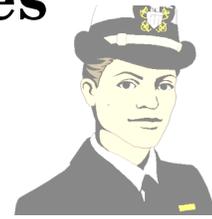


15

Training Issues for Women



In this chapter you will learn about:

- ◆ Guidelines for exercise during pregnancy and lactation.
- ◆ Eating Disorders
- ◆ Osteoporosis.

Guidelines for nutrition and exercise for optimal health and performance are the same for women and men. However, special issues, such as pregnancy, will alter these practices. Seek the advice of your physician, Registered Dietitian, Health Promotion personnel, or contact the American College of Obstetricians and Gynecologists (ACOG) at (202)863-2518 for more information on women's health.

Pregnancy and Lactation

Pregnancy is one of the most physiologically stressful events undergone by healthy women. Because exercise is also a physiologic stress, there have been concerns about the effects of exercise on the health of the mother and child during pregnancy. To address these concerns, ACOG has established guidelines for exercise during pregnancy. The general consensus is that women in good health may continue (or start) exercising during pregnancy. However, each woman should consult her physician for personal recommendations.



Proper nutrition and routine exercise during pregnancy is important for your health and the health of your baby. [Table 15-1](#) outlines general nutrition and exercise guidelines that you should follow during pregnancy.

Table 15-1. Nutrition and Exercise Guidelines for Pregnant Women

Nutrition Guidelines	Exercise Guidelines
Choose nutrient dense foods (Chapter 3, page 23).	Exercise at least three times per week. Ideally, start this before your pregnancy or during the first trimester. Consult your doctor.
Eat according to the Food Guide Pyramid to meet your increased energy needs (Chapter 3).	Monitor exercise intensity according to perceived exertion or effort (Chapter 5). Target heart rate zone is not accurate since heart rate is higher during pregnancy.
Get adequate folate intakes prior to and during pregnancy to prevent birth defects (Chapter 2, Table 2-2).	Try swimming as it is an excellent, low-impact aerobic exercise and the water helps regulate body temperature.
Talk to your doctor about the proper amount of weight to gain for your pregnancy.	Stop exercise if you feel short of breath, feel any pain, feel dizzy or faint, or have contractions.
Meet nutritional demands for both pregnancy and exercise. You should not attempt to lose weight.	Avoid supine (lying on your back) exercises after the first three months of pregnancy.
Drink adequate amounts of water for both hydration and dissipation of heat.	Avoid activities that may result in trauma to the abdominal area, such as contact sports.
	Avoid exercises requiring balance, especially during the last three months of pregnancy.
	Avoid exhaustive and maximal exercise.
	Avoid exercising in environmental extremes.
	Avoid saunas, stream rooms, and whirlpools.

Exercise guidelines adapted from the AGOC exercise guidelines.

There are some contraindications to exercise during pregnancy. If you have any of the contraindications listed below, discuss them with your doctor.

- ◆ High blood pressure.
- ◆ Anemia.
- ◆ History of premature labor.
- ◆ Third trimester breech.
- ◆ Extremely sedentary lifestyle.
- ◆ Multiple spontaneous abortions.
- ◆ Irregular heart beats.
- ◆ Premature labor.
- ◆ Diabetes.
- ◆ Extreme obesity or underweight.
- ◆ Incompetent cervix.
- ◆ Unexplained complications.

- ◆ Thyroid, cardiac, vascular, or lung disease.
- ◆ Carrying more than one baby.
- ◆ Bleeding or abnormal symptoms during this pregnancy.

After the baby's birth, gradually resume exercise, ultimately building up to your pre-pregnancy levels of duration and intensity. To lose weight after your pregnancy, do so according to the guidelines in [Chapter 1](#) and the **Navy Nutrition and Weight Control Self-Study Guide** (NAVPERS 15602A).

Nutrition and Exercise Guidelines for Lactating Women

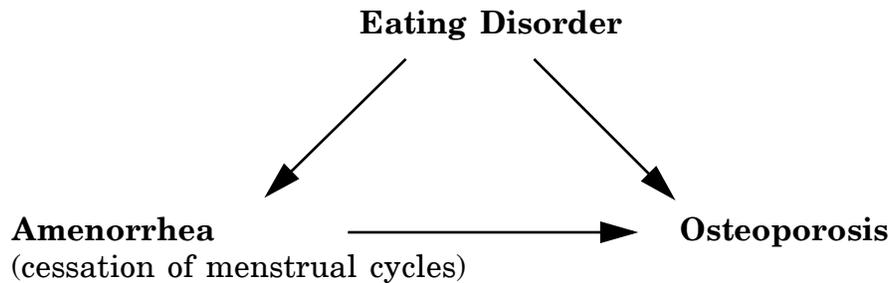
Consult your baby's pediatrician or your family physician with questions and concerns you have about your and your baby's diet.

- ◆ Energy needs are higher when breast feeding than during pregnancy. Consume adequate kcals (roughly an extra 500 kcal per day).
- ◆ Choose nutrient dense foods ([Chapter 3, page 23](#)).
- ◆ Drink adequate fluids to prevent dehydration.
- ◆ Consume adequate calcium (see [Chapter 2](#)).
- ◆ Lactic acid production during exercise can affect the taste of breast milk, so breast feed prior to exercise.
- ◆ If you drink coffee, drink less than 2 cups a day; the caffeine may cause your baby to be sleepless and irritable.
- ◆ Avoid alcohol; alcohol enters the breast milk and can decrease the baby's appetite.
- ◆ Avoid cigarette smoking; smoking decreases milk production.

Female Athlete Triad

The Female Athlete Triad is a trio of associated disorders found among female athletes trying to balance the pressures of body image and physical performance. The triad ([Figure 15-1](#)), marked by inadequate food intake, menstrual abnormalities, and bone loss, can be fatal if left untreated. Therefore, a healthy relationship between food, body image, and performance must be established.

Figure 15-1. The Female Athlete Triad



Some signs of the Triad are:

- ◆ Dieting excessively to lose weight.
- ◆ Occurrence of stress fractures.
- ◆ Compulsively overexercising.
- ◆ Irregular or absent menstrual cycles.
- ◆ Self-esteem governed by body weight.



From FS Kaplan. Prevention and Management of Osteoporosis. CIBA Clinical Symposia. 47(1); 1995.

Eating Disorders

Eating disorders are more prevalent than one might think, especially among young female athletes. An eating disorder results in inadequate intakes of kcals and nutrients to replenish the energy used during daily activities. Two common types of eating disorders are Anorexia Nervosa and Bulimia Nervosa. Some behaviors people with eating disorders engage in are starvation, self-induced vomiting, excessive exercise, and the misuse of laxatives or diuretics. Both disorders are extremely damaging to the mind and body, and, if untreated, can lead to death. These disorders can have long-term health consequences by affecting the heart, liver, kidneys, and bone. In addition, these behaviors severely limit physical and mental performance.

Amenorrhea

Amenorrhea is the cessation of menstrual cycles. A woman is considered amenorrheic when she misses three or more consecutive menstrual cycles. In well-nourished women, heavy physical training should not result in amenorrhea. When non-pregnant, premenopausal women become amenorrheic it may reflect malnutrition.

Osteoporosis

The decreased levels of female hormones during amenorrhea can lead to calcium loss from the bones and increase the likelihood of developing **osteoporosis** later in life. Osteoporosis is a major cause of bone fractures in the elderly. Bone density throughout the adult lifespan is greatly impacted by the amount of bone formed prior to the early thirties. Therefore, amenorrhea and eating disorders in young adults can negatively affect bone health for life. Prior to menopause, a healthy diet (including adequate calcium intakes) and the performance of weight bearing activities are the two factors that have the greatest positive influence on bone health (see [Chapters 3, 4, 5, and 7](#)). For more information on bone health, ask your doctor or health care provider.

