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Emergency Disinfection of Drinking Water

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EMERGENCY DISINFECTION OF DRINKING WATER

by

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In preparation for emergency situations, there is a need to have a supply of stored water and the ability to disinfect that water and other sources of water that may be available. In emergencies, the main threat from drinking water for people is disease causing organisms. It is important that all water be disinfected before using when there is an uncertainty as to its purity. Stored water that has been disinfected and placed into disinfected containers does not give a person complete certainty of the absence of disease organisms when it is opened because the lids of these containers can not be sealed to prevent these organisms from entering the containers. As the temperature changes in a container, the container breathes; that is, air enters and leaves the container as the air expands and contracts with the rise and fall of the temperature. The residual chlorine in the water when

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it was put into a container will dissipate with time. The residual chlorine does prevent contamination only while it is present. Therefore, any stored water should treated prior to use.

There are three methods of disinfection that can be used in emergency situations that are not expensive so that one can be prepared:

-Boiling water

-Chlorine bleach

-Tincture of iodine

BOILING WATER is extremely effective as a disinfectant. Vigorous boiling for one minute will destroy bacteria, including disease causing organisms and giardia cysts.

CHLORINE BLEACH (not the fresh scent or the other special whitener laundry products) which contains only a 5.25% solution of sodium hypochlorite can be added. For each gallon of water to be treated, add 8 drops of chlorine bleach to clear water or 16 drops of chlorine bleach to cloudy water. It is required to wait at least 30 minutes before using this water since the chlorine must be in contact with the disease organisms or giardia cysts before they are destroyed.

TINCTURE OF IODINE from a medicine chest can also be used to disinfect drinking water. Long term use of tincture of iodine is not recommended. For each gallon of water to be treated, add 5 drops of tincture of iodine to clear water or 10 drops of tincture of iodine to cloudy water. It is also required to wait at least 30 minutes before using the water.

Chlorine and iodine tablets to treat water for drinking can also be obtained from a camping goods store or a drug store. Follow the directions provided with the purchased product to treat the water for drinking.