

SUPPLEMENTS:

Warning—dietary supplements are not regulated by the Food and Drug Administration (FDA).

Before taking a supplement ask:

1. Is it safe?
2. Is it effective?
3. Is it backed by scientific research?
4. What are the pros/cons?
5. What is the cost?
6. What are the ingredients?

FAD DIETS:

Be aware of misinformation in the media, advertisements, and on the internet. Be a smart consumer and contact a Registered Dietitian to help you determine the best nutrition plan to reach your goals.

APPOINTMENTS:

Visit the MDC website,
<http://intranet.usna.edu/MDC/>.

Click on “First Time Dietitian Appointments.” Fill out and submit the intake questionnaire and a Registered Dietitian will provide you with an appointment.

RECOMMENDED RESOURCES:

REGISTERED DIETITIANS

Individualized nutrition counseling to include:

- Sports Nutrition
- Weight Management
- Special Dietary Needs
- Disordered Eating
- Food Intolerances
- Supplements/Medications
- Hydration

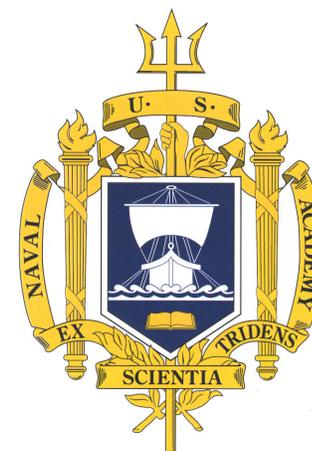
WEBSITES

- www.usna.edu/MDC
- <http://www.gssiweb.com/>
- <http://www.drugfreesport.com/>
- <http://www.ausport.gov.au/ais>
- http://www1.ncaa.org/membership/ed_outreach/nutrition-performance/index.html
- <http://www-nmcphc.med.navy.mil/hp/nutrit/index.htm>
- <http://www.usantidoping.org/>
- <http://www.wada-ama.org/en/>
- <http://www.mypyramid.gov/mypyramid/index.aspx>

United States Naval Academy
Midshipmen Development Center
8th Wing, Mezzanine Level, Seaward Side
Phone: 410-293-4897
<http://intranet.usna.edu/MDC/>

UNITED STATES NAVAL ACADEMY

MIDSHIPMEN DEVELOPMENT CENTER



Nutrition and Performance

***How to optimize your
potential.***

“Consuming the right foods and fluids at the right time will help one achieve peak performance.”

Nutrients:

Carbohydrates: The key component for nerve conduction, brain function and muscle contraction. Carbohydrates are able to be stored in the muscle cells for quick energy release during power and endurance sports. Sources include: breads, rice, cereal, pasta, potatoes, oatmeal, fruits, vegetables. 50-60% of one's total diet should come from carbohydrates.

Proteins: Critical for many functions in the body. It is an important part in maintaining and developing muscles and other body tissues. It also plays an important role in the formation of hormones, hemoglobin, enzymes and antibodies. Sources include: lean meats, fish, poultry, beans, eggs, low-fat dairy products, nuts, nut butters and soy. 15-20% one's total diet should come from protein. Consuming more than 20% from protein is not beneficial and may be harmful.

Fats: An important source of long term energy. It protects and insulates body organs and is necessary for absorption of fat-soluble vitamins. There are two types of fats; saturated and unsaturated. Unsaturated fats are considered to be the “healthy fats” and sources include fatty fish, nuts, avocado, olive/canola oils. Saturated fats are considered to be the “unhealthy fats” and sources include butter, fried foods, pastries, pop-tarts, and “junk” foods. 20-30% of one's diet should come from fats, mostly unsaturated fats.

Timing of Meals/Snacks:

Before: Eat a high carbohydrate snack 30-60 minutes prior to training/competition. Examples: fruit, granola bars, raisins, bagel/English muffin with jelly, dry cereal, fig newtons, high carbohydrate energy bar.

During: Hydration is the key to a successful performance. Consume 5-12oz fluid every 15-20 minutes during exercise. Also, 30-60 grams of carbohydrates should be consumed per hour of exercise.

After: Eat a snack that is high in carbohydrates with a small amount of protein within 30 minutes after your workout. This is important to ensure recovery and prevent injury. Examples: peanut butter sandwich, chocolate milk, trail mix, cereal/milk, fruit, energy bars.

Sweat rate: many factors affect an athlete's sweat rate including heat, humidity, cold weather and altitude. It is important to monitor fluid losses during workouts. No more than 1% of body weight should be lost during a workout. An athlete must increase fluids before and during workouts to ensure optimum performance and make up for sweat losses.

Sports Drinks: include beverages such as gatorade, powerade or accelerade. These beverages are important for athletes who exercise greater than 60 minutes to ensure proper intake of electrolytes and carbohydrates. Energy drinks such as Monster, RedBull, Rockstar are not sports drinks. These beverages are not recommended and if consumed may cause gastrointestinal distress and elevated heart rate.

Fluid Requirements:

Dehydration: is the excess loss of water from the body.

Hyponatremia: is an electrolytes disturbance in the blood when the sodium concentration in the blood becomes too low.

Signs and Symptoms of Dehydration and Hyponatremia:

- Decreased appetite
- Restlessness
- Difficulty concentrating
- Confusion
- Nausea and vomiting
- Agitation
- Swollen hands and feet
- Headache/Dizziness
- Lethargy
- Blurred vision
- Sweating has stopped
- Decreased performance
- Muscle cramping
- Low urine output (dehydration)
- High urine output (hyponatremia)

Prevent Dehydration:

- Consume fluids evenly throughout the day.
- Do not consume large amounts of fluids at one time.
- Eat salty foods or add salt to foods.
- **Tip:** Pale yellow urine = hydrated.