

SUSTAINING FEMALE SOLDIERS' HEALTH AND PERFORMANCE DURING DEPLOYMENT: GUIDANCE FOR SMALL UNIT LEADERS

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This health threat and countermeasure information is from the most current data available from U.S. Department of Defense Medical agencies at the time of publication.

We are producing this guide in an effort to educate female soldiers and small unit leaders on those unique issues that may impact women's health and performance during deployment. The information is provided as recommended guidance; is primarily for predeployment planning; and may be used as a resource for operational considerations.

This guide is a companion to the USACHPPM pamphlet, "A Female Soldier's Guide to Staying Healthy," intended for all interested soldiers. Limited quantities of this guide in printed, hard copy format, are available to unit leaders, commanders, and medical planners. It is also available in electronic format. Order these publications or other USACHPPM products from:

Commander

U.S.A. Center for Health Promotion & Preventive Medicine

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FOREWORD

Recent military deployments have brought to light unique medical and health issues for female service members. In response, USACHPPM and USAMRMC have produced this handbook addressing women's medical and health issues.

This guide will assist in preparing the female soldier for deployment, maintaining her health and performance during deployment, and facilitating mission accomplishment.

Information about issues common to men and women, and other guidance regarding deployment to a specific region, is available from sources including the USACHPPM.

This document does not replace policy and doctrine established by Department of Defense or Department of Army or their subordinates, contained in Technical Bulletins and other official publications, but attempts to provide solutions or guidance based on "lessons-learned" and current trends.

Users are encouraged to provide recommended changes to this guide using DA Form 2028. We also welcome comments describing personal observations or techniques during field operations. Comments and suggestions may be forwarded to:

Commander, USACHPPM
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MEDICAL/HEALTH MEASURES

PREDEPLOYMENT PHASE: Encourage soldier's to:

- Arrange OB/Gyn medical examination to:
 - Detect pregnancy if present
 - Receive counseling regarding contraceptive measures
 - Receive information on preventing sexually transmitted disease (STD)
 - Report types of prescription medications being used (including birth controls pills)
- Pack ample personal hygiene supplies and medications (a recommended list is at Appendix A).
- Make sure clothing and gear fit. Ensure chemical protective clothing and masks are fitted properly (it is more difficult to fit women in MOPP gear and masks).
- Plan for diminished privacy.
 - Encourage soldier's to rig gear and practice removing clothing to reduce time for urinating.
 - Advise soldiers on the benefits of female urinary directors, used to ease urination in the field.
- Minimize separation stress. Ensure family care plans are in place and tested prior to deployment.
- Recognize signs of sexual harassment.
- Obtain and distribute "A Female Soldier's Guide to Staying Healthy" pamphlet.

MEDICAL/HEALTH MEASURES

DEPLOYMENT PHASE:

- Encourage soldiers to practice personal protective measures to combat the medical threat.
- Jet lag, stress, and increased energy levels may disrupt menstrual cycles.

OPERATIONAL PHASE:

- Implement shelter arrangements based on unit and duty. Shelter should not be segregated by gender.
- Encourage female soldiers to:
 - Maintain hydration, despite reduced opportunity and time for using the latrine.
 - Use non-deodorant panty-liners when clean underwear is unavailable.
 - Avoid skin infections by not shaving underarms, legs, or bikini areas.
 - Use unscented, non-perfumed personal hygiene supplies as scented products may cause skin irritation and attract biting insects.
- Report sexual harassment immediately.

REDEPLOYMENT PHASE:

- Encourage soldiers to resume normal schedule for OB/Gyn medical care.

INTRODUCTION

Women comprise approximately 12% of the U.S. Army and constitute a substantial part of units deployed for peace-keeping and humanitarian aid missions. During Operation Desert Shield/Storm, forty thousand female service members were deployed. The medical and health lessons learned about deployment of so many women led to recommendations for preparatory and preventive measures designed to ensure good health and performance. No unique medical or health issues, other than pregnancy, prevent women from being deployed to field situations. Women have been members of long lasting expeditions to high terrestrial environments, areas of extreme heat or cold and other wilderness areas with no difficulties.

Leaders must address several major elements to ensure the health and performance of female soldiers is sustained during deployment, including medical, health, and physical fitness issues. Within each element, potentially unique issues for individual soldiers and/or the small unit will be identified, and countermeasures to overcome those detractors offered where appropriate.

MEDICAL OVERVIEW

Female soldiers are encouraged to have annual examinations performed by a gynecologist to ensure peak physical well-being and correct or monitor health problems. Female soldiers are also encouraged to perform routine breast exams, and to report soreness, lumps, or unusual problems to their medical staff immediately.

Prior to deployment, female soldiers should undergo an OB/Gyn medical examination to detect pregnancy if present; receive counseling regarding the use of contraceptive measures; receive information for prevention of sexually transmitted disease; and report types of prescription medications being used.

Increased incidences of urinary tract infection, vaginitis and other gynecologic infections may occur during deployment. Soldiers should seek medical care immediately for vaginal discomfort, sores (painful or painless), unusual swelling or lumps, unusual vaginal discharge, painful or burning urination, or lower abdominal pain.

Given the many stresses associated with deployment, such as jet lag, reduced food intake, increased energy expenditure, and psychological stress, some women may experience changes or disruption of their menstrual cycle. Lack of, or unpredictable menstrual cycles may not decrease fertility.

All soldiers should practice personal protective measures to combat the medical threat. If county or area-specific guidance is not available, ask Preventive Medicine or medical support personnel for assistance.

REPRODUCTIVE SYSTEM ISSUES

PREGNANCY

1. Approximately 12% of female soldiers are pregnant at any time, many without realizing they are pregnant. Prevention of pregnancy during deployment is desired for several reasons.

a. Pregnant soldiers must be evacuated from the theater. There is no option. Evacuation occurs at great cost.

b. The stress of military operations may harm the fetus.

c. Pregnant soldiers will not have access to obstetrical care during deployment.

d. Vaccinations or medications required to prevent disease during deployment could potentially injure a fetus.

e. Pregnancy during deployment disrupts unit cohesiveness. Loss of unit members requires modification to operations and affects morale.

2. Countermeasures to Prevent Pregnancy During Deployment. Unit leaders should encourage soldiers to take countermeasures to prevent pregnancy during deployment. The following countermeasures are not directives, but guidelines to help prevent pregnancy. The decision to use any form of contraception rests entirely with the soldier.

a. Abstinence from sexual intercourse prevents pregnancy and sexually transmitted disease (STD) and is clearly the best choice.

b. If sexually active, several effective prescription products to prevent for pregnancy are available in military pharmacies. These prescription products are safe, but may have some side effects.

(1) A highly effective method to prevent pregnancy (99.9%) is the Norplant implant that consists of small capsules inserted under the skin by a physician. Norplant implants are a reversible and effective long term method (up to five years) for birth control.

(2) Another effective choice for birth control is the Depo-Provera injection (99.7% effective). A physician can inject this product prior to deployment with repeated doses given every three months to prevent pregnancy. Soldiers should note that this product may not be available in the field.

(3) The next most effective choice to prevent pregnancies is birth control pills. When taken on the prescribed schedule, birth control pills are 97% effective in preventing pregnancy; however, some women may not want to use them due to personal reasons, and birth control pills do have side effects that may be more pronounced in some women. If deployment is anticipated, women wanting birth control pills should obtain a prescription for a 6-month supply. Soldiers should ensure other contraceptives are in use during the first month after starting birth control pills.

NOTE: Use of these forms of birth control will not reduce the risk of sexually transmitted disease.

(4) Use of condoms is not as effective in preventing pregnancy (88%), but should still be used as barrier protection if no other birth control is being used. Additionally, condoms reduce -- but do not eliminate -- risk of exposure to STD's. Female soldiers should ensure partners use a new condom for each new sexual encounter regardless of other birth control protection being used to reduce risk of exposure to STD's.

GYNECOLOGIC DISEASES

Female Reproductive Tract Diseases

1. Vaginal infections affect readiness. Fungal and bacterial vaginitis may occur during deployment. Limited showers increase difficulty in maintaining good hygiene, especially during the menstrual period.

2. Countermeasures for Female Reproductive Tract Diseases.

a. Encourage soldiers to wear loose cotton underwear (e.g., briefs) since cotton underwear, in hot or cold weather, increases ventilation and breathability of skin. During cold weather, soldiers should wear long underwear made from polypropylene.

b. Encourage soldiers to bathe or shower daily, if possible. If showers are not available, soldiers should use unscented (non-perfumed) wet wipes.

c. Encourage soldiers to use non-deodorant panty-liners if clean underwear is not available.

3. Care of Female Reproductive Tract Diseases.

These diseases can become serious if left untreated. Medical care is necessary for vaginal discomfort, sores (painful or painless), swelling of lymph nodes in groin, unusual vaginal discharge, painful or burning urination, or lower abdominal pain.

SEXUALLY TRANSMITTED DISEASES

ABSTINENCE Is the Only Sure Protection From STD's.

1. Sexually transmitted diseases, including *chlamydia*, *gonorrhea*, *syphilis*, *genital warts*, *herpes*, *hepatitis B and C infection*, and infection with the AIDS virus (*HIV*), can occur anytime. Risk factors include having sex with infected partners, frequent sexual exposures, having unprotected sex, or having anal intercourse.

2. Countermeasures to prevent STD's, including HIV:

a. **Abstinence** from sexual intercourse is the best way to prevent STD.

b. Avoid anal intercourse, which causes tissue damage and increases susceptibility to STD.

c. Encourage soldiers to use condoms, although they are only partially effective in preventing disease.

3. Care of STD's.

All STD's are serious. Obtain medical care if genital discomfort, sores (painful or painless), swelling of lymph nodes in groin, unusual vaginal discharge, painful or burning urination, rectal pain or discharge, lower abdominal pain, or fever develop.

MENSTRUAL CYCLE DISRUPTION

1. Given the many stresses associated with deployment, such as jet lag, reduced food intake, increased energy expenditure, and psychological stress, some women may experience changes or disruption of their menstrual cycle.

2. Problems Associated With Menstrual Cycle Disruption.

a. Possible changes to the menstrual cycle include increased frequency of menstrual periods, or prolonged time between menstrual periods. The volume of menstrual flow might also change.

b. Lack of, or unpredictable menstrual periods may not decrease fertility. Soldiers who misinterpret this type of change in their menstrual cycle might risk unwanted pregnancy.

3. Countermeasure to Prevent Menstrual Cycle Disruption.

Birth control pills prevent normal reproductive function, but allow for regular menstrual periods after regular use. Use of birth control pills may reduce menstrual cycle problems that occur during deployment.

HEALTH/PHYSICAL FITNESS ISSUES

NON-BATTLE INJURIES & PHYSICAL FITNESS

1. Non-battle injuries include athletic injuries resulting from training and recreation and occupational injuries resulting from unsafe practices, including improper lifting, improper use of equipment, and working while fatigued.

a. All soldiers are at a greater risk for non-battle injury if they:

(1) Have poor physical strength and conditioning, including low levels of previous physical activity, low levels of cardiovascular fitness, and low levels of muscular strength and endurance.

(2) Are subjected to rapid changes in training intensity, and duration of intensity.

(3) Have a history of smoking, or inadequate nutrition (especially women with low calcium and iron intake).

b. When compared to her male counterpart, the female soldier's physical differences are in size and muscle mass, and the addition of a complex reproductive system. Females are prone to more lower extremity injuries (referring to anything below the waist (hip to toe)) because of the differences in size and muscle. In fact, the incidence of lower extremity injury in women is approximately twice that of the men. Female soldiers are likely to use a greater percentage of their strength on a task, resulting in quicker fatigue and/or greater vulnerability to non-battle injury.

2. Countermeasures to Prevent Injuries. All troops should be encouraged to:

a. Gradually acquire a high level of physical fitness and muscular strength before deployment. Increase cardiovascular, muscular strength, endurance, and flexibility exercises slowly, but at a steady pace to decrease the possibility of injury.

b. Maintain a high level of physical and cardiovascular fitness and muscular strength to maintain operational readiness.

c. Expect increases in training and operational activity duration, frequency and intensity during deployment. Prepare for specific work requirements (marching, lifting equipment, etc.). Train to perform with the unit, incorporating task rotation procedures to sustain performance.

d. Conduct adequate warm up, cool-down and stretching exercises before physical training or recreational activities.

e. Use appropriate equipment (good footwear, etc.).

f. Do not smoke.

g. Eat a balanced diet.

3. Care of Non-battle injuries. Seek medical attention if pain, swelling, numbness, etc. develop.

NUTRITION

1. Food and water play a major role in sustaining health, performance, and morale in the field. To maintain physical performance and the body's ability to heat/cool, unit leaders must ensure soldiers consume adequate amounts of high quality food, three times per day.

a. Daily field rations provide about 50% more calories than an average female soldier needs for energy. To avoid weight gain, women may eat less (about 2/3) of each ration component. Additionally, to decrease calorie intake, consumption of pogeys and other non-issue foods should be limited or eliminated.

b. The MRE is designed to provide complete nutrition only when the entire ration is consumed. If less than the entire ration is consumed, a multiple vitamin and mineral supplement meeting 100% (not more) of the RDA may be taken.

2. Countermeasures for Nutrition Problems.

a. Extreme environments (heat/cold) increase caloric requirements. These requirements can be met by consuming the equivalent of three whole MRE's per day.

b. To maintain hydration, usually about four canteens of non-caffeinated fluid (primarily water) should be consumed daily. Extreme environments can double this requirement.

c. Ensure soldiers maintain current weight. Inadequate food intake results in body weight loss that will impair physical and mental performance.

COLD & HOT WEATHER CONSIDERATIONS

1. Water Consumption and Field Mobility.

a. Maintaining adequate hydration is important in all types of climates. All soldiers should drink adequate amounts of water to reduce risk of disease and non-battle injury.

(1) Female soldiers may be at greater risk of dehydration in the field because of their reluctance to use the latrine due to privacy or time constraints.

(2) Dehydration reduces physical and mental performance in any environment and increases heat injury casualties.

(3) Female soldiers need more time and effort to urinate in the field than men because at least some disrobing is involved. Unit leaders need to plan long enough breaks to ensure that female soldiers do not voluntarily dehydrate due to lack of private facilities. As adaptation to field movement occurs, break times may be reduced accordingly.

(4) Female soldiers may not realize that their actions of decreasing water intake to reduce trips to the latrine will cause them to dehydrate.

(5) Female soldiers who hold urine are susceptible to urinary tract infections.

b. Countermeasures for Problems with Water and Field Mobility.

(1) Ensure ALL soldiers drink adequate quantities of water.

(a) Educate all soldiers on the risks associated with decreased water intake.

(b) Sufficient quantities of water should be consumed to maintain urine the color of diluted lemonade (usually about four canteens of non-caffeinated fluids -- primarily water -- per day; extreme climates may double this requirement).

(2) Do not put a time limit on using the latrine or limit the frequency of trips to the latrine.

(3) If permitted, (IAW unit and/or theater requirements), the Load Carriage Equipment (LCE, formerly LBE) may be reconfigured to minimize time needed for disrobing.

(a) During troop movement, the protective mask may be placed on the LCE (versus strapped to the leg), as shown in Appendix B, to facilitate quick latrine stops.

(b) Placing the mask on the LCE should not interfere with quick removal of the mask or attachments from its pouch.

(4) Female soldiers should consider using a female urinary director (available at outdoor/camping retail stores) which should be cleaned with water or wet wipes after each use.

(a) Urinary directors minimize disrobing during urination, thereby decreasing time needed for urination.

(b) Field studies found that use of urinary directors reduced incidences of urinary tract infections.

2. Sleeping in Cold Weather.

a. Some women may have greater difficulty staying warm enough to sleep well at night. Chronic disruption of sleep will adversely affect performance as well as morale.

b. Countermeasures for Problems in Extreme Environments.

(1) Stuff clean, dry clothing or a jacket in the foot of the sleeping bag to help fill excess air space.

(2) Sleep in the same amount of clothing as worn during the day. Sleeping bags are not designed to give enough warmth alone.

(3) Place a poncho liner folded in half (or a wool blanket or foam pad if available) between the cot and the sleeping bag (i.e., under the sleeper).

(4) Eat a high carbohydrate snack before bed.

(5) Avoid "burrowing" in the sleeping bag.

(6) Wear a knit hat to minimize heat loss from the head.

SEPARATION STRESS

1. There are similar stresses for female and male soldiers due to separation from family and friends. Unresolved problems at home may distract the soldier and affect duty performance and susceptibility to detrimental effects of operational stress.

a. Deployed female soldiers may have added separation stress from defending their decision to serve in the Armed Forces, particularly if they have children. Recent mothers may experience extended post-partum depression. Because of these concerns and pressures, soldiers may be irritable, nervous, inattentive, and have difficulty sleeping.

b. Families and friends change as they adjust to the absence of the soldier. Children may not be as close to their parent when she returns from deployment.

2. Countermeasures for Separation Stress.

a. **Make family members self-sufficient.** Encourage soldiers to ensure their families have the information and skills they need to manage their personal affairs. Discuss routine responsibilities and how to handle emergencies. Build confidence by encouraging soldiers to practice these skills.

b. **Ensure family care plans work and update them routinely.** Single parents and parents who have a spouse who is also deployed must ensure that a family member or trusted friend is ready to take responsibility for a soldier's dependent children. Introduce parents, spouses or household head (if not a family member), and children of all ages to support groups. Ensure that support is provided to those who need it most, regardless of rank or distance from post.

c. **Keep families and friends informed.** Establish effective lines of communication with the unit rear detachment. Encourage soldiers to write home and provide time for letters to be written. Unofficial communication, such as a unit newsletter written by deployed soldiers, can reduce rumors back home.

d. **Plan reunions.** Have soldiers discuss how they will talk with family members about what they have been through; how family members have changed during the deployment; and the likelihood that the families will not understand what they have experienced. Keep the person responsible for dependent children during deployment included in the family when the soldier returns home. This will smooth the transition needed by children, especially small children, when their mother returns home. Mothers should prepare for children showing more affection to the person responsible for them during deployment than to their mother.

e. **Maintain networks.** Family support groups should not break up when soldiers return home. They will help families deal with reunion stress.

SEXUAL HARASSMENT

Sexual harassment is a violation of the Uniform Code of Military Justice (UCMJ) and AR 600-20 and is defined as 1) influencing, offering to influence, or threatening the career, pay, or job of another person in exchange for sexual favors; 2) or deliberate or repeated offensive comments, gestures or physical contact of a sexual nature in a work or work-related environment.

1. Problems of Sexual Harassment.

a. Sexual harassment occurs more often to female soldiers than to male soldiers.

b. Sexual harassment in any unit needlessly increases stress and erodes unit integrity at a time when the unit can least afford it.

c. Sexual harassment reduces the productivity and morale of the victim. Soldiers who are sexually harassed may experience insomnia, physical symptoms, decreased concentration, reduced ambition, listlessness, and depression. Sexually harassed individuals may also be at greater risk for problems related to operational stress. Individuals in deployed units may be particularly susceptible to sexual harassment due to their separation from family and friends and their consequent dependence on individuals in their unit for support.

d. Sexual harassers tend to harass a series of individuals, not just one individual. They tend to use similar approaches for each victim and usually harass individuals who are personally or situationally vulnerable. For example, new members to the unit, subordinates, or those who are not assertive. Sexual harassment will not go away if it is ignored. Sexual harassers

tend to interpret a lack of negative consequences as a license to continue or escalate their behavior.

e. Failure to report incidents allows the harasser to continue harassing a series of individuals and prevents the detection and resolution of the problem. Sexual harassment charges are rarely false. Individuals frequently fail to report sexual harassment believing that those who choose to report harassment may not be believed, may be ridiculed or blamed for encouraging the harassment, or may experience retaliation from the harasser and other members of the unit. Because of the relative isolation of the deployed unit, soldiers may be even less likely to report harassment when deployed.

2. Countermeasures to Sexual Harassment.

a. Implement a clear policy prohibiting sexual harassment.

b. Designate and train a military equal opportunity (EO) representative and provide all soldiers with the name of this EO representative.

c. Train all soldiers to identify sexual harassment, to describe detrimental effects of sexual harassment on individuals and units, and to take specific actions if sexual harassment occurs. These actions include telling the harasser to stop the offending behavior, and reporting the harassment to the chain of command and/or the EO representative.

d. Investigate all charges, determine the appropriate action to take, and inform the soldier who complained of the results of the investigation and any action taken. Monitor the situation for continued sexual harassment or retaliation.

e. Inform soldiers about resources outside the chain of command or unit, including chaplains and the Inspector General's Office.

f. Counsel subordinates if inappropriate behavior occurs in order to maintain a professional environment and to prevent situations from escalating to the point where charges are filed.

g. Be alert for signs such as requests for transfers, increases in sick-call use, decreases in performance, and persistent deterioration in attitude or behavior of one or more soldiers. Because many soldiers are reluctant to report harassment and because the harasser often will act only when alone with the victim(s), the signs listed above may be the only indications that sexual harassment is occurring in the unit.

h. Keep allegations of sexual harassment confidential until the allegations are investigated.

REFERENCES

AR 40-5 Preventive Medicine
AR 600-20 Army Command Policy
FM 21-10 Field Hygiene and Sanitation
USARIEM Technical Note 93-3, Nutritional Guidance for Military Operations in Temperate and Extreme Environments, JUN 93
Report to the President, Presidential Commission on the Assignment of Women in the Armed Forces, 15 NOV 92

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APPENDIX A

PERSONAL HYGIENE & MEDICATIONS KIT

Recommended items (and suggested quantity, if any) in addition to prescribed packing lists.

Cotton underwear	10
Polypropylene long underwear	4
Compressed camouflaged bandage	1
Small inflatable pillow	1
Polypropylene socks (wear inside regular socks)	4 pair
Moleskin or artificial skin for "boot bite"	2 pkgs
Plastic freezer bags (keeps underwear, medications dry)	
Personal hygiene items: (3-6 month supply)	
Non-deoderant tampons(cardboard applicator)/sanitary napkins in waterproof package	
Commercial unscented wet-wipes in airtight packages	
Non-deoderant panti-liners	
Toothbrush, toothpaste, comb/brush, hair fasteners	
Unscented sunscreen (\geq SPF 15), and unscented lip balm w/sunscreen	
Unscented deodorant, talc, soap, and body lotion	
Artificial tears	
Medications: (3-6 month supply)	
Prescription Medicines *	
Contraceptive supplies	
Over-the-counter Medicines	
Aspirin, ibuprofen or other analgesic for cramping	
Yeast infection medication	
Female urinary director **	

* Soldiers requiring special or "hard to get" hygiene products or prescription medications should obtain at least a 6-month supply.

** Urinary directors minimize disrobing during urination. If used, directors should be cleaned with wet wipes after each use. Soldiers can obtain this item at outdoor/camping retail stores as desired.

NOTES

**REPORT ALL INJURIES AND ILLNESSES TO
YOUR MEDICAL AUTHORITY IMMEDIATELY**



READINESS THRU HEALTH

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