**CAP health & wellness** HSO Briefing: FIELD SANITATION

**Purpose:**

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| (U) **Bottom Line:**   * Risk to populations**: very low** **| low** | **moderate** | **high** * **Many acute illnesses are preventable by continuing our usual hygiene practices while in the field environment** * **Acute gastrointestinal illness can dramatically interfere with completion of a search and rescue or training mission** |

**Overview:**

**The topics to be covered in this presentation are:**

* Water purification in the field
* Safe food storage
* Waste management

**Water Purification**

All field water sources MUST be purified as you don't know what is upstream in your water source to avoid acute gastrointestinal illness such as diarrhea or more serious illnesses such as hepatitis A.

* Human waste
* Animal waste
* Dead animals

Diarrheal disease-causing

bacteria include:

* Salmonella
* Shigella
* E. coli
* Campylobacter
* Cholera

Hepatitis A is also spread by contaminated food and water

**There are many effective ways to treat water to make it fit for human consumption**. We will discuss 3.

* When in the field we must be self-contained and not reliant on external supply of drinkable water.
* We will present three methods to purify water in the field environment.
* Important: **None** of these methods remove chemical hazards.

## **Chemical Purification**

* Chemical water disinfection tablets are easily available in outdoor and camping supply stores
* They use iodine or chlorine as an active ingredient
* Both may leave a "chemical" taste in the water
* Iodine tablets when used with dehydrated or freeze-dried food will turn starch blue. Not harmful, just colorful!
* Be very cautious if using military surplus iodine tablets as they may be quite old. Check the expiration date!
* Chemical treatment does not remove sediment
  + Sediment and organic matter can be removed using a clean cloth diaper or paper coffee filter
* In all cases, follow the manufacturer's instructions in using these products
* Battery powered devices are available that generate chlorine from salt
  + These are expensive to purchase
  + Mechanical device in a field environment……….

**Procedure for chemical disinfection of water**

* Fill water container with water
* Add purification tablets according to manufacturer's instructions
* Dirty or cold water require additional tablets
* Replace the cap on the water container
* Wait five minutes
* Loosen cap and shake container spilling a small amount of water
  + This will disinfect the threads of the container and lid
* Apply the lid tightly
* Allow to sit 30 minutes
* Enjoy the water
* **In all cases, follow the manufacturer's instructions in using these products**

**Mechanical filtration**

*No specific products are recommended nor endorsed in this discussion*

Mechanical filters remove sediment and bacteria from water

Filter devices are associated with a higher purchase price

Used devices must not be permitted to freeze between uses to avoid damage to the filter element

Use various methods to force water through the filter membranes

* Gravity as in a Platypus or Lifestraw
  + May be more suitable for team use as quick filtration of several liters is possible
* Pump when using a Sawyer or Katadyn
* Suction when using a pocket Lifestraw
* In all cases, follow the manufacturer's instructions in using these products

**Boiling**

* Remove sediment and organic matter by filtration before boiling
* Water can be effectively disinfected by boiling
* Boil water for one minute
  + Start time when vigorous boiling occurs
* Above 5,000 feet boil water for three minutes
* To improve the "taste" of the water, pour it back and forth between two containers
* The major drawbacks to this method are:
  + The time it takes to build a fire
  + Boil the water
  + Allow water to cool to a temperature allowing drinking or storage in a reservoir

***Recommendations:***

Become proficient at one or more methods of purification of water in the field

Practice good and effective personal hygiene in the field and insure compliance among subordinates.

The goal is to avoid preventable unpleasant illness

**Questions**: **Contact your Region/Wing/Unit Health Services Officer or**

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