



OPERATIONAL MEDICINE

FMST Student Manual - 2008 Web Edition*

UNITED STATES MARINE CORPS
Field Medical Training Battalion
Camp Lejeune

FMST 1603

Supervise Field Waste Disposal

TERMINAL LEARNING OBJECTIVES

1. Given the requirement in a tactical environment, necessary equipment and supplies, and the references, supervise field waste disposal, to reduce the incidence of disease per the reference. (FMST-FP-1603)

ENABLING LEARNING OBJECTIVES

1. Without the aid of references, given a description or title, identify the types of field waste, per the student handout. (FMST-FP-1603a)
2. Without the aid of references, given a description or list, identify the preferred method of disposal for each type of field waste, per the student handout. (FMST-FP-1603b)
3. Without the aid of references, given a list, identify the uses of field sanitation devices per number of personnel, per the student handout. (FMST-FP-1603c)

1. OVERVIEW

Historically, in every conflict the US has been involved in, only 20% of all hospital admissions have been from combat injuries. The other 80% have been from diseases not related to battle, commonly referred to as Disease Non Battle Injury (DNBI). Excluded from these figures are vast numbers of service members with decreased combat effectiveness due to DNBI not serious enough for hospital admission. Preventive medicine measures are simple, common sense actions that any service member can perform and every leader must know. The application of preventive medicine measures can significantly reduce time lost due to DNBI. The intent of this lesson is not to make you preventive medicine experts. You will have access to them through the Environmental Preventive Medicine Units (EPMU) that deploy in times of war or conflict. This course is to give you knowledge of the basic skills necessary to employ safe preventive medicine practices for your Marines.

2. WASTE

Definition - all types of liquid and solid material excreted from the body as useless or unnecessary as a result of living activities of humans or animals.

Types of Waste

Human waste (black water): Liquid waste containing human urine and fecal matter.

Liquid Waste (Gray Water): Liquid waste containing water used for bathing or liquid waste from kitchen operation.

Garbage: Any kind of non-liquid organic materials resulting from food service operations.

Rubbish: Waste consisting of non-organic materials such as boxes, cans, paper, or plastics.

2. GUIDELINES FOR LATRINE PLACEMENT

When determining the location for latrines, give consideration to protecting food and water supplies from contamination as well as providing convenient accessibility. Place as far from food operations as possible (328 feet or more). Other considerations include:

- Downwind and down slope, if possible.
- Down slope from wells, springs, streams, and other water sources (100 feet or more).
- At least 50 feet from berthing areas.

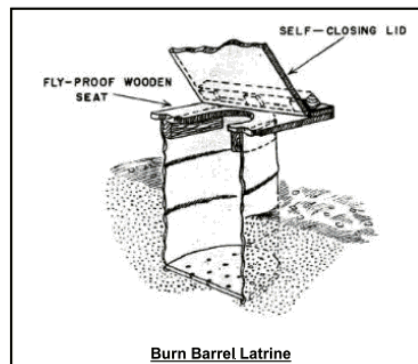
3. FIELD SANITATION DEVICES USED FOR FECAL DISPOSAL

The type of improvised waste disposal used will depend on the mission, length of stay in the area, terrain, and weather conditions. The primary means of human waste disposal in a bivouac area is a chemical toilet. When chemical toilets are not available, the burn-out latrine is the preferred improvised waste disposal device.

Chemical Toilets

- Latrines maintained by contracted services.
- One toilet can service up to 15 personnel.

Burn Barrel Latrine - the burn-barrel is a commonly used device for human waste disposal in the field. Best employed in areas where the water table is high or the ground does not permit digging. Personnel utilizing the Burn Barrel Latrine are encouraged to use urinals for urination instead of the Burn Barrel Latrine since additional fuel is needed to burn urine and feces.



Cat Hole - used for the disposal of individual human excrement in situations where other latrines are not available such as when on the march and at short halts.

- One foot wide by one foot deep.
- Covered immediately after use to prevent flies from spreading germs from waste to your food.

4. **FIELD SANITATION DEVICES USED FOR LIQUID WASTE DISPOSAL**

Liquid waste disposal methods are primarily designed to maximize the evaporation of the waste. Using items such as rocks increases the surface area and allows the waste to dissipate quickly. Liquid kitchen or bathing waste disposal methods include:

- Soakage pits.
- Evaporation beds.

5. **FIELD SANITATION DEVICES FOR GARBAGE AND RUBBISH DISPOSAL**

Every individual generates some type of garbage. The bigger the unit, the bigger the problem! It is important that you are able to make appropriate recommendations to the unit commander regarding the disposal of solid waste. The preferred method of garbage disposal for short overnight stops is the garbage pit. A standard four feet by four feet pit will service 100 people per day. For longer stays, a garbage trench is used. The trench measures two feet wide by four feet deep and is extended as needed.

6. **GUIDELINES FOR GARBAGE PIT DISPOSAL DEVICE PLACEMENT**

- Recommend at least 100 feet from mess area
- Recommend at least 100 feet from water source
- Incinerators must also be at least 150 feet downwind from camp.

REFERENCES

Naval Preventive Medicine Manual, NAVMED P-5010, Pgs 9-17 through 9-30

Field Hygiene and Sanitation, FM 21-10, June 2000

REV: July 2008

Field Waste Review

1. Describe garbage.
2. What is the preferred method of fecal disposal when chemical toilets are not available?
3. Describe a "cat hole"
4. What is the preferred method of garbage disposal for a unit making an overnight halt?

*The FMST Student Manual was produced by the Field Medical Training Battalion-East, Camp Lejeune, North Carolina. This 2008 web edition has been enhanced by the Brookside Associates, Ltd., preserving all of the original text material, while augmenting, modifying, eliminating or replacing some of the graphics to comply with privacy and copyright laws, and to enhance the training value. These enhancements are marked with a red box □ and are © 2008, with all rights reserved.

[Home](#) · [Textbooks and Manuals](#) · [Videos](#) · [Lectures](#) · [Distance Learning](#) · [Training](#) · [Operational Safety](#) · [Supplies and Equipment](#) · [Search](#) · [About Us](#)

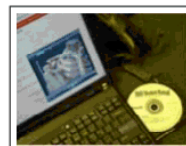


This website is dedicated to the development and dissemination of medical information that may be useful to those who practice Operational Medicine. This website is privately-held and not connected to any governmental agency. The views expressed here are those of the authors, and unless otherwise noted, do not necessarily reflect the views of the Brookside Associates, Ltd., any governmental or private organizations. All writings, discussions, and publications on this website are unclassified.

© 2006, 2007, 2008, Medical Education Division, Brookside Associates, Ltd. All rights reserved

[Other Brookside Products](#)

[Contact Us](#)



**FMST Student Manual
Multimedia CD**
30 Operational Medicine
Textbooks/Manuals
30 Operational Medicine
Videos
"Just in Time" Initial and
Refresher Training
Durable Field-Deployable
Storage Case