

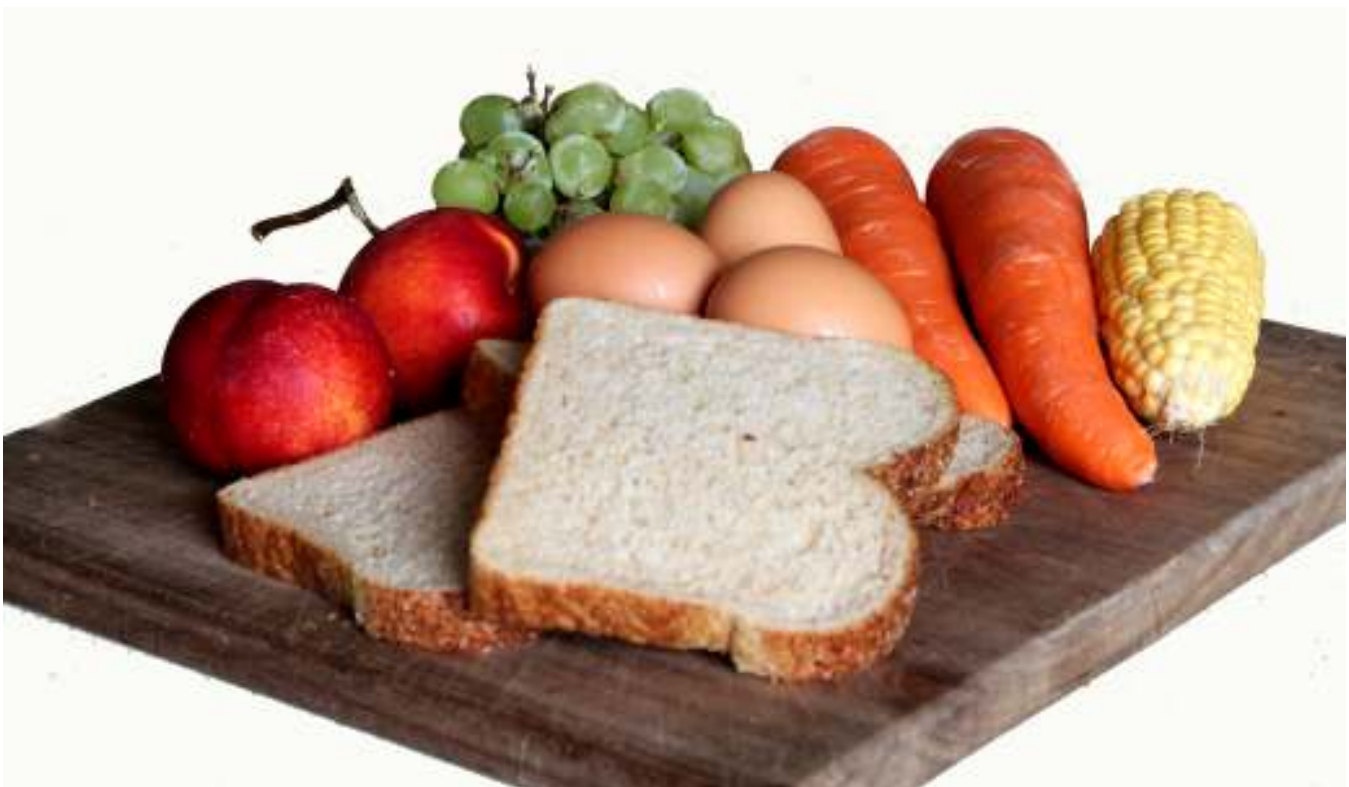
## Weight Loss, Healthy Eating and Energy Balance

Diet and weight loss is an area that everyone has an opinion on. Every person is different and like exercise one diet does not fit everyone. The following article is about energy balance and how eating a balanced diet will eventually decrease your total energy intake and improve your health.

The key component of weight loss is energy balance. Fat is a long term energy source. When we intake energy our body uses it for cellular metabolism. This includes energy for our brain, muscles and other organs. Energy can't be destroyed it must be used. Therefore the excess that isn't burnt must be placed somewhere and that somewhere is usually our body fat. If our aim is to decrease our body fat and improve our health we need to look at how we can lower our energy intake or increase the total amount of energy we expend.

There are several ways you can decrease you total energy intake without starving yourself. The following principles are sustainable long term and will enable you to loose weight without counting calories or partaking in a fad diet. As a result you will have an overall improvement in your health and energy levels and have a sustained weight loss.

- 1) Eat Wholegrain Foods
- 2) Eat more Fruit and vegetables, less packets
- 3) How dense is your food?
- 4) Not so sweet!
- 5) Include some Protein



## 1) Eat Wholegrain Foods

Wholegrain foods are good for a number of reasons. They are less refined. This means there are more natural vitamins and minerals present in the food. One argument for eating a less processed diet is that our bodies crave more than just energy. We crave vitamins and minerals. Wholegrain food contains larger amounts of B vitamins, zinc and iron. This is due to the germ or outer layer of the grain remaining in the food. A possible signal of the body for a need for certain vitamins will lead to us eating more energy. The second reason for eating more whole grains is for the increased fibre. Insoluble fibre or roughage as found in wholegrain food decreases fat absorption. Fat though is not bad, it is required for our body to function properly. Eating too little of it can have negative consequences. Fat though is a highly dense energy source and overeating of fat will result in your daily energy intake rising. Decreasing fat absorption is therapeutically induced by certain obesity drugs with successful results. Eating a diet moderate high in fibre acts similar to these drugs. Once again moderation is the key

### *What should I consume more of:*

Brown or Grain Breads

Wholegrain cereals

Fibrous Fruits and vegetable

Beans and legumes

Brown Rice

Add wheat germ or bran to homemade breads, biscuits or cereals

Barley

### *What should I avoid eating as much of:*

White Breads

White Rice

Packet biscuits

Sweets

Soda's

Lollies



## 2) More Fruit and Vegetables; less package foods

The more food you eat from the fresh isles of the supermarket the better. Packaged foods tend to be lower in fibre, vitamins and have a higher energy density. We have already talked about insoluble fibre and whole grains. Vegetables are a large source of soluble fibre. This is fibre that is absorbed and used in other processes in the body. There is evidence that soluble fibre decreases LDL cholesterol. This is the bad cholesterol that increases your chances of developing heart disease. Soluble fibre also has an effect in improving blood glucose control. This is beneficial in the prevention of type 2 diabetes.

Also fibre increases satiety; which is the feeling of fullness. This means smaller meals and less total energy intake.

### What should I eat more of:

Oats, fruits, vegetables, lentils, other sides of vegetables.

### What should I avoid eating:

Package foods, sweets. Refined or unnatural foods

## 3) How dense is your food

If you had a container in front of you, one is filled with feathers and one is filled with stone. You can't visibly see inside the container so you have no way of telling which has the feathers and which has the stones. The container of feathers will weigh very little and the container of stones a lot. They both take up the same space but the stones are higher in density. This is what energy density is referring to. Foods that are the same size can have 5, 10 or 20 times the energy content of other foods. Learning the Energy density of your foods is important especially when snacking or just eating out of habit. Many diets are built around this point. So what is energy density? It is simply how many calories are in a given amount of food. When referring to the energy density of food we talk about a 100g portion of the food.

The energy density is important for a couple of reasons. One reason is when eating through boredom or just through a moment of weakness you can choose lower energy density foods. This means still having a snack but you won't be taking in the energy you would with higher energy density foods.

Below is the energy value in kilojoules of a bunch of snacks.

Food	Energy Value Per serve (kj's)
Carrot (1 Med)	106
Small Apple	325
Tim Tam (1 Biscuit)	393
Dove Milk Chocolate (5 pieces)	913

## A meal and energy Density

This is possibly an easier way of highlighting the importance of energy density. The average male will need around 2500kj per meal if he eats 3 equal sized meals a day and has 2 medium sized snacks. Take a look at the table and note just how much of the low energy density foods you can eat to make up a 2500kj's meal. Then look at how little of the high energy density foods you can eat.

Food	Energy per serve (kj's)	Number of serves required
Tomato (1 Medium)	92	27.2
Carrot (1 Medium)	106	23.6
Pear (1 Medium)	431	5.8
Cesar Salad no chicken (215g)	392	6.4
Chicken Cesar Salad (310g)	917	2.7
Sandwich (Whole wheat bread, Light cheese, Lettuce, Tomato)	782	3.2
Mars Bar (62.5g)	1170	2.1
Chips (medium cut)	726	3.4
McDonald's Big Mac and Fries	3905	0.6
Pasta (100g)	1510	1.7
Frozen Peas, carrot, corn and green bean mix (1 cup)	278	9.0
Pumpkin (2 pieces, 150g)	160	15.6
Broccoli (medium stalk)	204	12.3

## Where does Energy density come from?

The energy in a food will come from the three macronutrients; proteins, carbohydrates and fats. Foods that have high energy densities will have high amounts of these nutrients and generally a lower fibre content. The macronutrients aren't equal in their energy value. One gram of **protein** contains 17kj's of energy. One gram of **carbohydrates** contains the same value. A gram of **fat** on the other hand, contains 37kj's of energy. Fat therefore is a high energy density nutrient. This is one of the reasons to look at your fat intake. If a food is high in fat it will have a high energy density. Making a conscious effort to monitor you fat intake will see you lower the energy density of your foods and as a result you will lower your overall energy intake.

## Some tips for reducing you're fat intake and lowering the energy density of you're foods:

- Don't crumb your meats before cooking
- Avoid pastries and biscuits
- Steam vegetables instead of baking
- Limit commercial snack foods
- Try to add less butter and cream to cooking
- Limit fatty meats such as salami, bacon and meats with visible fats
- Cook as much of your own food as possible. Restaurant food is higher in fat then home cooked food.
- Eat as much fresh food as possible. If it's in a packet its likely to have more fat then that which is fresh of the shelf.

### Fat Phobia



We don't need to be extremists when viewing fat intake. Over eating them will likely increase our energy intake and possibly our cholesterol levels. Excluding them may result in vitamin deficiencies or other hormone related problems. As vitamins A, D, E and K are fat soluble. You also need to eat a variety of fats and eat them from a range of sources, not just pastries and chocolates. Saturated fats are generally those found in animal sources and result in a increase in our cholesterol intake and possible increase blood LDL's. Monounsaturated fats such as those in olive oil, nuts and avocados can reduce cholesterol. Omega 3's the fats found in fish, canola oil and some nuts is essential and is involved in many reactions in our body. Excluding

any of these food groups over time will have an effect on your health.

### Discovering the Energy Density of your food.

Finding out the energy density of your food is very easy. It can be done by reading the nutritional label of the product. Look at the energy content, (kilojoule value) per 100grams of the food.

**Low density <500kj's**

**Medium density 500>1500kj's**

**High Density >1500kj's**

Also check the website <http://www.nal.usda.gov/fnic/foodcomp/search/> For foods which don't have a nutritional labels. Be sure to select a 100 gram portion of the food when searching the database.

### **What Foods should I eat more of:**

Vegetables and salads, fibrous foods, foods with a higher water content, fresh non packaged foods

### **What foods should I Avoid:**

Be careful of eating large amounts of nuts

Sweetened Drinks

Juices

Chocolate

Energy Bars

Biscuits

Dried Fruit

## **4) Not so sweet**

Eating excess sugar can be a cause of weight gain. Sugar or fructose is a simple form of carbohydrate. It is found in fruits but also added to cereals, cakes, chocolates, lollies and soft drinks. The sugar present in fruits and can have the same effect if eaten in large amounts. But other important nutrients are present in these fruits. Sugars are metabolised differently. Excess sugar can easily be converted to fats in the body. The sugar also doesn't create a feeling of fullness like other carbohydrates or proteins will. When carbohydrates are eaten there are hormonal responses that occur in our body making you feel full and satisfied. The hormones responsible for this are insulin and leptin. These hormones tell us that we have eaten and we are satisfied. Fructose which is a large component of added sugars is not metabolised like glucose, which is the carbohydrates found in wheats, oats and other grains. Fructose when consumed in small amounts can stabilize blood glucose but in large amounts it may increase insulin resistance and blood lipids possible contributing to diabetes and metabolic syndrome. Fructose may do this as a result of being quickly converted to fats by the liver and entering cells without a rise in insulin and leptin.

### **What Foods should I eat more of:**

Replace soft drinks with water, use glucose based lollies, have a larger main meal and less or no dessert

### **What foods should I Avoid:**

Lollies, chocolate, refined sweetened cereals, soft drinks, desserts and cakes



## 5) Include some Protein

There is a lot of confusion around the amount of fats, carbohydrates and proteins you should eat during a day. Many diets encourage low carbohydrates or limiting carbohydrates after a certain time of the day. There is no scientific reason for doing this. Carbohydrates if eaten in excess are stored initially in the liver and muscles. Once these storage places are at capacity the excess is converted to fats. Fats are already fats and cannot be converted to carbohydrates. Carbohydrates are the fuel used by the brain and muscles at high exercise intensities. For this reason carbohydrates are needed. All meals should contain some carbohydrates. A steady release of carbohydrates throughout the day is needed for proper mental functioning and to keep your energy levels up. If we don't consume carbohydrates the protein you eat or muscle tissue is broken down to produce carbohydrates (glucose) for the body to use. This is called Gluconeogenesis. Rather than limiting carbohydrates, instead concentrate more on the type of carbohydrates you're eating. If you follow the advice and eating lower GI foods that are higher in fibre and follow the advice regarding protein you won't have a problem eating carbohydrates. Dietary guidelines realised suggest that adults consume 45% to 65% of their total calories from carbohydrates, 20% to 35% from fat, and 10% to 35% from protein.

Protein is one nutrient that can help with your weight loss endeavours. Protein isn't easily stored as fat. Instead some energy is taken up converting protein into fats. This means eating regular protein isn't as likely to turn to fat. This is one reason why high protein diets are sometimes used for weight loss. This though is a more extreme measure and long term high protein diets can cause negative health effects.

Protein can help with satiety. Satiety relates to how full or satisfied you feel after eating. The protein can help lower the GI of foods and allow you to eat less through out the day by controlling your appetite. This means you'll intake less energy making it easier to create a negative energy balance and lose weight. This is all a positive for including some protein throughout the day.

The best sources of proteins are from meat based products. Meat based proteins generally contain iron, zinc and some B vitamins that cannot be found in other non meat sources. Dairy and nuts are also high in protein.

### **What Foods should I eat more of:**

Have lunch meats or tuna with sandwiches

Eat beans and nuts

Have meat once per day

Include dairy in you diet

### **What foods should I Avoid:**

Refined foods, not eating meat for long periods of time, sweetened spreads as opposed to dairy or meat fillings.

## Monitoring Progress

With all this knowledge you now need to make sure you implement some of it. It's useless reading, unless you make some changes. At the end of the booklet there is a question sheet containing 13 questions. Each question relates to the above topics. Each page contains one week worth of assessment. To fill out the question sheet, colour in the number of squares that corresponds to the answer you have given or record the points that are next to the question. An answer that is a positive eating habit will score you a 2, a moderate answer will score a 1 and a answer that is a negative eating habit will score a 0.

Fill out the questionnaire for 2 week days and 1 weekend every month.

Alternatively every week fill out the questions based on a standard day. It will only take 2 minutes but every day it will enforce what you have read and make it more likely for you to continue improving you're eating habits. Each week tally up your weekly total and fill in the weekly chart to see if you've made positive changes

### What does your daily score mean?

**10 and below** – You're eating habits are off track and are probably effecting you're weight and you're health.

**11-15** – You're eating habits are moderate to poor and may be counterproductive to your health and body weight. Try making some changes and then reassess your score

**16-20** – You're eating habits are good, try to make a few more changes to ensure your diet is the best it could be.

**21-26** – Congratulations, you are making the right decisions when it comes your diet weight loss



How many equal sized meals did you have today?	1-2	0
	3-4	1
	5	2
How many servings of Vegetable's did you eat?	0-2	0
	3-4	1
	5	2
Of Lunch and Dinner how many of the meals did you prepare?	none	0
	1	1
	Both	2
Did you eat Whole grain breads? (or alternative)	No	0
	Yes	2
How many serves of diary did you have?	0-1	0
	2 or more	2
How many of your meals did you choose a low GI option?	0	0
	1	1
	2 or more	2
Did you eat packaged snacks ie biscuits/chips/ice creams or snack bars?	2 or more	0
	1	1
	0	2
Did you eat a serving of salads?	No	0
	Yes	2
Of you're 5 meals how many of them contained a protein? (meat/diary/eggs/beans)	0	0
	1-2	1
	3 or more	2
How much Alcohol did you drink?	3 or more	0
	1-2	1
	0	2
How much water did you drink?	0-1L	0
	1-2L	1
	2L or more	2
How many soft drinks, juices, sweetened milks or energy drinks did you have	2 or more	0
	1	1
	0	2
How many of your meals were you hungry before you ate?	0-2	0
	3-4	1
	All 5 meals	2

Weekday 1	Weekday 2	Weekend 1
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