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| --- | --- | --- | --- |
| **Stage 1: Energy Preparation*** **10 Min prior to workout**
* **steady flow of nutrietn intake as workout proceeds**
 | * **INCREASE NUTRIENT DELIVERY TO MUSCLE**
* **SPARE CURRENT MUSCLE GLYCOGEN/PROTIEN LEVELS**
* **SET NUTRITIONAL STAGE FOR FASTER RECOVERY AFTER WORKOUT**
 | * **HIGH GLYCEMIC CARBS: *25g***
 | ***GATORADE, CEREAL, HONEY, FRUIT*** |
| * **WHEY PROTEIN: *6-10g***
 | ***PROTIEN SHAKE, PEANUT BUTTER, MEATS, NUTS*** |
| * **SODIUM: *100-250mg***
 | ***CHEESE, PRETZELS***  |
| **stage 2: Anabolic growth*** **within 45 min after workout has ended**
* **most important phase of nutrient uptake**
 | * **SHIFT CATABOLIC TO ANABOLIC GROWTH**
* **INCREASE SPEED OF WASTE REMOVAL IN BLOOD**
* **REPLENISH MUSCH GLYCOGEN STORAGE**
* **INITIATE REPAIR OF DAMAGE AND MUSCLE GROWTH**
 | * **HIGH GLYCEMIC CARBS: *60-70g***
 | ***GATORADE, CEREAL, HONEY, FRUIT*** |
| * **WHEY PROTEIN: *18-20g***
 | ***PROTIEN SHAKE, PEANUT BUTTER, MEATS, NUTS*** |
| **stage 3: growth phase i*** **first 4 hours after workout**
* **rapid growth stage**
 | * **MAINTAIN INSULIN SENSETIVITY FOR INCREASE NUTRIENT TRANSFER**
* **MAINTAIN ANABOLIC GROWTH PHASE INITIATED BY STAGE 2**
* **DECREASE TIME OF RECOVERY**
 | * **WHEY PROTIEN: *15g***
 | ***PROTIEN SHAKE, PEANUT BUTTER, MEATS, NUTS*** |
| * **CAESIN (DAIRY) PROTIEN: *5g***
 | ***CHEESE, YOGURT, MILK, CAESIN PROTIEN POWDER*** |
| * **LOW GLYCEMIC CARBS:*42g***
 | ***PASTA, WHEAT BREAD, POTATOES, OATMEAL*** |
| **stage 4: growth phase ii*** **16 – 18 hours following workout**
* **sustained growth stage**
 | * **MAINTAIN POSITIVE NITROGEN BALANCE**
* **STIMULATE PROTEIN SYNTHESIS FROM AVAILABLE AMINO GROUPS**
* **PROMOTE MUSCLE DEVELOPMENT**
 | * **PROTIEN**

***MEALS EVERY 2 – 3 HOURS*** | ***PROTIEN SHAKE, PEANUT BUTTER, MEATS, NUTS,******CHEESE, YOGURT, MILK, CAESIN PROTIEN POWDER*** |
| * **LOW GLYCEMIC CARBS**

***MEALS EVERY 2 – 3 HOURS*** | ***PASTA, WHEAT BREAD, POTATOES, OATMEAL*** |

**Ivy, John, and Robert Portman. *Nutrient Timing: The Future of Sports Nutrition*. Laguna Beach, CA: Basic Health Publications, 2004. Print.**