

## **What is Food calorie?**

The food is the source of energy in the body. The measure of food energy is calorie. All three macronutrients are a source of energy in the body. The caloric value of each macronutrient is measured by burning a particular food in a laboratory and measuring the heat energy produced. The caloric value of the three macronutrients is as follows:

- Carbohydrates-4 calories/ gm
- Proteins -4 Calories/ gm
- Fats-9 calories/ gm

When measured in gram per gram, fats produce twice as many calories as the carbohydrates and proteins. Compared to humans who eat animal-based diet, the humans who eat a balanced holistic predominately plant-based diet, get far less fat calories. Additionally, the fats of plant origin- from the seeds and nuts are healthy unsaturated fats. Ideally, the balanced diet for optimal health must have three macronutrients in the following proportion, along with an appropriate mix of micronutrients- minerals, vitamins, and antioxidants.

- Carbohydrates – Carbohydrates should account for 50% of food calories, mostly from the natural plant-based low glycemic carbohydrates.
- Fats – Fats should constitute 25-30% of food calories, coming mostly from natural plant-based unsaturated fats with a small amount of saturated fat. That includes both visible and invisible fats (seeds, nuts, meat, and dairy have hidden fat). A right proportion is a visible fat in the amount 4 to 6 teaspoons (20-30 gm) of cold compressed seed oils, 2 to 3 teaspoons ( 10-15 gm) of ghee and fistful of nuts and seeds daily. Lean growing children and young adults require more fat than those who are overweight. Holistic meal program for a person with diabetes requires the consumption of 40-50 gm healthy fat daily. The fat is the only macronutrient which does not need Insulin for its utilization in the body. The Carbohydrates and Protein, on the other hand, require Insulin release for their usage. The healthy fats keep the appetite tamed and prevents overeating, which is critical for a person with diabetes.
- Proteins – Proteins should account for 25-30% of food calories, mostly from the plant-protein sources. Growing children, athletes, pregnant and lactating mothers require a higher amount of proteins (see the recommendation on the protein amounts below)

## **Daily food calorie requirements**

The daily caloric requirement of the body is 25-30 calories/Kg/day in an average adult. The growing children, young adults, athletes, and the pregnant and the lactating mother require a higher number of calories, as much as 40-50 calories/Kg/day