

WATCH YOUR CARBS & DEFY AGEING

LOSE WEIGHT, NOT ENERGY LEVEL

“Dieting? My gosh, I am perpetually hungry and drained to keep me looking trim and attractive, and of course to be loved and cared. I tried so many weight control plans. I have yet to find one that I wouldn't long to terminate. I wish they had found a pill to control weight. I hate parties because I can't eat all the good food mocking at me.”

I have heard the above kind of expressions from innumerable people. They don't need a pill. They only need to understand and listen to their body engine. And you don't need to be rocket scientist to do that.

Body Engine

The body engine is built with muscles, arteries, veins, nerves, bones, organs, and brain. They all work in harmony for the body engine to work efficiently. Proteins are building blocks of muscles. Muscles contract and expand, either voluntarily or involuntarily to provide movements of the body and its organs. It takes energy to perform these movements. Energy is provided by the chemical combination of sugars and oxygen in the blood carried by arteries to the muscles.

Muscle tissues made from proteins break down from working and their rebuilding requires proteins. We also need essential minerals, vitamins, and enzymes for the purpose. If our food is deficient in any of these elements, especially protein, the engine becomes weak and we feel tired after little or no work. Body then constantly demands food so that it can extract these elements from the food in sufficient quantity it needs. As a result we feel hungry very often and wish to eat a lot each time. Body starts degenerating and ages prematurely.

Carbohydrates we consume in food are converted into sugars, mainly glucose, for absorption into blood stream. These sugars metabolize and provide energy for the operation of voluntary and involuntary muscular activities. Excess sugars are readily converted by insulin first into glycogen and then into body fat. When body does not have enough sugars in the blood stream to support the muscular activities, it first converts glycogens into sugars and when glycogens are depleted, it starts to convert the body fat back into the sugars. Body thus automatically maintains its sugar level in a rather narrow range, 65 to 110 mg per 100 cc of blood for most of us.

Food

Food provides body elements to build, develop, maintain, heal, work, reproduce, think, etc. Body requires a balanced food - protein, carbohydrates, fat, vitamins, minerals, enzymes, etc., and of course lots of water. Protein (~4 calories/gram) is required for building and rebuilding muscles taking part in voluntary and involuntary functions of the body. Carbohydrates (also ~4 calories/gram) provide direct energy for activating muscles for doing work, such as for circulating blood through the body and walking. Fat (~9 calories/gram) is a concentrated form of energy. Since our body can create its own fat from carbohydrates, it does not need much fat in food. Micronutrients (vitamins, minerals, enzymes, etc.) are required for good health and proper functioning of various organs.

How many calories body needs?

Our body requires food based on the voluntary and involuntary work it does. Body's basal calorie requirement (BCR) is the energy needed just to maintain body at rest. For an average person BCR is 22 calories per kg of bodyweight. Voluntary activities - walking, house cleaning, gardening, exercising, reading, thinking, etc. - all require additional energy, some quite a lot, some very little - the energy that is derived from burning calories. For an average person, more active the life style, more calories body needs, on the average roughly 30 cal/kg. Additional calorie requirement may be estimated using Calorie Expenditure Chart:

ACTIVITY	Cal/kg Wt.
Aerobics	6.0
Backpacking	7.0
Badminton, social	4.5
Basketball	8.0
Bicycling -16 Km/H	6.0
Child care	3.0
Cleaning, house	3.5
Cooking	2.5
Cricket	5.0
Croquet	2.5
Dancing	4.5
Fishing	4.0
Gardening	5.0
Golf	4.0
Hockey, field	8.0
Horseback riding	4.0
Jogging	7.0
Judo, karate, kick boxing, tae kwan do	10.0
Music playing, piano, organ, violin, trumpet	2.5
Racquetball	7.0
Rope jumping	10.0
Running	8.0
Soccer	7.0
Squash	12.0
Swimming	6.0
Table tennis, ping pong	4.0
Tennis, general	7.0
Walking, 5 km/h, walking dog	3.5
Wallyball, general	7.0
Weight lifting	3.0

How does body lose or gain weight?

In order to lose weight, the calories your body extracts from the food you consume have to be lower than the calories your body burns. If not, then excess calories are stored as body fat. Any deficiency in its calorie requirement comes from burning body fat. Your body can also lose weight on a short-term basis by discharging water and gain weight by retaining extra water. However, such water imbalance is only short-term, resulting from various physical or psychological reasons, or are chemically induced. You may notice several pounds fluctuations from day today that

is not possible to account based on your calorie input-output balance. By taking weight in the morning everyday, you will minimize such variations.

Get a good quality digital bathroom scale, such as Tanita which also measures body fat, and weigh yourself everyday before taking breakfast, but after going to bathroom, and keep record of it. There is nothing more convincing than your scale showing reduced weight when no one else around you notices it. It also keeps you focused.

How to lose weight while increasing your energy level?

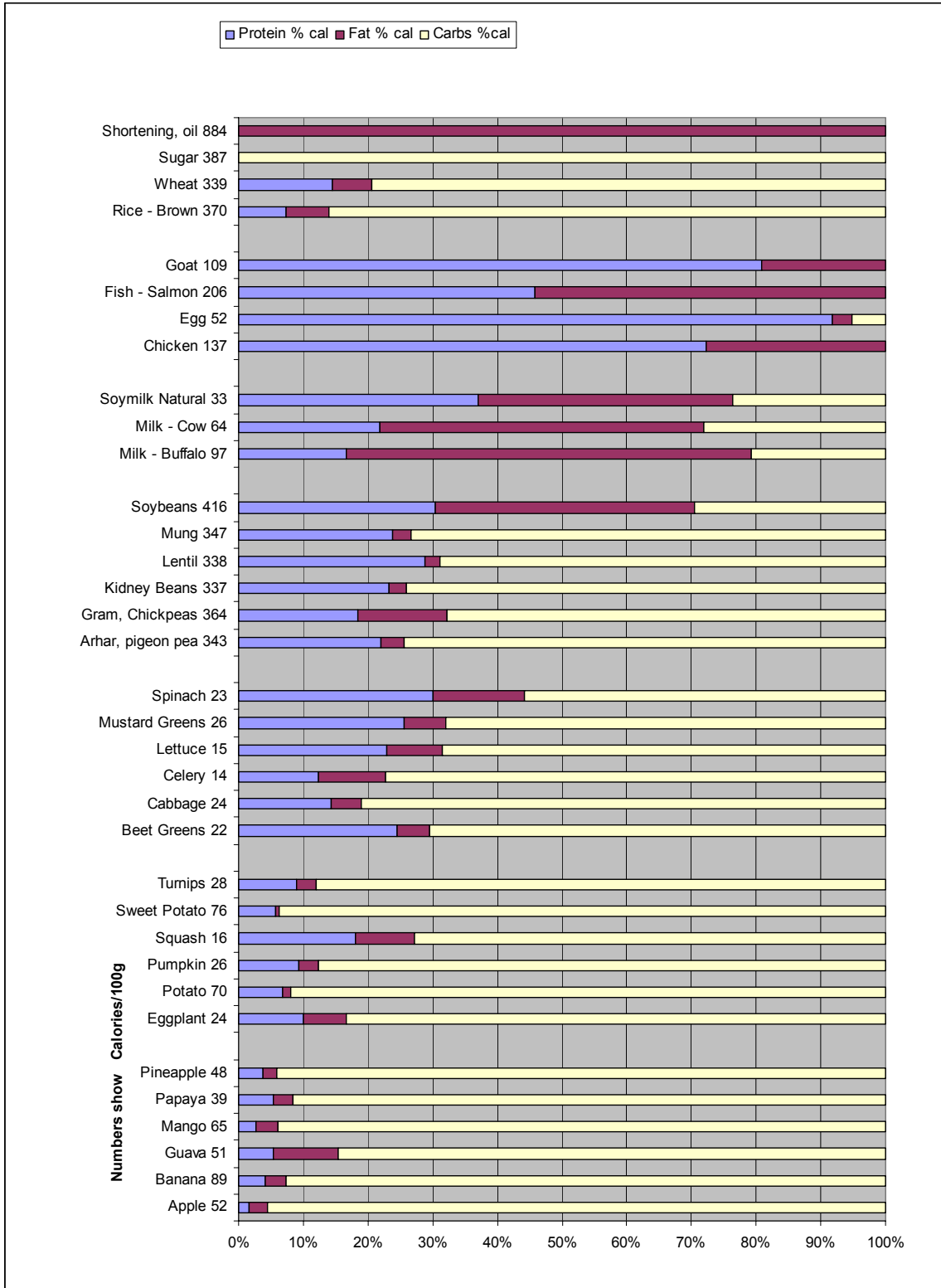
If you take natural wholesome diet high in protein and essential micronutrients, while low in carbohydrates and fat, you are bound to feel more energetic. After all you will be burning excess fat and your bones and muscles will need to drag less weight around. Your body starts to feel good in anticipation of losing excess weight. In weight losing mode, you need your quota of protein and micronutrients based on the calories you are burning, i.e. 10% of the calories burned (not consumed) while minimizing calories by watching your carbohydrate and fat intake.

Example: You are 65 kg in weight with a target of 55 kg. Your calorie requirement at the target weight is $30 \times 65 = 1,950$ calories per day or 13,650 calories per week. With a moderate exercise plan, you enhance the calorie burned by 500 calories or 3500 calories a week, giving you a total calories burned of 17,150 calories. To lose 10 Kg of fat in 20 weeks, you need to burn 500 grams of fat per week or $500 \times 9 = 4,500$ calories. Your food consumption will then be 12,650 calories per week or 1,807 calories per day. You may thus consume about 1,700 calories a day and save $107 \times 7 = 749$ calories for the weekend or a party. If you wish to lose the same weight in 10 weeks, your food consumption will be an additional 4,500 calories less or only 8,150 calories per week or 1,164 calories per day only. You may thus consume 1,100 calories a day and save $64 \times 7 = 448$ calories for a nice dessert at a party on weekend. However, your protein consumption has to be based on the calories burned – 17,150 per week – 10% of which is 1,715. The protein equivalent of this is $1,715/4 = 429$ grams per week (or 61 grams per day). Since your food consumption is only 8,150 calories a week in the extreme case, energy from protein is $1,715/8,150 = 21\%$ of total food calories. You thus need to strongly focus on high protein foods as much as possible in order to lose weight at the desired rate, not feel hungry all the time and to lead energetic and active lifestyle.

What to eat?

Reduce your all carbohydrate consumption, especially bread, rice, pasta, sugar, etc. (except salads, and fruits in moderation) to 1/3rd. Minimize your fat consumption. Focus strongly on protein rich foods that have 20% and more calories from protein (leafy vegetables, milk, soybeans, pulses, egg, lean meat, fish, chicken, etc., and foods made from them). Read or estimate the nutrients to ensure excessive carbohydrate and fat addition to them have not compromised their protein richness.

Target your diet to derive about 10% of the calories you are burning (not consuming) from protein. Since most great tasting foods, direct from nature as well as manmade, derive less than 10% of energy from protein, you should try to take most foods with 20% or more calories from protein. There are many foods rich in protein. Sampling of various basic foods and food ingredients are displayed in the bar graph for their calories source in percent. Total calories per 100 grams are marked on the left of each bar.



Reference <http://www.nal.usda.gov/fnic/foodcomp/Data/SR16-1/sr16-1.html> except for soy milk

Most fruits have less than 5% energy from protein. Vegetables have about twice as much. Greens on the average have 20% protein calories with spinach hitting the 30% mark. Beans are similarly very high in protein with soybeans at 30% with lentils a close second. In milk category, soymilk leads the pack at 37%. In animal foods, egg is the leader. Brown rice, wheat, shortening, oil, and sugar are given as reference and for calculating calories in food preparations made using them.

Why weekly rather than daily calorie requirements?

Our life is styled on weekly cycles, workweek and weekends. Most activities are also cycled similarly. It is thus convenient to organize diet intake on a weekly cycle. You are likely to eat more at a party on a weekend rather than when working. Rewarding yourself on a weekly basis with your favorite foods would help you stick to your diet plan, especially when you know that once you reach your target weight, you will be able to eat even more goodies.

How to eat what you like without feeling guilty?

The secret is to earn the calories contained in your favorite food item. If the item has 500 calories, earn yourself first those 500 calories by exercising, gardening, housework, and by eating less of other carbohydrate or fat rich foods before consuming the favorite food item. You may earn these calories over a day or a week, but do earn before you consume. Borrowing from future earnings does not stick, especially if you don't have a good credit history.

Why soy?

Soy being a very rich source of protein without cholesterol and lactose, and loaded with the micronutrients body needs, will enrich any food preparation or menu with protein. Soymilk is a highly versatile source of balanced protein. It can be used for making nutritious beverages and fruit shakes, soy-paneer or tofu, yogurt, soups, etc.

Soy also helps reduce the risk of breast and other cancers, coronary heart disease and diabetes, as well as minimizes the menopausal symptoms. Recent research has established that whole soy products are superior to those made with refined soy proteins. US-FDA permits claims on products containing at least 6.25 grams of soy protein – “25 grams of soy protein a day, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease”.

You can indeed start loving your mirror again!

QUESTIONS:

1. *True or False:* All soymilks have bad taste, so people use them like medicine when they are sick under doctor or nutritionist's advice.
2. *True or False:* Soymilk is used in China, Japan and other eastern countries only.
3. *True or False:* Soy foods and beverages are great for reducing carbohydrates intake, and thus help control weight and diseases caused by excess body weight.

ANSWERS:

1. *False* – Technological advancements have made it possible to produce delicious soymilks without compromising nutrition. However, most soymilks in the market are unsatisfactory either in taste or nutrition or both. Try Staeta soymilk – www.staeta.com.
2. *False* – The market for soymilk in the USA is almost \$1 billion (Rs.4,500 crores) annually and growing rapidly.
3. *True* – Being high in protein they provide you the macronutrients body need to minimize hunger – explore www.carbowatch.com.