Lecture 10:

Post – Exercise Diet

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- **Nutrition after exercise is the most complicated part of sports nutrition due to all those chemical and physiological changes have happened in the body.**

The main goals in post – workout diet are:

- **1) To induce a quick recovery**
- **2) Replenish glycogen stores**
- **3) Make the body ready for the next training or exercise session.**

Nutritional advices after exercise depends on the following factors:

- **1) Whether you are a regular gym-goer or a professional athlete.**

- **2) As a gym-goer, whether your goal is to lose weight, get fit, or put some muscles on.**

- **3) As a professional athlete, whether you are an endurance or strength athlete.**
- **4) Whether there is a medical condition or not.**
- **5) As a competing athlete, the next competing time.**

Abazar`s Classification for Post – Workout Period:

- **Early Post – Workout (Fat Burning Period).**
- **Late Post – Workout (Recovery Period).**

Early Post – Workout or Fat Burning Period:

- This period is within 30 minutes immediately after a workout or a sports training session:

Physiological Changes:

- 1) Blood sugar is low.
- 2) The cells are very sensitive to insulin.
- 3) The release of growth hormone (GH) is at the highest level.

- **This period is sometimes referred to as "anabolic window", as the body shifts from a catabolic state to an anabolic state and the body can easily use amino acids and glucose to rebuild glycogen storage and build muscles.**

- **During this period, you should drink plenty of water to replenish water loss.**

How much water do you exactly need after exercise?

- **The amount of water required during early post – workout period is at least 2 glasses (500 ml) or 2 glasses of water per one pound weight lost, whichever counts higher.**

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- **Example 1:** if your body weight is 136 lbs before exercise and there is no change in your body weight after exercise, you would need at least 2 glasses of water.

- **Example 2:** if your body weight is 136 lbs before exercise and 134 lbs after exercise, you have lost 2 lbs. In this case, you would need 4 glasses (1000 ml) of water.

You should always wait the whole 30 minutes if:

- 1) You want to get leaner
- 2) To drop more body fat
- 3) To lose weight

You do not need to wait for 30 minutes if:

- 1) Your goal is not losing weight.
- 2) You want to build more muscles and increase your size.
- 3) you feel dizzy or lightheaded.

Late Post – Workout or Recovery Period:

- **This period occurs after about 30 minutes.**

Physiological Changes are:

- **1) Blood sugar starts rising due to the release of *counter – regulatory hormones.* The five hormones, growth hormone, cortisol, epinephrine, norepinephrine, and glucagon are known as counter – regulatory hormones. They are released in response to hypoglycemia to increase blood sugar level.**

- 2) The cells are still sensitive to insulin in recovery period.

- 3) The release of GH starts declining as the blood sugar level rises

Nutritional Advices During Recovery Periods:

- 1) **Eat some carbohydrates**, especially carbohydrates with high glycemic index (GI).
- Fruits are good choices.
- For weight loss seekers, a fruit is considered enough.
- Non – weight loss seekers could have carbohydrates **up to 1 gr/kg/body weight**.

- 2) **Eat more protein**, about **0.5 gr/kg/body weight**, maximum 40 grams.

- Protein could be in a liquid form (protein shake) or a solid form (chicken, fish, beef, and cottage cheese).

- **Consuming protein after exercise would limit post exercise muscle damage, help with muscle repair, keep the body metabolism active, and enhance glycogen replenishment.**

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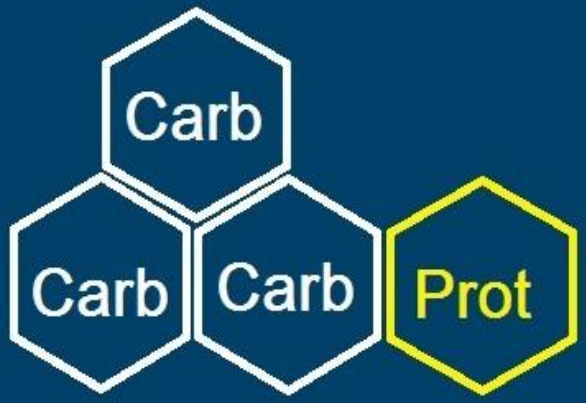
Carb-To-Protein Ratio:



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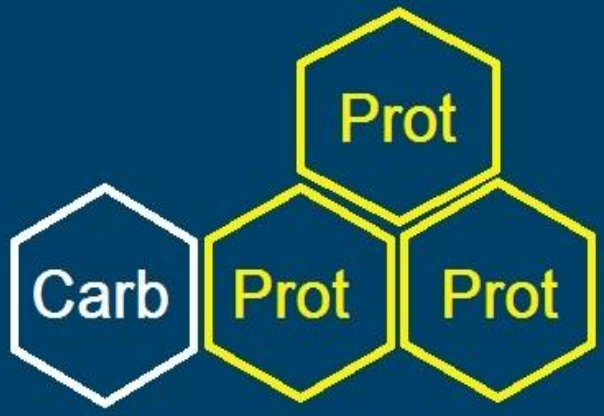
Before Exercise



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After Exercise

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- 3) **Replace potassium.**

- **It is an important mineral you lose by sweating during exercise.**

- **Potassium depletion in the muscles may lead to muscle cramps or post – workout exhaustion.**

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- **Helps maintain GH level higher for a longer period.**

- **Banana, potato, raisins, yogurt, tomato and dried fruits are excellent sources of potassium.**

- **4) Sodium replacement:**

- **Though you lose sodium by sweating during a training session, there is no need to increase your salt intake after workout unless you are involved in an endurance sport.**

- **For most gym-goers, post – exercise salt replacement is not a major concern at all, as most daily meals contain adequate salt.**

Homework:

- **1) Describe anabolic window.**
- **2) Describe physiologic changes during early and late post – exercise periods.**