

## Nutrition – Pre, During and Post Physical Activity

**Purvi Gala\****Department of Sports Nutritionist, India***\*Corresponding Author:** Purvi Gala, Department of Sports Nutritionist, India.**E-mail:** purvigala.18@gmail.com**Received:** May 28, 2019; **Published:** June 04, 2019**Abstract**

Nutrition is vital for performance for any physical activity – strength training, endurance training or cardio training. Getting nutrition plan right, Knowing what to eat, and when to eat, before and after a workout will help you optimise each training session and ultimately help to reach your fitness goals. While workout nutrition will completely depend on the type of workout you, body composition and Fitness, the basic principles remain the same.

**Keywords:** Sustain Energy; Boost Performance; Hydrate; Preserve Muscle Mass; Speed Recovery

**Introduction**

Nutrition is the most important factor in the fitness lifestyle. The right vitamins, minerals, macronutrients, calorie levels, and meal timing are needed for the body to function at its optimal level.

Pre workout determines the ability of individual's performance during a physical activity, if meal is consumed as per the bodily requirements, they can perform better to achieve their desired fitness goal without losing on the precious muscle tissue.

During workout meal helps to prolong your workout, keeps you hydrated without getting muscular cramps and prevents muscle loss.

After workout, body is into "anabolic window phase" – optimal absorption of all nutrients which are fast absorbed and helps for recovery.

**Materials and Methods****What to eat before a workout**

Pre workout meal requires nutrients which provides sustained release of energy throughout the workout, to perform to its optimal level and preventing muscle loss (due to less energy).

Nutrients required during workout - Pre workout meal varies on few factors

- Fitness Goal - fat loss and/Muscle gain
- Type of physical activity and
- Intensity of the physical activity (calorie of a meal)

**Figure 1****Nutrition pre-activity for fat loss****Pre workout meal for Cardiovascular or endurance workout**

Glycogen stores are low as a first thing in the morning, if any cardio or endurance workout done on an empty stomach will result in fat loss (Figure 2).

**Pre workout**

- 1<sup>st</sup> thing in morning - Black coffee (Accelerates energy and fat loss)
- Any other time of the day 45 minutes before - 1 serving of complex carbs i.e. Fruit as a pre-workout.

**Pre workout meal nutrition for strength training**

To have a sustained release throughout the workout without losing on a muscle mass, pre workout meal should have combination of.

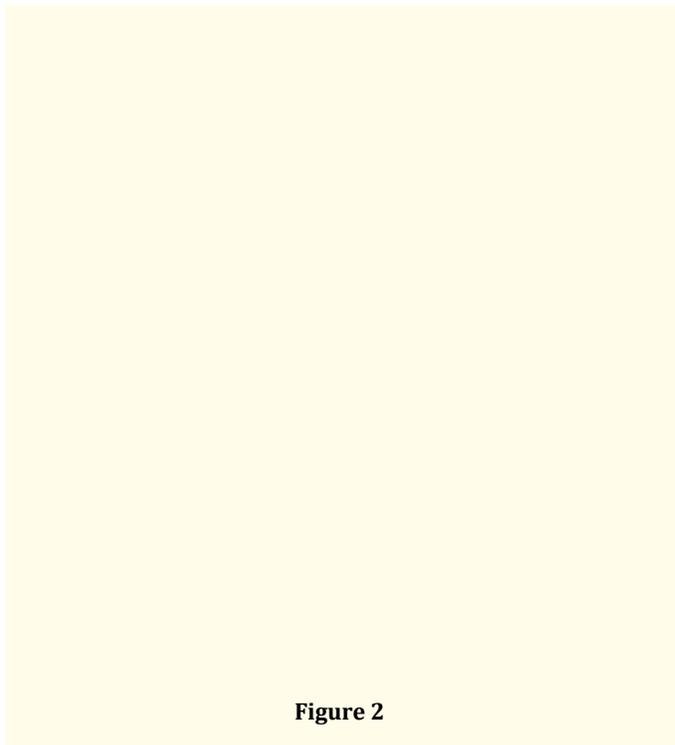


Figure 2

**Cereal carbs:** Helps to maintain a sustained release of energy throughout the workout. E.g. complex carbs i.e. Wheat products – oats, muesli or roti or jowar or bajra nachni.

**Slow acting proteins:** To prevent on the muscle loss during workout if energy from carbohydrates is inadequate e.g. Whole eggs, Paneer, whey protein in milk, chicken or fish, milk and milk products.

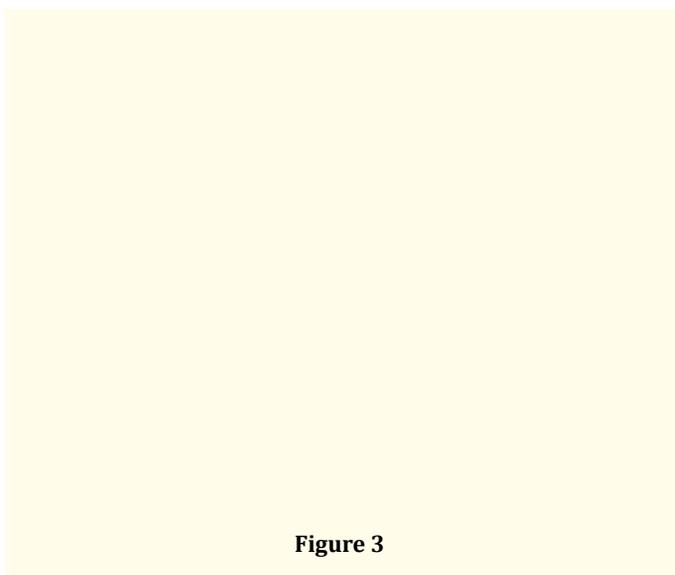


Figure 3

**Fats:** Fat sources mainly help to have a slow absorption of the meal during workout.

**B complex and multivitamin supplements:** Are required with a pre workout meal, to metabolise the meal, which helps for giving energy during workout.

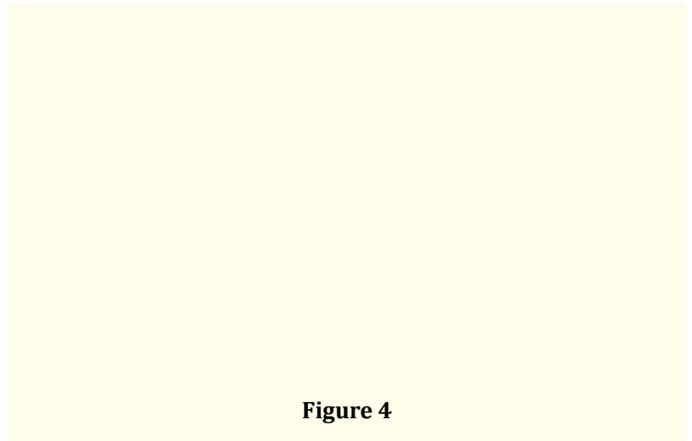


Figure 4

#### Pre workout nutrition for weight gain or muscle gain clients

Irrespective of cardio and strength training, type of pre workout nutrition remains same for muscle gain clients, as per the intensity calories of the meal changes.

Cereal carbs, slow acting proteins, fats and multivitamins and mineral supplements.

#### During workout nutrition

- Intra- workout supplements.
- Intra whey – whey protein composition of hydrolysed whey, BCAA as its components, help for instant energy during workout in absence of carbohydrates energy preventing muscle loss and optimising performance.
- Water plays an important role during workout in few ways.
  - Clears lactic acid accumulation during the workout, (which results in cramps) and helps to prolonged the workout at a stipulated period.
  - Prevents electrolyte loss due to sweat and helps to maintain body temperature during workout.
  - Helps to lubricate joints, adequate water provides good amount of synovial fluid to the joints.
  - Helps to transport blood to the exercising muscle, which in help gives oxygen to those contracting and relaxing muscle which optimises the performance by giving them more energy during the workout.

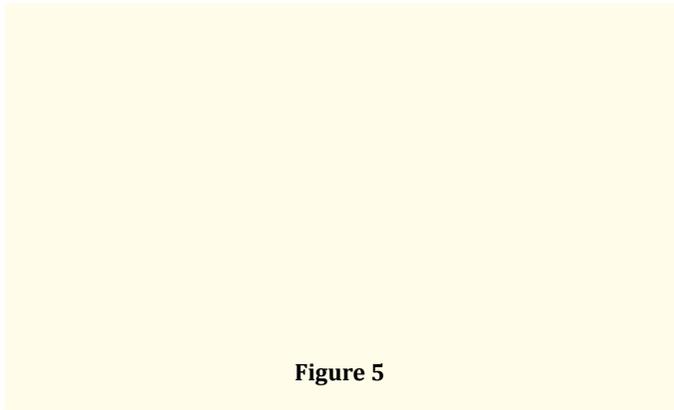


Figure 5

### Post workout nutrition for strength training

After workout, glycogen stores are depleted, refuelling of glycogen stores results in anabolism i.e. muscle gain and fat loss.

Fast absorbing carbs – After workout body is in high demands to replenish on the energy stores (glycogen in muscle), so High glycaemic index food which results in spike of insulin and absorption of nutrients is to the optimal, which results in muscle gain, increase in muscular strength and low fat percentage. To achieve its benefit meal should happen within 30 mins on completion of workout.



Figure 6

- Complex carbs fat loss clients – Apple, orange, sweetlime, guava, pear, kiwi, dragon fruit, papaya, jamun.
- High Glycaemic index fruits for muscle gain clients - banana, chickoo, mango, grape juice and/ dates, berries, prunes.
- Fast absorbing proteins - Breakdown of muscle happened during workout, for its recovery fast absorbing proteins is required for muscle synthesis and its anabolism and growth
  - Whey protein in water within ½ hour on completion of workout.
  - 2<sup>nd</sup> option – egg whites.
- Antioxidants – Vitamin E and C, and minerals like Se, Zn, and manganese are required after workout to prevent free radical damage which hinders the muscle recovery.

### Post workout nutrition for cardiovascular training

- Intermediate to advanced intensity – fast absorbing carbs and proteins and antioxidants.
- Beginner level - complex carbs and moderate absorbing proteins.

### Results and Discussion

Pre, during or post nutrition if it's not followed in an ideal way, it will affect any sports performance and their overall health and well-being, i.e. low in energy, reduced performance and inappropriate body composition – low muscle, low hydration.

### Conclusion

For most of us, people without athletic competitions on the horizon, the best pre- and post-training meals will contain some combination of high quality protein, high quality carbohydrates, healthy fats, and some fruits and vegetables.

### References

No references taken anywhere because it is self-written article.

**Volume 3 Issue 7 July 2019**

**© All rights are reserved by Purvi Gala.**