NBC SURVIVAL SKILLS: (nuclear, biological, and chemical)

NUCLEAR:

Nuclear weapons can be delivered by short range and medium range missiles, rockets, aircraft, submarines and by artillery. There effects of these weapons vary on their size and intended use. There are even tactical nukes, that would have sub-kiloton warheads for specifically targeting an area, where as there are also multi-megaton weapons with which effect a very large area.

NUCLEAR EFFECTS:

There are some different types of effects that occur when a nuclear weapon is detonated. Some of these effects, like fallout last for days and even months after the explosion. The main effects will be those that occur within 1 minute after detonation. These are BLAST, THERMAL RADIATION, INITIAL NUCLEAR RADIATION AND RESIDUAL RADIATION. These are described as the following:

- **BLAST** - is a high pressure wave that develops and moves outward from the detonation. This is the cause of most of the damage and destruction accompanied with nuclear detonation. The blast is considered the primary killer.

- **THERMAL RADIATION** - this is radiation that is produced from the heat and light of the blast. This radiation burns the skin and can blind your eyes from the light. This radiation is felt at great distances from ground zero. This radiation also assist with the overall destruction by catching things on fire.

- **INITIAL NUCLEAR RADIATION** - this is radiation emitted within the first minute of the detonation. This radiation contains neutrons and gamma rays. They travel large distances away from ground zero to effect personnel. These rays are penetrating and they damage tissue and blood forming cells.

- **RESIDUAL RADIATION** - this is radiation that last after the first minute of the detonation and is mainly classified as fallout. Fallout is particles of earth that were vaporized and combined with radioactive material during the detonation. These particles get tossed into the air and are carried by the winds. They then fall back to the earth contaminating the ground and supplies.

NUCLEAR DEFENSE:
Shelter from the blast and radiation are the primary concerns for survival during a nuclear attack. The earth remains the best form of protection from these detonations. One should dig in, if there is a warning given prior to an attack. Whether it is a well constructed fox hole or a cave in the side of a mountain, these should provide you with adequate protection. Take time to make bomb shelters if necessary, that are well stocked with supplies and constructed well.

If you find yourself caught in the open, you should do the following:

1. immediately drop flat on the ground, face down, facing away from the fireball
2. close your eyes
3. protect exposed hands or skin by laying on them
4. remain down until the blast wave has passed and debris has stopped falling
5. stay calm and check yourself for injuries

FALL OUT PROTECTION- following a detonation, you should try to filter the air that you breath with a gas mask or cloth over your mouth to lesson the indigestion of radioactive particles. You should also take the clothes that you are wearing and thoroughly shake and brush them off. Periodically comb dust out of your hair and keep your finger nails clean. Also wipe all of your exposed skin with a damp cloth to clean them off. Remember to keep all food and drink supplies covered and protected from fall out as you can get contaminated from exposed supplies. AVOID GOING OUTSIDE FOLLOWING A BLAST, REMAIN IN DOORS FOR AS LONG AS POSSIBLE!

FOR MORE COMPREHENSIVE INFORMATION ABOUT NUCLEAR PROTECTION CHECK OUT THIS SITE:

NUKE INFO

MORE ABOUT NUCLEAR PROTECTION FROM THE ARMY

CLICK HERE

BIOLOGICAL AGENTS:
Biological agents are microorganisms and toxins that are used by militaries to cause disease in personnel, animals, and plants. The objective of these agents is to reduce the ability to fight. This is done by killing or incapacitating troops or by contaminating food and water supplies.

Some of these agents are fungi, bacteria, viruses, and toxins. These agents are made up of living organisms so their dissemination must be able to keep the organism alive. This is generally done with the use of an aerosol dispenser or by the use of disease carrying insects like mosquitoes, ticks, and fleas.

Some common forms of bio agents are ANTHRAX, TYPHOID, INFLUENZA, and BUBONIC PLAGUE.

PROTECTION:

A gas mask and protective clothing can prevent some initial exposure to biological agents. Since bio weapons kill with diseases, some preventive measures can be accomplished with the following:

1. immunization
2. quarantines of contaminated areas
3. rodent and pest control measures
4. proper first aid for cuts and wounds
5. using uncontaminated sources of food and drink
6. maintain good personal hygiene
7. avoid practices that leave you in a "run-down" condition

INDICATIONS OF BIOLOGICAL WEAPON USE

USE THE FOLLOWING AS A GUIDE OF WHAT TO LOOK FOR:

1. LOW-FLYING AIR CRAFT, THAT APPEAR TO BE PRODUCING MIST OR SPRAYING SOMETHING
2. THE FUNCTIONING OF ANY TYPE OF SPRAY DEVICE
3. WATCH FOR MUNITIONS THAT DON'T HAVE IMMEDIATE EFFECTS WHEN DETONATED OR ON IMPACT
4. LOOK FOR STRANGE TYPES OF MUNITIONS THAT ARE LEFT IN THE OPEN
5. WATCH FOR HIGH CONCENTRATIONS OF INSECTS APPEARING SUDDENLY AFTER AIRCRAFT DROPPED CONTAINERS, LIKE MOSQUITOES
6. NOTICE AN INCREASE IN SICK OR DEAD ANIMALS IN THE AREA
WELCOME TO OUR DISCUSSION OF NBC SURVIVAL SKILLS. FIRST TAKE A LOOK AT THIS CHART THAT CONTAINS MOST OF THE CURRENT "CHEMICALS" USED MY MILITARIES:

**CHEMICAL CHART:**

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>ODOR</th>
<th>RATE OF ACTION</th>
<th>INJURIES</th>
<th>PROTECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSGENE (CG)</td>
<td>NEW MOWN HAY, GREEN CORN</td>
<td>IMMEDIATE TO 3 HRS DEPENDING ON CONCENTRATION</td>
<td>DAMAGES AND FLOODS THE LUNGS</td>
<td>GAS MASK</td>
</tr>
<tr>
<td>DIPHOSGENE (DP)</td>
<td>NEW MOWN HAY, GREEN CORN</td>
<td>IMMEDIATE TO 3 HRS DEPENDING ON CONCENTRATION</td>
<td>DAMAGES AND FLOODS THE LUNGS</td>
<td>GAS MASK</td>
</tr>
<tr>
<td>SARINE (GB)</td>
<td>ALMOST NONE, WHEN PURE</td>
<td>VERY RAPID</td>
<td>CESSATION OF BREATH AND DEATH MAY FOLLOW</td>
<td>GAS MASK AND CLOTHING</td>
</tr>
<tr>
<td>SOMAN (GD)</td>
<td>FRUITY, CAMPHOR ODOR WHEN PURE</td>
<td>VERY RAPID</td>
<td>CESSATION OF BREATH AND DEATH MAY FOLLOW</td>
<td>GAS MASK AND CLOTHING</td>
</tr>
<tr>
<td></td>
<td>Odor</td>
<td>React Time</td>
<td>Effects</td>
<td>Protection</td>
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</tr>
<tr>
<td>VX</td>
<td>Odorless</td>
<td>Rapid</td>
<td>Produces casualties when inhaled or absorbed</td>
<td>Gas mask and clothing</td>
</tr>
<tr>
<td>HYDROGEN CYANIDE (AC)</td>
<td>Bitter almonds</td>
<td>Very rapid</td>
<td>Interferes with use of oxygen by tissues, increased breathing rate</td>
<td>Gas mask and clothing</td>
</tr>
<tr>
<td>CYANOGEN CHLORIDE (CK)</td>
<td>Somewhat like above, but can go un-noticed</td>
<td>Unknown</td>
<td>Chokes, irritates, causes slow breathing</td>
<td>Gas mask</td>
</tr>
<tr>
<td>DISTILLED MUSTARD (MD)</td>
<td>Garlic</td>
<td>Delayed-hours to days</td>
<td>Blisters, destroys tissues, injures blood vessels</td>
<td>Gas mask and clothing</td>
</tr>
<tr>
<td>NITROGEN MUSTARD (HN)</td>
<td>Fishy or musty</td>
<td>Delayed-12 hours or longer</td>
<td>Blisters, affects respiratory tract destroys tissues</td>
<td>Gas mask and clothing</td>
</tr>
</tbody>
</table>
### CHEMICAL AGENTS:

Chemical agents are used primarily to kill, injure, or incapacitate personnel. They can be classified by their action and effects. Each of the chemicals effects on an individual depend on the doses received. The more you are exposed to the more severe the effect is.

### TYPES OF CHEMICAL AGENTS:

- **NERVE AGENT**- acts on the nervous system, interferes with breathing, cause convulsions, paralysis and death. These agents are highly toxic in liquid or vapor form. They can be inhaled or absorbed through the skin, causing similar effects. Some symptoms are: runny nose, tightness of chest, difficult breathing, excessive sweating, nausea, vomiting, dimness of vision, pinpointing of the pupils of the eyes, and convulsions. The vapors are easily absorbed by the eyes and tissues in the nose and throat. The liquid easily penetrates the skin also. Most of these agents are quick acting when inhaled, having an onset of 1 to 2 minutes. however, absorption through the skin

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Immediate Effects on Contact</th>
<th>Violently Irritates Mucous Membrane of Eyes and Nose</th>
<th>Gas Mask and Clothing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosgene Oxime (CX)</td>
<td>Sharp, Penetrating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lewisite (L)</td>
<td>Variable, May Resemble Geraniums</td>
<td>Rapid</td>
<td>Systematic Poisoning</td>
</tr>
<tr>
<td>Mustard/Lewisite Mix (HL)</td>
<td>Garlic Like</td>
<td>Prompt Stinging, Delayed Blistering (13 Hours)</td>
<td>Systematic Poisoning Plus mustard Effects Above</td>
</tr>
<tr>
<td>CS Gas (CS)</td>
<td>Pepper</td>
<td>Instantaneous</td>
<td>Highly Irritating, But Non-Toxic</td>
</tr>
</tbody>
</table>
does take longer to effect.

- **BLISTER AGENT** - these agents affect the eyes, lungs, and skin. They will blister and burn any part of the body that they come in contact with. Some of these agents are painful, while others are not. In liquid form, they may appear to be colorless or dark brown and oily looking. In its vapor form, you should be able to see it.

- **BLOOD AGENT** - these agents are lethal in that they interfere with the exchange of oxygen in the blood with body tissues. Most of the time these agents are in vapor form. The only warning signs are the onset of headaches, vertigo and nausea.

- **CHOKING AGENTS** - these agents primarily attack the lungs, causing the lungs to flood with fluid. These agents are easily detected by their smell and initial irritancy. The victim drowns in his own body fluids or suffocates. These agents produce the following symptoms: coughing, choking, tightness in chest, nausea, headache, and watering of the eyes.

**PROTECTION:**

Now that you see what type of chemical weapons there are, you should try to take measures to protect yourself. Unfortunately most of the public in general is not well prepared at all. In fact even the emergency services are just now implementing training about how to deal with these types of emergencies. Refer to the following as some protective measures to take:

1. **PURCHASE A GOOD QUALITY GAS MASK THAT USES NATO STANDARD FILTERS.** Usually old surplus mask can provide "some" protection, but a new one is better. Don't forget the family either, there are mask for everyone some are expensive while most are fairly priced.

2. **IMPLEMENT A PLAN OF ACTION LIKE HAVING THE MASK IN ONE LOCATION THAT EVERYONE CAN GET TO.** The mask is only as good as the filter is, so keep plenty of new sealed filters around.

3. **YOU MAY WANT TO PURCHASE A MILITARY SURPLUS CHEMICAL SUIT, TO PROTECT YOU FROM MUSTARD AGENTS AND THOSE THAT CAN BE ABSORBED BY YOUR SKIN.** There are permeable and impermeable ones available at low surplus prices. There are also new commercial self contained suits as well.

4. **IN THE EVENT OF GETTING A WARNING PRIOR TO AN ATTACK, TRY TO WATCH FOR OR PLOT THE PATH OF THE CHEMICAL GAS CLOUD.** This can be done by watching the news and listening to a weather radio.

5. **DON'T FORGET ABOUT GLOVES AND FOOT COVERS**

6. **STAY IN DOORS SEAL ALL OPENINGS, AROUND DOORS, WINDOWS EXT.........
THESE ARE MILITARY MARKERS USED TO IDENTIFY AREAS THAT ARE CONTAMINATED, EFFECTED, OR DANGEROUS

**GAS** - YELLOW COLOR WARNING TRIANGLE, WITH RED LETTERS THAT SAY "GAS", FOR CHEMICAL AREAS  
**BIO** - BLUE COLOR WARNING TRIANGLE, WITH RED LETTERS THAT SAY "BIO", FOR BIOLOGICAL AREAS  
**ATOM** - WHITE WARNING TRIANGLE WITH BLACK LETTERS THAT SAY "ATOM", FOR RADIOACTIVE AREAS  
**GAS MINES** - RED WARNING TRIANGLE WITH YELLOW STRIPE, WITH WORDS THAT SAY "GAS MINES", FOR MINE FIELDS

Join our discussion group at [http://groups.yahoo.com/group/CITIZENSDEFENSE](http://groups.yahoo.com/group/CITIZENSDEFENSE)