Role of Dietary Fat:

- Vital for absorbing and transporting certain nutrients, such as vitamins A, D, E & K
- To provide Essential Fatty Acids, which may only be supplied through food. These are necessary to produce hormone-like substances which regulate many body processes
- Fats carry flavors and make food taste good
- Fats slow digestion and provide satiety (fullness)

Role of Body Fat:

- Provides us with an energy reserve
- Protects vital organs against impact and trauma
- Provides thermal insulation
- Fat is a necessary component of every cell membrane

Don’t Go Too Low:

- Eating too little fat can severely disrupt important body functions
- It may disrupt hormone production:
  - Females: insufficient fat intake may disrupt menses which negatively impacts bone health, increasing risk for osteoporosis and fracture
  - Males: a very low fat diet may inhibit testosterone production, which negatively affects muscle building
- Inability to absorb certain nutrients
- Inability to tolerate cold, which can be problematic for swimmers, skaters, skiers, among others
Why a High Fat Diet Is Not Advantageous for Athletes:

- Often high fat diets crowd out sufficient carbohydrate intake, resulting in lowered glycogen stores.
- Regular activity improves the ability to burn fat during mild/moderate exercise, but to become fit, one needs sufficient carbohydrates to fuel the exercise.
- To consistently improve fitness and performance, one needs to train at higher levels, which require carbohydrate. Fat cannot supply fuel fast enough for muscles working at higher intensities.
- When exercise is fueled by fat (i.e.: in a glycogen depleted state), intensity is limited by the rate at which fat can be broken down, thus it is a rate-limiting factor in training.
- **POWER** generated by fat is about **ONE HALF** of that generated by carbohydrates.
- High fat diets have been shown to be immunosuppressive (negatively affecting immune function).
- High fat meals and snacks are not appropriate pre-game due to their long digestion time.
- Exercise does not eliminate the harmful effects of a high fat diet.

Recommended Fat Intake

- A healthy level of fat intake for athletes has not been firmly established, but generally, <30% calories from fat is the recommendation for good health. An appropriate range for most athletes may be between 20-25% calories from fat. To select healthful fats, more selections should come from unsaturated sources rather than from saturated or trans (hydrogenated) fats.
# Lower Fat / Higher Fat Foods

<table>
<thead>
<tr>
<th>Fruits &amp; Vegetables</th>
<th>Fruits, vegetables, fruit &amp; vegetable juices, dried fruit</th>
<th>Olives, avocado</th>
<th>Coconuts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains</td>
<td>Most breads and cereals, barley, bulgur, pasta, rice, matzoh, tortillas, melba toast, rye, soda or water crackers, pretzels</td>
<td>Waffles, pancakes, granola (check labels)</td>
<td>Cornbread, biscuits, oil-popped popcorn, donuts, pastries, snack chips, most crackers</td>
</tr>
<tr>
<td>Dairy</td>
<td>Non-fat and low fat (1%): milk, yogurt, cottage cheese, frozen yogurts; non-fat dry milk, buttermilk</td>
<td>Nuts, seeds, salmon, sardines, anchovies, tuna in oil, mackerel, pickled herring, soybeans</td>
<td>2% &amp; whole milk, all cheeses, creamed cottage cheese, half &amp; half, ice cream, whipped cream, sour cream, cream cheese</td>
</tr>
<tr>
<td>Protein Foods</td>
<td>Dry beans, egg whites, shellfish, most fish (except those under high fat listing) tuna canned in water, white meat skinless chicken &amp; turkey</td>
<td>Nuts, seeds, salmon, sardines, anchovies, tuna in oil, mackerel, pickled herring, soybeans</td>
<td>Whole eggs, dark meat of poultry, all poultry with skin, pork, lamb, veal, ham, bacon, sausage, hot dogs, most cold cuts, organ meats, most cuts of beef</td>
</tr>
<tr>
<td>Other</td>
<td>Broth based soups, bouillon, jams, jellies, applesauce, tomato sauce, mustard, ketchup, salsa, soy sauce, horseradish, herbs, spices</td>
<td>Most vegetable oils, some salad dressings, trans-fat free margarines</td>
<td>Creamed soups, butter, most margarines, some salad dressings, mayonnaise, cakes, pies, cookies, chocolate, other candy</td>
</tr>
</tbody>
</table>

**References:**