

Beverages And Managing Energy Density

Reducing the energy density of your diet is one of the easiest and most effective ways of reducing your total energy input and arguably this is the most important thing to consider when changing your diet to achieve weight loss.

What is Energy Density?

Energy density can be defined as the amount of energy that a food contains per gram. Fats and oils are the most energy intense food group and therefore if you are trying to lose weight it makes sense to try and reduce the amount of fat and oils consumed in your diet. On the other hand water and fibre are the least energy dense nutrients and therefore foods that contain both water and fibre are smart options and can assist weight loss.

Why Drinks?

Fluids drunk throughout your day can also significantly impact on the total amount of energy consumed and so switching to low energy dense drinks make sense. Currently society consumes around 20% of its daily energy intake. Ideally we would like to see this at 10%.

The problem with energy dense fluids is that they are easily absorbed, have minimal nutrients and don't impact on satiety (feeling of fullness) so they make it really easy to get the energy in without noticing. Take fruit juice for example. Fruit is great for us. In fact it's low in energy density. Fruit is primarily water, sugar, fibre and vitamins and minerals. But take out the fibre (the things that reduces the energy density) and what do you have? Sugar and water, i.e. juice.

Is there an easy way to work out the energy density of a drink?

By law, each packaged beverage must contain a nutritional information panel (except for things such as coffee etc), which summarises the energy content of the food.

To work it out it's the same as if you are working out the density of a food. If you look at the top line of the nutritional information panel you will see the word "Energy". You will also notice 2 columns "per serve" and "per 100g". Take the amount of energy per 100g (in red) and divide it by 100 and that will give you the energy density. (see example below)

Servings per package = 2 Servings size = 50ml	Per serve (50ml)	Per 100g
Energy	105kJ	175kJ
Protein	3g	10g
Fat	1g	3g
Carbohydrate	24.3g	81.1g

Eg: Total energy per 100g = 175kJ. $175/100 = 1.75$. Therefore the energy density = 1.75kJ/g

What to aim for

At the end of the day we would ultimately like to aim for foods that are less than 12kJ/gram with some of those being less than 7kJ/gram. Below are some examples:

Energy Density	Measure	Advice	Examples
Low	<1kJ/ml (<0.2kcal/ml)	Drink freely	Water; tea; coffee; 'diet' drinks; skim milk; vegetable juice

Energy Density	Measure	Advice	Examples
Medium	1 – 1.49kJ/ml (0.2 – 0.3kcal/ml)	Drink sparingly	Low fat milk (unflavoured); sports drinks; alcohol*; some iced teas.
High	>1.5kJ/ml (>0.4kcal/ml)	Drink only occasionally (if at all)	Soft drinks; fruit juice; full cream milk; 'energy' drinks; flavoured milk; iced coffee

What about alcohol?

Alcohol is a little different to your other types of beverages. Alcohol is a toxin, therefore the body needs to metabolise it straight away. So our body doesn't actually store the energy in alcohol as fat. At the end of the day if you're consuming in moderation its pretty safe to say your alcohol isn't contributing to your waist line, it's probably what you're eating with it.

At the end of the day though it all adds up so if your are consuming in excess it will cause body weight problems along with the other health risks associated with excessive alcohol consumption. You also need to be aware of the sugar sweetened alcoholic drinks as these will add to the belt notches

For more information on managing energy input go to www.lifestylemedicine.net.au OR email info@lifestylemedicine.net.au