Why is Recovery Important?

As a high performance athlete, you’ve chosen a career where taking care of your body is your job. When you are training and competing, there are several physiological consequences that occur which make you fitter, faster, stronger and/or improve your skill level. A sound recovery nutrition protocol will ensure you can optimize training adaptations and perform at 100% of your body’s potential in the next training bout or in preparation for competition.

Are you practicing the 4 R’s of recovery?

**Re-plenish** muscle glycogen (carbohydrate stored in muscle) after practice. Eat 0.5 g/lb BW.

**Re-pair** and regenerate muscle with high quality protein. Eat 15 – 25 g (higher end for larger athletes).

**Re-inforce** muscle cells and immune system with colorful and anti-oxidant rich foods (e.g. fruits, veggies, whole grains, fish, nuts, olive oil). Eat at least 2 cups of fruit and 3 cups of veggies daily.

**Re-hydrate** with fluid and electrolytes based on sweat loss in training (3 cups fluid/lb of sweat loss). Use urine color as a hydration guide pre-training.

Nutrition within 30 – 60 minutes after training or competition can enhance recovery due to:

- Increases in heart rate and blood pressure which enhances nutrient delivery to muscles
- Faster glycogen replenishment and initiation of tissue repair
- The body’s hormonal switch from muscle breakdown to muscle building earlier in the recovery timeline

Recovery nutrition depends on:

- Type of training session
- Training volume
- Training intensity
- Timing of your next training session
- Body weight
- Whether you are training or competing
**Key Considerations**

**Moderate to Hard Training Session**
High volume or intensity, heavy lifting, competition, multi-day training bouts
- Timing and balance of nutrients is critical
- Refueling with the 4 R’s will facilitate training adaptations
- If 2 - 3 sessions/day, eat recovery snack post-training, then eat again in 2 hours

**Light Training Session**
Skills/drills, yoga, stretch, recovery day, weight loss phase
- The next meal or small post-training snack is sufficient

---

**Recovery is an all-day process!**
It takes 24 - 48 hours to fully replace your glycogen stores if they’ve been completely depleted, and your muscles are responsive to protein for 24 - 48 hours after a resistance training session.

Continue eating well-balanced meals and snacks throughout the rest of the day for optimal recovery.

*Successful recovery will only occur with proper planning! Think about your training sessions ahead of time in order to plan and pack the appropriate fuels.*

---

**Recovery Snack Ideas**

*Choose a food from protein column + food from carb column based on training session!*

<table>
<thead>
<tr>
<th>Protein: 15-20 g</th>
<th>Protein: 20-25 g</th>
<th>Carbohydrates: 15-30 g</th>
<th>Carbohydrates: 45-60 g</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 c milk (cow’s, soy)*</td>
<td>3 c milk (cow’s, soy)*</td>
<td>1 piece or cup fresh fruit</td>
<td>2-3 piece or cups fresh fruit</td>
</tr>
<tr>
<td>¼ - 1 c Greek yogurt*</td>
<td>1 ½ c Greek yogurt*</td>
<td>¼ - ½ c dried fruit</td>
<td>¼ - 1 c dried fruit</td>
</tr>
<tr>
<td>¼ c cottage cheese</td>
<td>1½ c cottage cheese</td>
<td>1 c fruit juice</td>
<td>2 c fruit juice</td>
</tr>
<tr>
<td>2 string cheeses</td>
<td>3 string cheeses</td>
<td>1 c chocolate milk</td>
<td>2 c chocolate milk*</td>
</tr>
<tr>
<td>1 c firm tofu</td>
<td>1 ¼ c firm tofu</td>
<td>½ c oatmeal</td>
<td>1-1 ½ c oatmeal</td>
</tr>
<tr>
<td>2-3 cooked eggs</td>
<td>3-4 cooked eggs</td>
<td>1-2 slices sandwich bread</td>
<td>3-4 slices sandwich bread</td>
</tr>
<tr>
<td>2-3 oz deli meat</td>
<td>3-4 oz deli meat</td>
<td>½ bagel</td>
<td>1 bagel</td>
</tr>
<tr>
<td>1 ½ c Kefir*</td>
<td>2-2 ¼ c Kefir*</td>
<td>1 english muffin</td>
<td>2 english muffins</td>
</tr>
<tr>
<td>1 ½ oz jerky</td>
<td>2-2 ½ oz jerky</td>
<td>1 granola or cereal bar</td>
<td>4 fig bar cookies</td>
</tr>
<tr>
<td>2-3 oz fish</td>
<td>¼ - ½ c nuts or seeds*</td>
<td>2 x 6” tortillas or wraps</td>
<td>2 x 8” tortilla or wrap</td>
</tr>
<tr>
<td>½ c nuts or seeds*</td>
<td>½ - ¼ c nuts or seeds*</td>
<td>½ - ¾ c rice or farro</td>
<td>1-1½ c rice or farro</td>
</tr>
<tr>
<td>½ - ¾ c edamame</td>
<td>1 c edamame</td>
<td>½ - 1 c quinoa, beans, lentils*</td>
<td>1½ - 2c quinoa, beans, lentils*</td>
</tr>
<tr>
<td>4 Tbsp nut butter*</td>
<td>1-1½ c beans or lentils*</td>
<td>¾ c cooked pasta</td>
<td>1 ½ c pasta</td>
</tr>
<tr>
<td>1 c beans*</td>
<td>1 scoop whey protein</td>
<td>4 Tbsp nut butter*</td>
<td></td>
</tr>
</tbody>
</table>

Key: * Protein source contains at least 15 g of carbs, Carb source contains at least 10 g protein

---

**Athlete Recommendations:**

---

© USOC SPORT NUTRITION TEAM