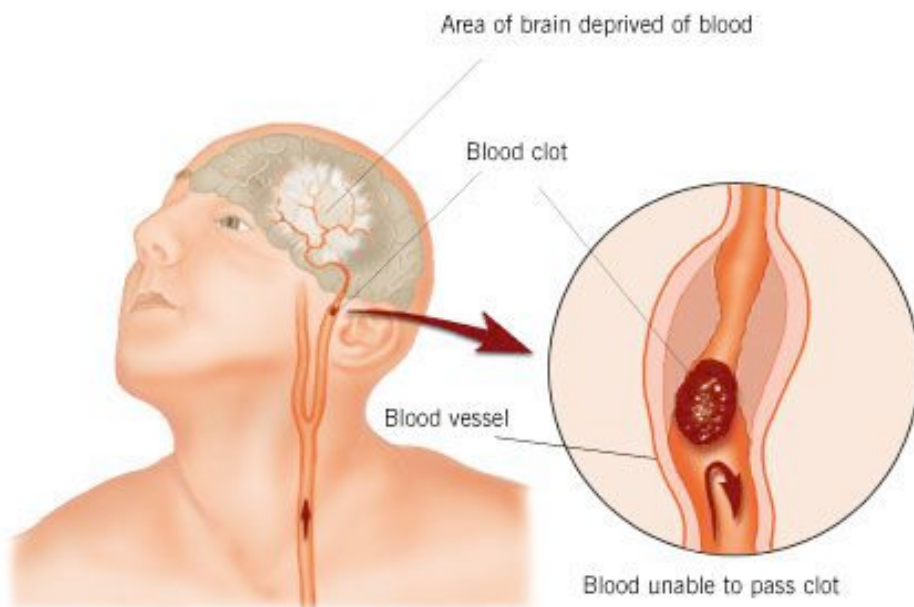
<b>F</b> FACE	Ask the person to smile.  Does one side of the face droop?
<b>A</b> ARMS	Ask the person to raise both arms.  Does one arm drift downward?
<b>S</b> SPEECH	Ask the person to repeat a simple sentence.  Are the words slurred? Can he/she repeat the sentence correctly?
<b>T</b> TIME	If the person shows any of these symptoms, time is important.  Call 911 or get to the hospital fast. Brain cells are dying.

*Signs*, as those shown above, are what you, the observer, perceives.

*Symptoms* are what the patient perceives. The patient may or may not be aware that they are experiencing a stroke. If they are alert, they may experience the following symptoms and should immediately call 911:

- ✓ Sudden numbness or weakness of face, arm or leg - especially on one side of the body.

(Continued on next page)



(Continued from previous page)

- ✓ Sudden confusion, trouble speaking or understanding.
- ✓ Sudden trouble seeing in one or both eyes.
- ✓ Sudden trouble walking, dizziness, loss of balance or coordination.
- ✓ Sudden severe headache with no known cause.

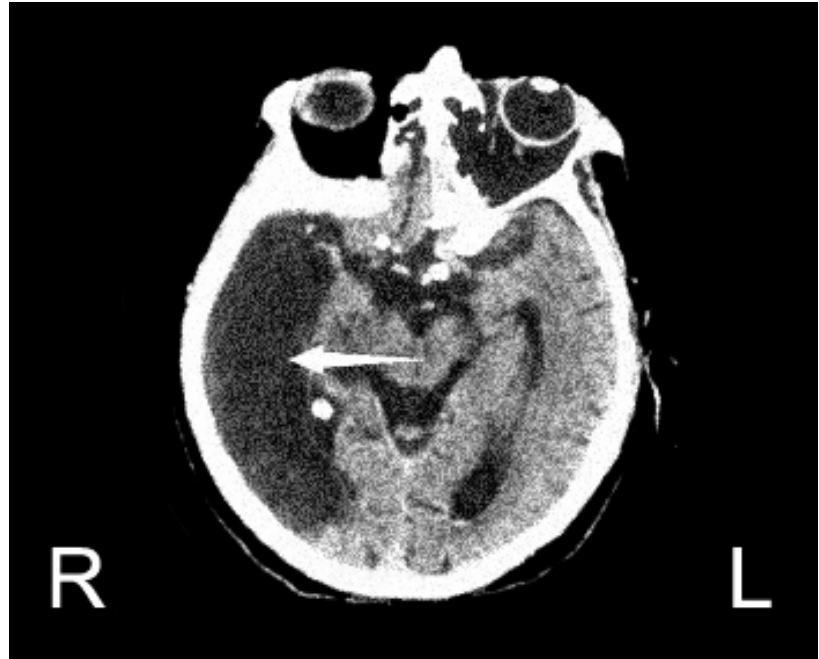
**Dr. Dawn Kleindorfer:** Assistant professor of Neurology, University of Cincinnati School of Medicine

"Understanding the warning signs is important because there are treatments we can give for stroke. If you understand the warning signs and get to the hospital quickly we can even possibly reverse the stroke itself."

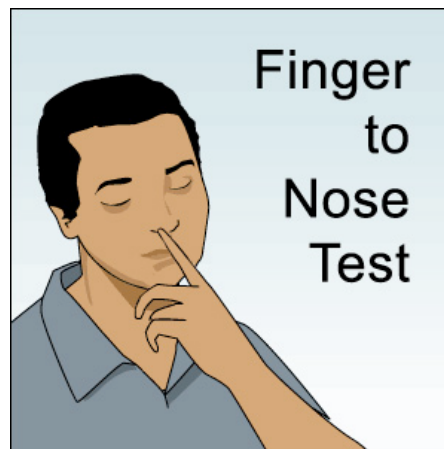
**Dr. Gerald Looney:** TACDA Board of Directors

"These signs are suggestive of, but not necessarily diagnostic of, a stroke. It is well taken that finding them in a patient certainly calls for further evaluation as rapidly as feasible."

A stroke occurs when ANY area of the brain is damaged, and some areas of damage may not produce these signs. Also, the schematic here shows only OCCLUSIVE stroke (blockage of an artery by intrinsic clot, or embolus from elsewhere) and omits the equally probable HEMORRHAGIC stroke when an aneurysm or artery wall breaks/tears and allows blood to flood into and over adjacent brain tissue.



Also, brief occlusion from intrinsic arterial vasospasm or from unusual head/ neck positioning or trauma can present the same or similar symptoms as a stroke (called a transient ischemic attack, or TIA), but clears rapidly before permanent damage and cell death occurs in cerebral tissue. In my experience, one of the best rapid assessments is the ancient finger-to-nose test with eyes closed.



This requires a tremendous number of intact cerebral circuits and healthy neurons and is generally reliable and fool-proof."

The following are some of the signs & symptoms of a possible hemorrhagic stroke:

- ✓ Headache, often severe and sudden onset
- ✓ Severe and sudden vertigo
- ✓ Nausea and/or vomiting
- ✓ Seizures
- ✓ An altered level of consciousness
- ✓ Intolerance of bright lights
- ✓ Difficulty expressing thoughts, or understanding others
- ✓ Weakness on one or both sides of body
- ✓ Abnormal eye movements
- ✓ Loss of coordination

TACDA hopes these reminders will help you recognize and seek treatment for a possible stroke, in a timely manner.





## Triaging a Localized, Neighborhood Disaster

Study TACDA academy lesson #1, *The Psychology of Civil Defense*, found on the TACDA web site, for help in forming a neighborhood organization. Post-event survival is dependant upon the preparations we make before the disaster occurs.



### Don't become a victim

In every situation, your first concern should be for your own safety. You will not be of assistance to those in need if you become a victim of the very disaster you are trying to mediate. In fact, you could become part of the problem. Watch for downed power lines, sharp objects, chemicals, fire, unstable footing, etc.

Initiate rescue attempts only if you believe your fire or police department is unable to respond in a reasonable length of time.

### Call for help

Professional emergency response teams (ERT) have been trained in rescue and first aid procedures. Call 911 to activate your local EMS system as soon as possible. In some types of disasters, your regular phones may not function. If your neighborhood has made the proper preparations, there will be several people in your vicinity with alternative communication capabilities.

### Rescue people whose lives are threatened

In some disasters, such as in large earthquakes, your local ERT may not be able to respond in time to initiate the necessary rescue procedures. People often hesitate to move an injured victim, for fear of aggravating their injury. Victims who are in danger of further injury, however, such as from fire or drowning, must be moved to a safer location. If spinal injuries are suspected, take care to support the back and neck of the injured individual.

### Provide first aid

Triaging the injured becomes necessary when there are large numbers of victims. Basic first aid must be given in a logical and prioritized manner. Life threatening injuries must be assessed and treated first. If the number of rescuers is limited, quick decisions must be made in order to maximize the number of survivors.

- ✓ Clear the Airway
- ✓ If spontaneous breathing does not occur, Initiate CPR
- ✓ Control severe bleeding
- ✓ Stabilize the spine and neck
- ✓ Treat for Shock

You may find yourself in a situation where CPR, though needed, must be stopped in order to perform other life saving procedures on victims who are more likely to survive. Request help from bystanders who may be able to continue performing CPR while you attend to other victims.

### Account for the condition and location of people in the neighborhood

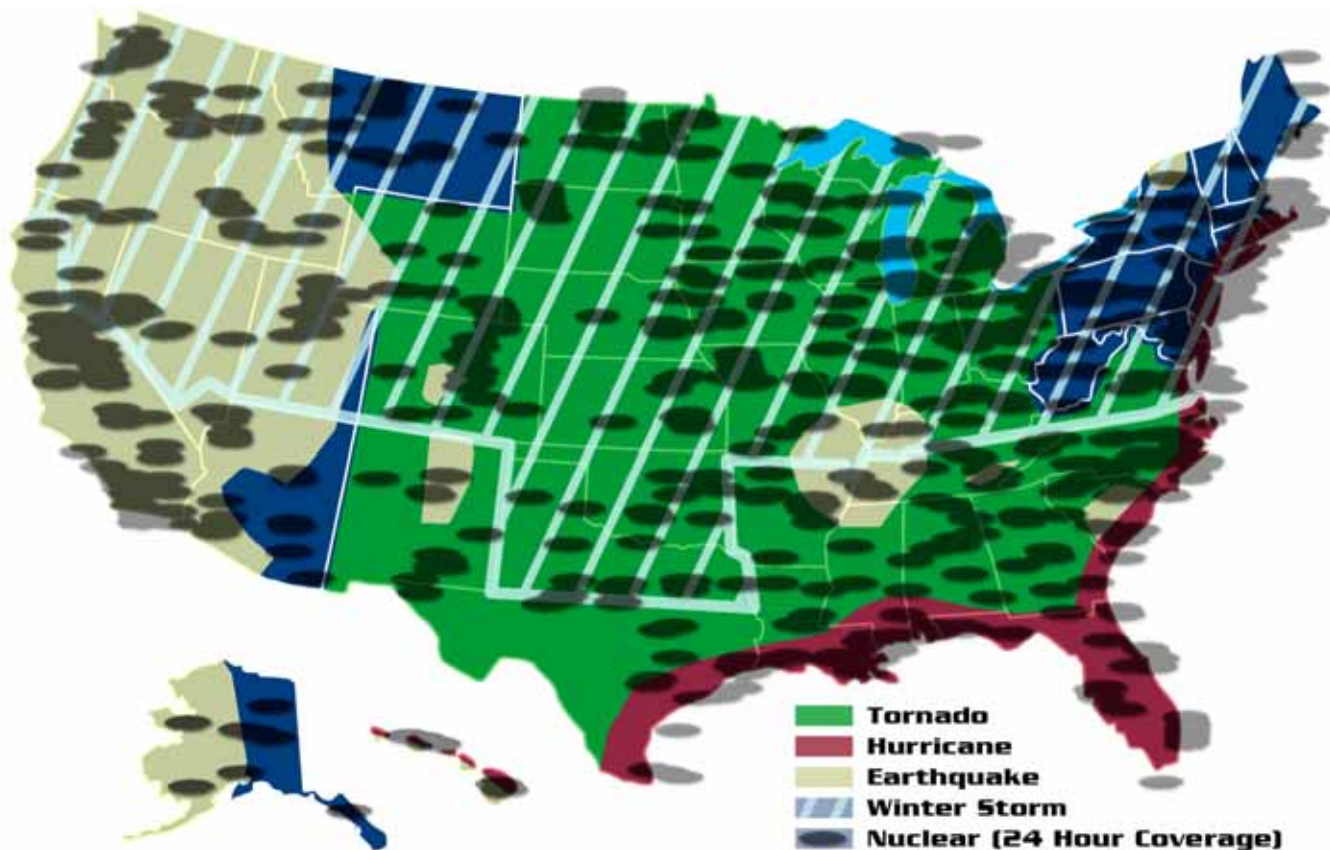
After immediate life saving procedures have been completed, proceed through your neighborhood looking for other victims. If you are acquainted with your neighbors, and have formed a neighborhood organization, you can quickly locate and assist the injured, elderly, handicapped and families with small children. Colored ribbons or cards should have been pre-designated to be hung on doors, to indicate which homes have people in need of assistance. Be sure that you consult with your local EMS, before assigning colors, as you may have assigned colors that conflict with their plan.

### Provide emergency water, food, clothing, and housing

Quickly assess the safest location for sheltering the victims and those who have been left homeless. Encourage the families to bring their 72-hour kits and as

(Continued on next page)

(Continued from previous page)



much clean drinking water as possible to the shelter. Gather blankets, extra clothing and food where it is safe to do so.

### **Restore normal living conditions as quickly as possible**

Assign people to cook in mass. Use perishables from the refrigerators first, then food from the freezers, and then canned foods and non-perishables.

### **Prevent or limit property damage**

If the neighborhood organization is functioning, people will have been pre-assigned, if necessary, to turn off the natural gas and water to the damaged homes.

### **Secure and protect assets**

Mobs and gangs will quickly form to loot and cause further chaos. There is safety in numbers. If possible, gather your trusted neighbors into a smaller number of locations.

### **Fortify social, emotional, and spiritual strength**

Support and comfort one another. A 2007 ABC News poll indicates that approximately 83% of the population of the United States identify themselves as believers in God. Do not hesitate to pray together for your spiritual comfort.

### **Be able to report to the next higher organization level the following information:**

- ✓ Your name, address, and how you can be reached.
- ✓ Description, location, and

- ✓ magnitude of the emergency.
- ✓ Names of any injured, missing or dead, and contact information for their next of kin.
- ✓ Exact location and extent of property damage.
- ✓ Number of persons needed to provide assistance and specific tasks to be done.
- ✓ Number of people who need skilled medical help.
- ✓ Actions being taken to help those in distress.
- ✓ Number of members available to provide assistance, including those with specific skills.
- ✓ Assistance needed that is unavailable in the neighborhood affected, including medicine, food, water, clothing, shelter, or fuel.



**By Trey Edwards**  
**Director of Operations**  
**TACDA and METTAG Products**

I joined the TACDA and METTAG team in January of 2005. Brought on as a consultant for design and business development, my primary duties were to update the look for TACDA and METTAG, including new logos, websites, and the Journal of Civil Defense. Over the past few years I have been privileged to be on the front lines of compiling the education resources and information TACDA and METTAG have developed over the decades for our members and clients. Much of this information was overwhelming at first, but I soon developed a sincere interest in triage and learning to help in a Mass Casualty Incident (MCI).

My fascination with METTAG began early as I started researching triage. Merriam-Webster's Medical Dictionary defines triage as "the sorting of, and allocation of, treatment to patients, especially battle and disaster victims, according to a system of priorities designed to maximize the number of survivors." The origin of modern triage has been attributed to Dominique Jean Larrey, a french battlefield surgeon in the late 18th and early 19th centuries, under the command of Napoleon.

He determined that battle patients needed to be evaluated by the severity of their injury, not by rank, in order to increase the number of survivors. His method worked, and more lives were saved.

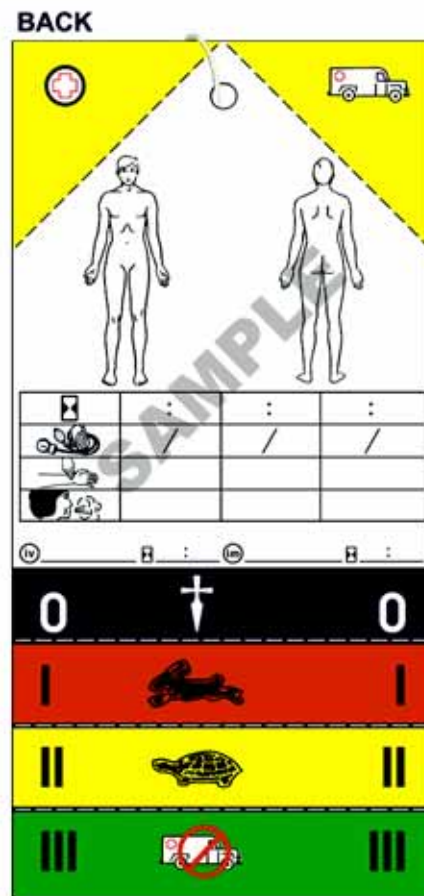
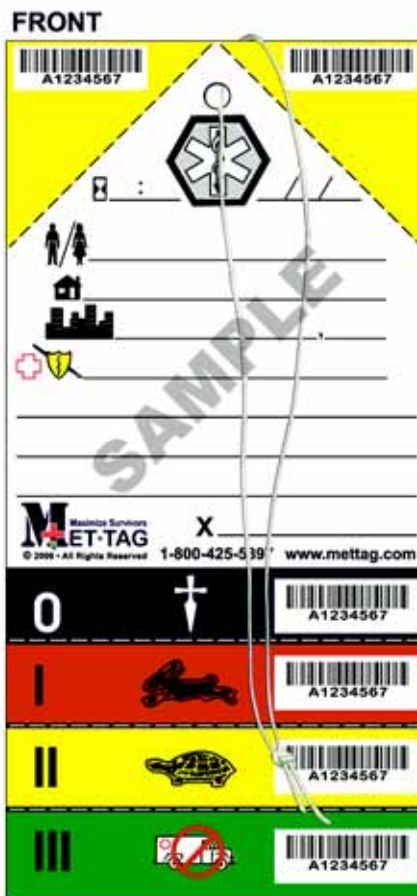
The term "Maximize Survivors" became the obvious choice for the motto added to the new METTAG logo.

The METTAG MT-137, introduced in 1976, is the original triage tag recognized as the standard for the US Military, fire departments, and emergency medical technicians (EMT) throughout the country. As a nationally recognized emergency tool, METTAG has been the choice for each of the Olympic Games on US soil (Lake Placid – 1980, Los Angeles – 1984, Atlanta – 1996, and Salt Lake – 2002).

METTAG receives numerous requests for MT-137 Triage Tags with this comment written in bold:

**"NO SUBSTITUTES"**

What makes the METTAG MT-137 the preferred choice for over 30 years?



(Continued on next page)





(Continued from previous page)

The MT-137 has been tested and developed under scrutiny of doctors, nurses, firefighters, rescue personnel, industrial safety experts, travel safety directors, and civil defense specialists. The original METTAG MT-137 Triage Tag, with its use of symbols, is the only triage tag that maintains a simple, effective design perfect for the most expedient triage situations. Competition for the triage market has grown over the past few decades, with new advanced designs attempting to improve the original METTAG. Many of these attempted improvements have a tendency to complicate their effectiveness and require additional training for their use. The need for a simple and effective triage tag, free from language barriers, will always exist. METTAG is committed to keeping the MT-137's 30 year old proven design as close to the original as possible, with great appreciation for the professionals for whom it was developed.

One obstacle I needed to overcome involved the psychological aspects of triage. At any time, and in any place, I could be involved in a mass casualty situation, either as a victim or as a witness. My knowledge of triage could be extremely beneficial to the situation.

In any mass casualty event, there will be those who will survive without help and some who will die even with quality intervention. However, there are those that my skills and quick response will save. The primary focus of triage is to find those people expediently.

Learning to be calm and helpful in response to an emergency is an acquired skill; you are not born with it. The first crucial factor is knowledge of what to do in an emergency. First aid, CPR, and first response training courses are readily available and essential to saving lives. Remember that triage is not taking care of an individual victim. Triage is quickly and safely assessing the entire group of casualties to pave the way for those with skills to treat those in need.

As a result of my triage education and research, I have grown confident that I could and would use these tested and proven techniques in an emergency situation.

The Newport Beach Marine and Fire Department has helped simplify the triage process even further by taking the fundamentals of triage and creating Simple Triage and Rapid Treatment (START). The START layout has been widely accepted, and works with essentially any triage tag, including METTAGs.

### **Triage tags provide color codes to designate the urgency of the victim:**

**Black** — Dead or expected to die. No treatment will change condition.

**Red** — Immediate or primary care needed. Treated first.

**Yellow** — Delayed or secondary care needed. Treated after Red.

**Green** — Minor or minimal care needed. Also called "Walking Wounded." May be used to call 9-1-1 or provide other assistance.

The tags colors are on perforated sections that can be torn off and discarded, or saved for recording. As you tear off a colored section, the color left at the bottom of the tag is the designated triage level of the victim. For example, tear off the **Green** section to designate **Yellow**. Tear off **Green** and **Yellow** to designate **Red**.

Please note that unless you are professionally trained to determine a dying or dead victim, it may be difficult to accept the responsibility of giving someone a **Black** triage tag. Be reassured the triage process explained later should help you overcome this difficulty.

Here is a possible scenario. I am the first one on the scene of a Mass Casualty Incident (MCI). My first step is to quickly determine what took place and make sure the area is safe. Has the structure been compromised? Are there downed power lines? Is there risk of fire or explosion or danger from hazardous materials? Recognizing the dangers, assessing the risks and acting appropriately will prevent me from adding to the over all problem by becoming a victim, myself. I must remain calm, think before I act, and remember the basics of risk assessment; examining the consequences of working in that environment.

The next step is to locate up to three (3) bystanders, if they are available, look directly into their eyes and say calmly and directly: **"You!...You!...You! Call 9-1-1 now. Get help. Come back and tell me when you've done it. Ok?"**

(Continued on next page)



(Continued from previous page)

I must know that more help is on the way. If there are no available bystanders, I will look for the "walking wounded" (those with minor injuries who may be able to assist with the triage process until more help arrives).

I shout in a calm and direct manner:

**"Listen!...Listen!...Listen!**

**Anyone that can hear my voice, come to the sound of my voice or go to (a location I have pre-determined to be safe)."**

Everyone who moves to that area is a **Green** triage tag victim. They're the **"walking wounded."** I will place **Green** triage tags on each of these people and, if necessary, have up to three (3) of them call 9-1-1 for more help (if I am unable to locate available bystanders).

I may use a **"walking wounded"** or bystander to assist with controlling bleeding, if they are available and it is necessary. If, for any reason, it is not possible to control the bleeding, then the victim may require a **Black** tag, but **Red** may be used. It is very important to remember that these are tested and proven guidelines, but it is entirely acceptable to label a potential **Black** victim with a **Red** tag...and this works with the order of the colors on the tags. I would rather tag someone **Red** than miss-tag someone **Black**.

Now I may proceed (only if it is safe) to enter the area where the rest of the victims are located. I will methodically sweep the room, checking each victim quickly and

spend approximately 30 seconds with each person.



With each victim, I will check the following (in order):

#### Breathing / Respiration

- ✓ Is the victim breathing?
  - If not breathing, open their airway
    - Tilt head & Lift jaw
    - Remove foreign material (have latex or nitrile gloves, if available)
- ✓ Are they breathing now?
  - If yes, **Red** tag.
  - If no, **Black** tag. **Move on to next victim.**
- ✓ If they are breathing without assistance, is it more than 30 times per minute (once every two seconds)?
  - If yes, **Red** tag. **Move on to next victim.**
  - If no, proceed to **Blood Circulation check.**

#### Blood Circulation / Perfusion

- ✓ Does the victim have a pulse?
  - If pulse is clearly present, proceed to **Being Alert check.**
  - If pulse is not clearly present, check for blood circulation.
    - Squeeze their fingernail until the nailbed whitens (or press a finger on their forehead until the area whitens).
    - Let go and count how long it takes to darken.

- If greater than two (2) seconds, **Red** tag. **Move on to next victim.**
- If less than two seconds, proceed to **Being Alert check.**

NOTE: The US National Library of Medicine calls this a "capillary refill" or "nail blanch" test. Use the finger on the forehead technique if the patient is wearing nailpolish. If the circulatory system is working well, the nailbed or forehead area will return to color in under two seconds.

#### Being Alert / Mental Status

- A. Is the victim alert? Ask the victim their name and what happened.
- If there is no response or it is inappropriate, **Red** tag. **Move on to next victim.**
  - If they answer appropriately, **Yellow** tag. **Move on to next victim.**

The process may seem overwhelming at first. Don't give up! The triage process is actually very simple and easy to remember. It is up to you to take the first step by becoming educated in triage principals. **START** now, to learn how to **MAXIMIZE SURVIVORS** in the event of a Mass Casualty Incident (MCI).

I welcome your questions and comments on triage or any civil defense or preparedness topic. **Please call 1-800-425-5397 or email me at [trey@tacda.org](mailto:trey@tacda.org) or [trey@mettag.com](mailto:trey@mettag.com).**

Take care and thank you for choosing TACDA and METTAG.

Trey Edwards  
Director of Operations



# Medical Emergency Triage Tag MT-137 Instructions



## Someone "CALL 911" • Identify "Walking Wounded" Know Simple Triage And Rapid Treatment (START)

**NOTE:** Diagonal tear-offs on upper corners may be used to indicate casualty positions at the MCI site, to attach to severed limbs, to place with personal effects, or for any additional use deemed necessary by local authorities.

The front view of the MET-TAG form includes a header with two barcode labels (A1234567). Below is a large white area with a black Star of Life symbol. To the left of the symbol are icons for a person, a house, and a city skyline. To the right are labels A, B, C, D, and E. Below these are lines for text entry. At the bottom left is the MET-TAG logo and contact information. At the bottom right is a signature line labeled F. Below the main form are four colored boxes representing priority levels: 0 (Black, Terminal), I (Red, Critical), II (Yellow, Serious), and III (Green, Non-Serious). Each box contains a number, a symbol, and a barcode.

### FRONT

- A. Enter time and date of triage
- B. Enter name of patient (if conscious and coherent)
- C. Enter street address (if conscious and coherent)
- D. Enter city, state and zip (if conscious and coherent)
- E. Enter pertinent medical information and observations on blank lines
- F. Enter name of triage personnel on signature line (X)

### BACK

- G. Indicate location of bodily injuries on front and back body diagrams
- H. Enter blood pressure, pulse, and respirations in vital signs chart with time taken. Indicate if pulse is full or weak, and if regular or irregular. Multiple vital signs may be taken.
- I. Enter intravenous (IV) and time
- J. Enter intramuscular (IM) and time

The back view of the MET-TAG form includes a header with two yellow triangular areas containing icons of a person and a truck. Below are two body diagrams (front and back) labeled G. Below the diagrams is a vital signs chart with columns for H (Heart Rate), I (Intravenous), and J (Intramuscular). Below the chart are four colored boxes representing priority levels: 0 (Black, Terminal), I (Red, Critical), II (Yellow, Serious), and III (Green, Non-Serious). Each box contains a number, a symbol, and a barcode.

### TRANSPORT PATIENT BY PRIORITY LEVELS

**0 BLACK (TERMINAL - Dead or Expected)**

**I RED (CRITICAL - Primary Care)**

**II YELLOW (SERIOUS - Secondary Care)**

**III GREEN (NON-SERIOUS - Minor Care)**

• 1-800-425-5397 (Toll Free) • 1-888-425-5339 (Fax) • info@mettag.com • www.metttag.com •



# START

Simple Triage And Rapid Treatment

WITH



Respirations

NO

Position Airway

NO Respirations



Dead / Deceased / Expectant

Respirations



Immediate / Primary

Pulse Absent

Capillary Refill

Over 2 Seconds



Immediate / Primary

Under 2 Seconds

## CONTROL BLEEDING



imize Survivors  
**T•TAG**

**/ Breathing**

**“Walking Wounded”**

III



III

Minor / Minimal / Able to Assist

**“CALL 911”**

YES

Under 30  
per min

Over 30 per min

I



I

Immediate / Primary

**Perfusion / Blood Circulation**

Pulse Present

**Mental Status / Being Alert**

NO

YES

I



I

Immediate / Primary

II



II

Delayed / Secondary



## TRIAGE IN A FULL SCALE NUCLEAR ATTACK

By Sharon Packer  
spacker@utahsheltersystems.com

It is likely that a nuclear attack would be initiated by an electro magnetic pulse (EMP). It is our belief that the general public will receive no warning of a full-scale nuclear attack. There is no warning system in place and there would not be time for our emergency broadcasting system to relay this information.

The power drop from the EMP could give us valuable minutes to prepare for the potential attack. Every instance of power failure should be tested for the possibility of an EMP. People living outside the zone of blast could have several hours before the arrival of dangerous levels of radiation. People living inside blast target areas in the central to western part of the country could have as much as a 25-minute "grace time" before the first missiles arrive. How should these people prioritize their time?

You may have no other alternative except to evacuate. Keep in mind that the fallout cloud will generally follow a west to east

direction. If possible, drive north or south of the assumed target. Your vehicle may be disabled from the EMP. In that event, try removing the battery cables for a few moments and then reattaching them. During EMP simulations, disabled vehicles were able to start after doing that procedure.

It is most probable that the enemy would initiate an attack during our nighttime hours. Make an EMP alarm that will awaken you when the power fails, and test for EMP in every instance of power failure. Never allow the gas in your car to go below the half way level. Study the TACDA Academy lessons #2 and #5 on Weapons Effects and EMP.

### Less than 25 minute scenario:

If you live near either coast, you may have just a few minutes warning time from the EMP. Assume there will be a missile attack following the EMP. Take shelter immediately. If you live well outside a target zone, follow the appropriate directions below.

### Twenty-five Minute Scenario:

Consider the following scenarios, assuming: there has been a confirmed EMP or an eminent attack warning; you have at least 25 minutes to prepare for the attack; and your car has not been disabled by an EMP.

#### A. You live within 5 miles of a blast zone, but have no blast shelter:

- ✓ Keep supplies in your car. Study fallout maps. Pre-position supplies in a safe place with friends who live in an area that is at least 20 miles outside the blast zone, or locate and plan to travel to a

nearby expedient shelter such as a mine or tunnel. See TACDA lesson #3 for expedient sheltering ideas.

- ✓ Gather your family and leave the area immediately. Drive to your 'safe place'.
- ✓ DO NOT take time to turn off gas or water to your home, or gather other supplies. Time is of the essence. If you are within 5 miles of a target, your home will be destroyed in the blast and you would be severely injured or killed if you stayed in your home.
- ✓ Many cars will be disabled from the EMP and freeways may be clogged. Plan several routes leading away from the target zone, before such an event occurs.
- ✓ As mentioned earlier, if possible, drive north or south of the blast targets, to limit fallout exposure. If you are able to travel at least 10 miles away from the target area before the blast occurs, the overpressure from the blast will drop to the one-psi range and the blast winds will be less than 35 mph.
- ✓ As you drive, have your passengers cover their side and back windows with aluminum foil to help reflect the thermal pulse.
- ✓ If you have gasmasks, wear them while you drive. The mask will protect you from biological agents, glass from a broken windshield and inhalation of fallout.
- ✓ If the blast occurs while you

(Continued on next page)



(Continued from previous page)



are driving, do not look in the direction of the fireball, as it could damage your eyes. Continue driving to your safe location.

**B. You live between 5 and 20 miles outside a target zone and do not have a hardened blast shelter:**

If you live in the 5 to 10 mile range, your best option is to evacuate. Your home will not survive at the 5-mile range, and you cannot trust that the missile will be exactly on target. Missiles from a full-scale attack will most probably come from the north or east and if they miss, will normally fall short of their intended target. Plan evacuation routes accordingly.

If you live in the 10 to 20 mile range, you may survive in a basement fallout shelter.

Remember, we are assuming you have 25 minutes warning from the EMP.

- ✓ Immediately send your family to your shelter and have them take a blast position. Begin taking a 'Thyroid Blocking Agent'. Follow the instructions on the bottle.
- ✓ An adult will do the following:
  - Quickly close all blinds and drapes in your home against the thermal pulse.
  - Turn off your gas and water.
  - Lock all exterior doors.
  - Do not take time to further any other preparations.
  - Return immediately to your shelter.
- ✓ After the blast, wait 30 minutes. Have one adult check the house and extinguish fires that may have been initiated by the thermal pulse.

- ✓ Quickly cover any broken windows with duct tape and plastic.
- ✓ Return to your shelter and begin monitoring radiation levels. If at any time, the radiation level in your shelter exceeds 10 R per hour, add more shielding (Refer to TACDA Academy lesson 6 on Radiation).

**C. You live more than 20 miles outside a target zone and do not have a hardened blast shelter:**

Well before the event, build a simple fallout shelter in your basement or in an interior room of your home. Supply the shelter with emergency supplies, non-perishable foods, clothing and sanitary supplies. Study TACDA Academy lesson #3 on sheltering. Gather your family, reminding them not to look in the direction of the blast. Send small children to the shelter under the supervision of an older child or adult. Take a 'Thyroid Blocking Agent', following the instructions on the bottle. If you are well out of the blast zone, one adult may choose to continue with the following preparations until the attack commences:

- ✓ Close drapes and blinds. This will protect your home from the thermal pulse, and discourage looters.
- ✓ Do not leave the immediate area of your home for any reason.
- ✓ Turn on one small, battery-

(Continued on next page)

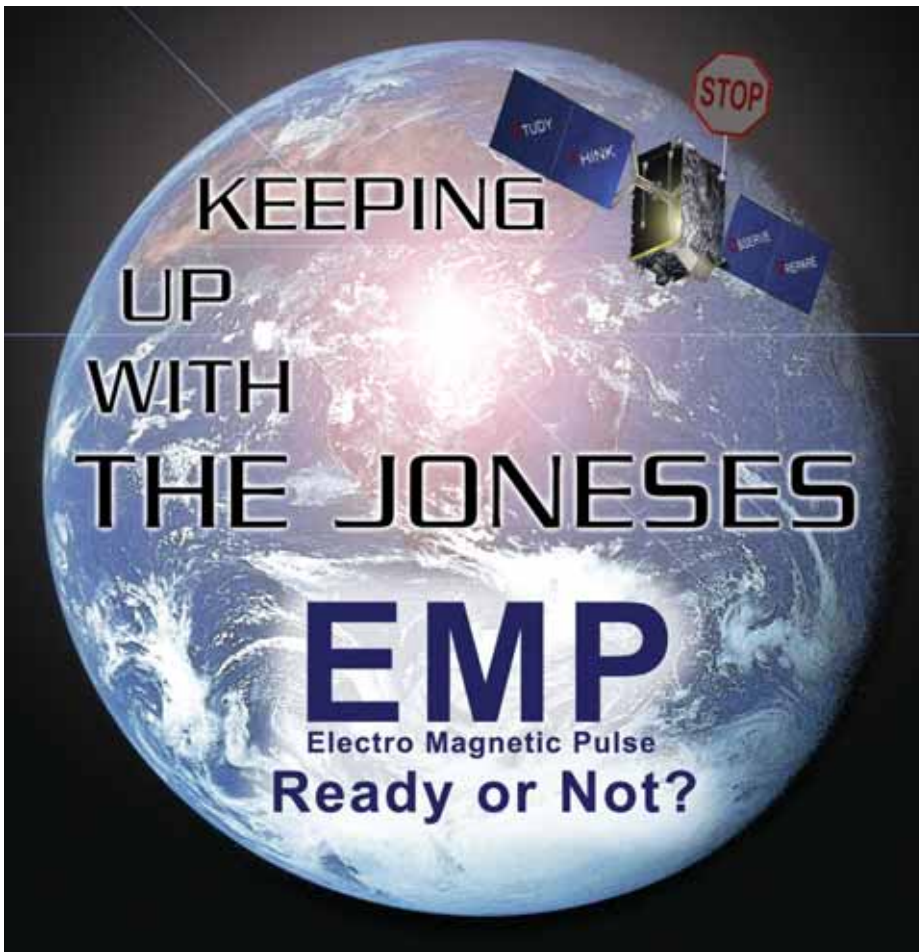
(Continued from previous page)

- ✓ powered radio and listen for the emergency broadcasting station. Though unlikely, some stations may still function.
- ✓ Gather last minute supplies, such as bedding and a 2-week change of clothing.
- ✓ Fill all tubs, basins, and empty containers (preferably with lids) with water.
- ✓ Place all food from the refrigerator into a cooler, and take it to the shelter. Leave the refrigerator door open and place a stack of newspapers inside to prevent mildew.
- ✓ Leave freezer foods inside the freezer with the door closed. Freezer foods should stay frozen for several days, after which radiation levels will have fallen to a level that would be safe to leave the shelter and retrieve and consume, or dispose of the food.
- ✓ Dig a 24" deep hole in your backyard, downhill from your water supply and future garden spots, for waste disposal.
- ✓ If sheltering in the basement, fill all window wells with dirt, sand or other dense materials.
- ✓ Close chimney dampers.
- ✓ Charge your dosimeters. Place batteries in your radiation meter.
- ✓ Bring radios and other critical electrical equipment to the shelter. Do not remove radios or other electrical supplies from their faraday cages until well after the attack.
- ✓ Bring a shovel, ax and chain saw into your basement.
- ✓ Retrieve tools and other valuable items out of your garage and out buildings and take them to your basement.
- ✓ Lock all vehicles and secure them in the garage. Remove batteries from all vehicles and store them in the basement.
- ✓ Secure animals in the barn or garage with a two-week supply of food and water. Do not bring pets into your home or shelter. Dogs will cause sanitation problems and if they are allowed to come in and out of the home, they may introduce a source of radiation or disease. A barking dog will also draw the attention of looters.
- ✓ Cover all outside fuel sources (firewood and coal) with plastic.
- ✓ Cover all furniture, carpets, and rugs with plastic or sheets.
- ✓ Board up and lock all windows and doors and prepare to defend your location.
- ✓ If there is still time, you may want to cover a garden spot with plastic sheeting.
- ✓ If you are certain you are well out of the blast zone, climb to the roof of the house and cover the chimney and air conditioner with duct tape and plastic.
- ✓ Remind them to take and hold a blast position in a hammock or bunk.
- ✓ Begin taking a 'Thyroid Blocking Agent'. Follow the instructions on the bottle.
- ✓ Do not take time to gather other supplies or food or make other preparations.
- ✓ If you live in the central part of the country and have adequate EMP warning take a few minutes to do the following:
  - Turn off the gas and water to your home.
  - Lock and secure your home.
  - Close your curtains and blinds.
  - Enter and lock yourself into the shelter
  - Turn off the air supply to the shelter (this keeps heavy dust and fallout from contaminating your filters).
  - Lie down in a hammock or bunk (this protects your legs and body from ground shock).
  - From your prone position, charge your dosimeters and pass them to your family.
  - One hour after the blast, activate your radiation meters and start a written record.
  - Do not leave your hammocks except to use the bathroom. Remain in your hammocks for several hours after the blast.
  - Assuming you have planned for at least 88 cubic feet of open space per person, do not ventilate the shelter for 5 hours. Dust, fallout and smoke will clog your valuable filters if you ventilate during that time. Before ventilating, connect the hose to the filter casing.

**D. You have a blast shelter, and live in a blast zone:**

- ✓ Gather your family and send them to the shelter. Remind them to turn on only 2 small 12-volt lights.





## By Jonathan B. and Kylene Anne Jones

It is a cold January evening. You are working late at the office, frantically trying to complete a major project when your computer crashes and the lights go out. Fumbling through your desk you locate a flashlight you had stashed "just in case". With the aid of a little light, you make your way to the windows hoping to see the extent of the outage. Your frustration turns to despair as you look out and see nothing but the wind driven snow in the moonlight. The entire city is in a state of complete darkness.

You decide to call your family to tell them you will be even later than expected. Dead silence is all

you hear from the phone and your heart sinks. "Stupid phones!" you mutter as you drop the handset back in the cradle. Puzzle pieces begin to come together as you sink back into your chair. You grab the radio you use while walking to work each day and run through the presets. Hoping to hear music or even commercials, your worst fears are confirmed as you hear nothing. Panic grips your heart as the last puzzle piece drops in place. Grabbing your coat, you bound down three flights of stairs and run the six blocks home.

You hit the "Scan" button on the radio as you race home. After what seems like eternal silence, your greatest fears are confirmed with the Emergency Broadcast System's annoying alert tones

and the announcement "A devastating electromagnetic pulse (EMP) has destroyed power, communications and other electrical and electronic systems throughout much of the country." All persons are advised to take cover in basements or other protected areas. Please stay tuned to this station for further news and emergency information." The only EMP hardened radio station in your area has just defined your future.

Do you understand the implications of what has just happened? Do you have the knowledge, skills and tools to take care of yourself, family and others? Will you be part of the problem or part of the solution and courageously take part in rebuilding the country? The answer will depend on what you have done to prepare for this event.

The purpose of this article is to educate and motivate. What is an EMP? What are the possible implications? How can I prepare for an EMP? How do I respond if an EMP occurs?

### What is an EMP?

An electromagnetic pulse (EMP) is generated when a nuclear weapon is detonated in the atmosphere. The higher the denotation occurs, the larger the area affected. Detonations at an altitude of 40 kilometers (about 25 miles) or higher are generally referred to as High-Altitude EMP or HEMP. For purposes of this article, I will generically use EMP to cover HEMP also. EMP effects are based on "line-of-sight." One nuclear weapon detonated 200 miles above the earth could cause

(Continued on next page)

(Continued from previous page)

serious damage across the entire continental United States. Even if an EMP occurred in only a portion of the country, there will most likely be a ripple effect impacting the rest of the nation.

This strong electrical energy pulse is collected by metallic pipes, wires, cables, conduits, or other “antennae” much like a radio signal is collected by a radio antenna or lightning by a lightning rod. High voltages and currents are induced that destroy many types of electrical and electronic devices and systems, including the power grid, communications, computers and many other systems that run our world. Lightning and surge protectors are generally ineffective in protecting against EMP.

Although not directly harmful to humans, the indirect effects of an EMP will be devastating to society. The United States is the most technologically advanced nation on earth making it the most vulnerable nation on earth. Our adversaries understand this and are actively seeking opportunities to improve their ability to inflict an EMP on us. Transportation will be severely hampered. Power and communications systems will be disabled. Our ability to produce, refrigerate and distribute food and necessities will be almost obliterated. Hospitals and health care facilities may be inoperable. The ability to produce clean drinking water and manage human and other waste will be severely hampered. Our vulnerability to disease and death will increase dramatically. Indeed, our world, as we know it, will be dramatically altered.

What are the possible implications of an EMP? There are two general scenarios in which an EMP will occur. One is as an act of terrorism, similar to “9-11”, only on a much larger scale. The second is as a precursor to something much more dangerous. Military strategists for decades have assumed that any large scale military action (particularly a nuclear assault) would be preceded by an EMP to disable communications, create commotion, and diminish the ability of the military to respond effectively. In either case, life as we know it will drastically change.

Individuals and families have very little control over these events. Our nation has not effectively dealt with this or other serious threats. It is critically important that we take a defensive approach and make necessary preparations that will provide protection during these challenging times.

### How can I prepare for an EMP?

The window of opportunity to prepare is now, before an EMP occurs. Review the following list, decide where you need to improve and get to work making those preparations:

- ✓ Build a supply of water and food. Store at least a two week supply of water, more if at all possible. Purchase equipment to purify water and understand the principles behind creating safe drinking water. Start with a three month supply of foods that you normally eat. Keep building until you have at least one year of basic provisions that provide energy, nutrition, and emotional satisfaction. Remember to include garden

seeds. Consider ways that you will be able to cook some of the foods you store. There are many good options including propane, charcoal, alcohol and my favorite: cooking with the sun.

- ✓ Consider sheltering options. Sheltering in or very near your home is preferable if you have, or can reasonably build, a workable (hardened?) shelter. (Visit the TACDA Academy or other resources for further shelter information). Your shelter should be stocked with necessities and things to pass time such as games, books, movies, hobbies, projects, etc.
- ✓ Develop a prioritized list of things to be accomplished in the short time that you may have after an EMP, in the event a more serious attack is to follow. Review this list with your household members regularly so everyone understands what needs to be done. Select a “chain of command” so that someone will be effectively directing the effort.
- ✓ Provide for alternative sanitation inasmuch as water and sewer systems will likely be inoperable. A little creativity and research will yield some good solutions, although they will not be as “nice” as the methods to which we are accustomed.
- ✓ Build or purchase (if you can find one) a power loss alarm that will alert you when grid power is lost. When this alarm sounds; check a phone for dial tone and check several, particularly non-hardened,

(Continued on next page)



(Continued from previous page)

radio stations with a battery powered radio. If all is normal, go back to bed or whatever you were doing, unless it requires electricity, as so many things do. If your tests suggest an EMP, an adrenaline rush will follow and the next section of this article becomes important.

- ✓ Invest in a variety of good radios. I suggest a police scanner, a shortwave radio, GMRS Radios, CB Radios, amateur (HAM) radio gear, and of course a good AM/FM radio. Having weather band is nice and I strongly recommend the NOAA Weather/All Hazard Alert capability. You can add or subtract as you decide what works for you. In an emergency situation, it is certainly nice, and perhaps essential, to have good information available to you. It is also extremely helpful to be able to talk to others, close to home or half way around the world.
- ✓ Generally speaking, and especially in an escalating crisis, keep radios disconnected from grid energy sources and keep antennas disconnected or collapsed down. Cords should be wound into a small coil. Use only one radio system at a time, making sure that other systems are protected. Radios and other electronic components, including spare parts, should be protected by putting them in a Faraday cage such as an old microwave that has the cord cut off, a metal can and metal lid that make good electrical contact, or other appropriate Faraday cage designs. There are other possible ways of

providing protection against EMP, but they are beyond the scope of this article. You can search the internet for topics such as "EMP protection" or "grounding systems".

- ✓ Make provisions for back-up energy supplies. This might include generators, solar modules, and/or wind turbines protected in Faraday cages. Energy from these devices and other such generators of electricity can be stored in a battery bank and used directly or through an inverter to create "household power". I also suggest that you properly store a safe quantity of fuels.
- ✓ Keep bicycles and other alternative means of transportation in good repair and have extra parts on hand to make repairs when necessary. Consider having a quality trailer that will attach to your bike.
- ✓ Invest in a variety of good tools. Include a radiation survey meter and dosimeter in this list of tools.

### How do I respond to an EMP?

If you do not already have preparations in place, use your time and resources to meet the basic needs for food, water, shelter, sanitation, and communication. After an EMP event, you will be competing with



large numbers of people seeking limited resources. If you are lucky, you may survive. It will be extremely difficult. If you choose not to prepare, you are part of the problem. Don't count on government organizations or charity of others to save you.

In contrast, if you have prepared by creating a comprehensive plan and implementing preparedness objectives, an EMP and whatever follows will be inconvenient and somewhat challenging, but chances are good you will survive. Produce a prioritized task list so you will know exactly what needs to be accomplished, if time allows, before seeking shelter. This will provide you with tremendous advantages in getting through the crisis. Once your critical resources are where you need them, you can focus on making the best of a bad situation. You will be part of the solution as you reach out to others and ease their burdens. Enlist those around you to courageously create order and rebuild lives.

### Conclusion

The threat of an EMP is real. Many argue it is more a matter of when it will happen than if it will happen. Several of our enemies have the ability to accomplish an EMP strike today, sending our nation immediately into third world status. The effect would be devastating. Our best defense lies in our personal preparations. Make a plan today and take the necessary steps to accomplish it. In the words of John Greenleaf Whittier, "For all sad words of tongue and pen, The saddest are these, 'It might have been'." I challenge you to take action now before it is too late.

# "RADIO" ACTIVE™

## Short Wave Radio Emergency Frequencies

Shortwave radios come in many band lengths and frequency ranges. The greater the frequency range, the more stations the radio can potentially receive. Some of the most interesting listening, for emergency purposes, can only be reached via radios with 'continuous coverage' and 'single sideband' capabilities. Single side band frequencies will be followed by the designation (USB), meaning upper side band, or (LSB) meaning lower side band.

For continuous coverage with single side band capability, an excellent radio is the Sangean ATS 909 Shortwave Radio, which can be purchased for \$249 from CCrane.com. Their technicians are very helpful, and they can be reached at (800)-522-8863. Remember to keep your radios stored in a faraday cage when not in use.



Band oriented radios are less expensive and do not have continuous coverage or single sideband capabilities. They are usually oriented to am and fm frequencies. They might receive frequencies in the range of 4 or 5 megahertz and then skip to 15 megahertz, leaving out many other important frequencies in between. A band-oriented radio might also be designated as a 7-band or 9-band radio.

The type of display determines how precisely the radio can be tuned. Analog tuning is less expensive and less accurate. They are harder to tune to a specific frequency. Digital tuning is more accurate and allows you to enter the frequency you want to monitor. A digital display indicates exactly which frequency you have tuned.

Shortwave radios provide information and opinions from around the entire world. Many countries broadcast in English, enabling you to find a country's political position on numerous issues. You can hear news and other programs from a wide range of sources, and you can get emergency information by listening to amateur radio broadcasts.

A good source of interesting frequencies can be found in the magazine, MONITORING TIMES ([www.monitoringtimes.com](http://www.monitoringtimes.com)). Another great source is the web site [www.radioreference.com](http://www.radioreference.com).

The following is an excellent list of emergency frequencies. These frequencies can only be accessed by radios with continuous coverage and single side band capability.

We hope you incorporate a shortwave radio into your emergency supplies, and learn to use this valuable tool.

## Shortwave Emergency Frequencies

### FEMA National Network Frequencies

- o 5.211 USB
- o 10.493 USB
- o 14.567 USB

### Military Command and Control

- o 4.724 USB
- o 6.739 USB
- o 8.992 USB
- o 11.175 USB  
(this is the frequency Hawk and HAM folks listen to)
- o 13.200 USB
- o 15.016 USB

(Continued on next page)



(Continued from previous page)

These are various frequencies used by the **Amateur Emergency Radio Service (ARES)**. While these frequencies were specifically used during Hurricane Katrina, they can be used for other situations than listed:

### American Red Cross (important frequencies to try)

- 2802.4 USB  
American Red Cross Disaster
- 3171.4 USB  
American Red Cross Disaster
- 5136.4 USB  
American Red Cross Disaster
- 5141.4 USB  
American Red Cross Disaster
- 5211.0 USB  
FEMA
- 5236.0 USB  
SHARES Coordination Network
- 6859.5 USB  
American Red Cross Disaster
- 7507.0 USB  
USN/USCG hurricane net
- 7550.5 USB  
American Red Cross Disaster (primary)
- 7698.5 USB  
American Red Cross Disaster
- 9380.0 USB  
USN/USCG hurricane net
- 10493.0 USB  
FEMA
- 14396.5 USB  
SHARES Coordination Network

### Amateur HF Gulf Coast Hurricane Nets

- 3845.0 LSB  
Gulf Coast West Hurricane
- 3862.5 LSB  
Mississippi Section Traffic
- 3873.0 LSB  
Central Gulf Coast Hurricane
- 3873.0 LSB  
Louisiana ARES Emergency (night)
- 3873.0 LSB  
Texas ARES Emergency (night)
- 3873.0 LSB  
Mississippi ARES Emergency
- 3910.0 LSB  
Mississippi ARES
- 3910.0 LSB  
Louisiana Traffic
- 3923.0 LSB  
Mississippi ARES
- 3925.0 LSB  
Central Gulf Coast Hurricane
- 3925.0 LSB  
Louisiana Emergency (altn)
- 3935.0 LSB  
Central Gulf Coast Hurricane
- 3935.0 LSB  
Louisiana ARES (health and welfare)
- 3935.0 LSB  
Texas ARES (health and welfare)
- 3935.0 LSB  
Mississippi ARES (health and welfare)
- 3935.0 LSB  
Alabama Emergency
- 3940.0 LSB  
Southern Florida Emergency
- 3950.0 LSB  
Northern Florida Emergency
- 3955.0 LSB  
South Texas Emergency
- 3965.0 LSB  
Alabama Emergency (altn)
- 3967.0 LSB  
Gulf Coast (outgoing traffic)
- 3975.0 LSB  
Texas RACES
- 3993.5 LSB  
Gulf Coast (health & welfare)
- 3995.0 LSB  
Gulf Coast Wx
- 7225.0 LSB  
Central Gulf Coast Hurricane
- 7235.0 LSB  
Louisiana Emergency
- 7235.0 LSB  
Central Gulf Coast Hurricane
- 7235.0 LSB  
Louisiana Emergency
- 7240.0 LSB  
American Red Cross US Gulf Coast Disaster
- 7240.0 LSB  
Texas Emergency
- 7243.0 LSB  
Alabama Emergency
- 7245.0 LSB  
Southern Louisiana
- 7248.0 LSB  
Texas RACES
- 7250.0 LSB  
Texas Emergency
- 7260.0 LSB  
Gulf Coast West Hurricane

- 7264.0 LSB  
Gulf Coast (health and welfare)
- 7265.0 LSB  
Salvation Army Team Emergency Radio (SATERN) (altn)
- 7273.0 LSB  
Texas ARES (altn)
- 7280.0 LSB  
NTS Region 5
- 7280.0 LSB  
Louisiana Emergency (altn)
- 7283.0 LSB  
Gulf Coast (outgoing only)
- 7285.0 LSB  
West Gulf ARES Emergency (day)
- 7285.0 LSB  
Louisiana ARES Emergency (day)
- 7285.0 LSB  
Mississippi ARES Emergency
- 7285.0 LSB  
Texas ARES Emergency (day)
- 7290.0 LSB  
Central Gulf Coast Hurricane
- 7290.0 LSB  
Gulf Coast Weather
- 7290.0 LSB  
Texas ARES (health and welfare)
- 7290.0 LSB  
Louisiana ARES (health and welfare) (day)
- 7290.0 LSB  
Texas ARES (health and welfare)
- 7290.0 LSB  
Mississippi ARES (health and welfare)
- 14265.0 USB  
Salvation Army Team Emergency Radio (SATERN)
- 14300.0 USB  
Intercontinental Traffic
- 14300.0 USB  
Maritime Mobile Service
- 14303.0 USB  
International Traffic
- 14313.0 USB  
Intercontinental Traffic (altn)
- 14313.0 USB  
Maritime Mobile Service (altn)
- 14316.0 USB  
Health and Welfare
- 14320.0 USB  
Health and Welfare
- 14325.0 USB  
Hurricane Watch (Amateur-to-National Hurricane Center)
- 14340.0 USB  
Louisiana (1900)

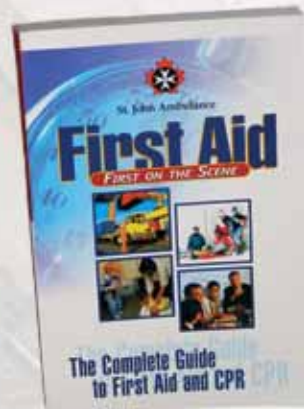
## **DELUXE First Aid Book**

**Member Price: \$15.95**

A comprehensive guide of  
First Aid situations and actions.

### **Contents:**

- Introduction to first aid
- Emergency scene management (ESM)
- First aid for choking
- Breathing emergencies and artificial respiration
- Cardiovascular disease and CPR
- Wounds and bleeding
- Injuries to bones, joints and muscles
- Poisons, bites and stings
- Burns
- Environmental illnesses and injuries
- Medical conditions
- Emergency childbirth and miscarriage
- Psychological emergencies
- Lifting techniques and transportation
- Be safe, be prepared
- The body and how it works



**Featured  
Products**

## **Latex Medical Exam Gloves (100 Qty.)**

**Member Price: \$4.95**

- Size Medium
- Professional Medical Quality
- Pre-Powdered
- Natural Latex
- Non-Sterile
- Disposable Single Use
- Ambidextrous



**The TACDA Store**  
**www.tacda.org**





## **CPR MOUTHPIECE (PRO VALVE)**

**Member Price: \$2.95**

The PTP II Pro-valve is designed to be used when a rescuer attempts to resuscitate an adult who has stopped breathing.

It will help protect the rescuer against potentially contaminated back drafts and secretions while providing a clear, flexible barrier to prevent unsanitary mouth-to-mouth contact.

**Featured  
Products**

## **Nitrile Exam Gloves (100 Qty.)**

**Member Price: \$4.95**

- Size Medium
- Professional Medical Quality
- Powder Free
- 100% Nitrile (Non Latex)
- Non-Sterile
- Disposable Single Use
- Ambidextrous



**The TACDA Store**  
**[www.tacda.org](http://www.tacda.org)**



BECOME A **TACDA** CONTRIBUTING MEMBER TODAY...  
AND BE PREPARED FOR TOMORROW

**ONLY \$36.00 PER YEAR**  
Minimum, Tax-Deductible Contribution

### **TACDA**

#### **Board of Directors**

**Jay Whimpey, PE**  
(President)

**Dr. Mary Pernicone**  
(Vice-President)

**Kylene Jones**  
(Secretary)

**Dr. Gary Sandquist**  
(Treasurer)

**Dr. Gerald Looney**

**Dr. Arthur Robinson**

**Bronius Cikotas**

**William Perkins**

**Jonathan Jones**

#### **Advisors**

**Kevin Briggs**

**Paul Seyfried**

**Dr. Jane Orient**

**Dr. David McKalip**

#### **Office Directors**

**Sharon Packer**  
(Executive Director / Editor)

**Trey Edwards**  
(Director of Operations / Creative)

### **TACDA**

11576 S. State St.  
Suite 502  
Draper, UT 84020

**www.tacda.org**  
**info@tacda.org**  
**(800) 425-5397**  
(888) 425-5339 (Fax)

ISSN# 0740-5537

An Annual TACDA™ Contributing Membership is designed to meet the basic educational and technical needs of individuals and families that have an interest in learning about civil defense and disaster preparedness concepts, strategies and techniques.

TACDA™, a 501(C)3 non-profit, non-political organization, is supported by the contributions of our members. All Contributing Members receive:

- One year of our quarterly publication, the "Journal of Civil Defense"
- One year member access to our basic education in the TACDA Academy
- One year member discounts on products and services through the TACDA Store
- One year access to member resources on the TACDA web site ([www.tacda.org](http://www.tacda.org))
- One year voting privileges at member meetings
- One year reduced rates at annual TACDA conferences and seminars
- Welcome letter and TACDA Contributing Member card

**THE AMERICAN CIVIL DEFENSE ASSOCIATION**  
**TACDA** *Serving America Since 1962*