**How to lose weight in an evidence-based way**

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Dieting to lose weight is a big industry, but much of the advice offered is not evidence-based. Being a scientist, I reasoned that, to lose weight, you only need to count your calorie intake and expenditure, put it in a spreadsheet, and ensure there is a deficit every day. I shall explain how to do it and provide a [spreadsheet](https://www.scientificfreedom.dk/wp-content/uploads/2023/02/Slimming-spreadsheet.xlsx) you can use.

Life should be pleasant, also when dieting. Therefore, do not start on some fancy diet you have seen in a magazine but keep it simple. Continue eating and drinking what you enjoy - but less of it - and exercise more. If you ensure the daily calorie deficit is tolerable, you cannot avoid losing weight.

You can find out what your [basic metabolic rate](https://www.calculator.net/bmr-calculator.html) is and how many calories you use when [exercirsing](https://www.calculator.net/calories-burned-calculator.html), which you need to enter into the spreadsheet. The spreadsheet calculates the calorie content of many common food items, beer, wine and liquor, and you can easily find additional information on the Internet and enter it. I use a [Danish website](https://gratiskalorietabel.dk/) because it gives the amount per 100 g; most websites give the [amount per piece](https://www.calories.info/), e.g. in an avocado.

If you also have a kitchen scale, you are ready to go.

Note: Kilocalories are usually called calories in articles and on websites. This is very odd. If you go 50 km by car, you don’t say you drove 50 m.

After a short while, you don’t need to count kilocalories consumed and spent because you will have developed a good sense for what you can allow yourself to consume to maintain the daily weight loss you have embarked on. From then on, the only thing you need is to record your weight every morning.

**How ambitious should you be?**

If you don’t go too fast, you are more likely to achieve the weight loss you planned for and more likely to sustain it, which is the difficult part.

A good speed is a deficit of 500 kcal per day, which will result in a weight loss of [about 2 kg](https://www.webmd.com/diet/calorie-deficit) per month. Weight varies with your hydration level, but you can see how well you are doing by looking at the average weight loss (the slope of the regression line in the spreadsheet).

Most people do not eat much at breakfast and lunch, and if you enter the values for intake of food and drink and any exercise during the day, you can see how much (or rather, how surprisingly little) you can allow yourself to consume for dinner. If you get so hungry in the evening that your stomach hurts, then take a thin slice of bread, e.g. with a little cheese - not that many kilocalories.

Stop eating sweets altogether. If a cake is served, eat half as much as usual and enjoy it double as much. Sugar containing drinks are fattening and should be avoided, also when you are not dieting. Drink fruit juice instead.

 Sugar is the big culprit, and some people eat more than a kilo every week. Sugar is everywhere and often in large quantities in processed foods. In my local supermarket, I found these amounts of sugar: ketchup and barbecue sauce 24%, mango chutney 42%, and sweet chili sauce 51%. Sugar is hidden in many products where you would not suspect it to be because they do not taste particularly sweet. Sweet biscuits have a surprisingly high calorie count, so don’t buy them and you will not be tempted.

 If you use cream in your coffee, you might be surprised to find out how quickly half a litre disappears. As the calorie content is very high, you might wish to use cream only occasionally, as a kind of reward if you make progress according to your plan.

**The two-week crisis**

It is common that the planned daily weight loss is achieved the first 2-3 weeks but then stalls, which is very frustrating. When you get slimmer, your basic metabolic rate drops and you spend fewer calories when exercising. More importantly, your body reacts to the weight loss by lowering metabolism. It tries to preserve the weight you had, no matter how large it was. Some people can feel this effect directly, as they grab for a blanket even though the room temperature has not changed.

 If you stop losing weight, you will need to introduce a somewhat greater calorie deficit than the one you started out with. The easiest way to do this is to exercise. Walking is not very effective. What you lose, depends on your weight, speed and distance. If I walk 5 km in an hour, I will burn only about 275 kcal. If I ride 25 km in an hour on a racer bike, 875 kcal, and 750 kcal if I run 10 km (see spreadsheet).

 If you exercise a lot, your muscle weight will increase. This could reduce your weight loss slightly, but you should be able to notice that your belly circumference drops.

What happened to all those slim people you knew when you were young? Well, for sure, few of them are slim today. As you age, your basic metabolic rate goes down. You also move around less, but you likely continue eating and drinking what you have always enjoyed, or even more. If you are retired, you might visit the kitchen or drink alcohol too often out of boredom.

**A practical example**

I currently use the spreadsheet for myself, and my plan is to lose 6.5 kg in two and a half months. I have explained in the spreadsheet how to construct the graph.

The line ends at about 80 kg, which is my target:

You can see the effect of enjoying New Year’s eve and of having holidays. I deliberately ate less before my wife and I went to Spain in late January, as I knew I would eat more than planned while on holiday.

**General remarks about obesity, diets, slimming pills, and the food industry**

It takes a good deal of discipline to lose weight and maintain the weight loss. It is better to avoid becoming overweight by eating prudently, avoiding soft drinks, snacks, and sweets, and burning calories by exercise.

 Obesity is not a disease, but it increases the risk of hypertension, heart disease, diabetes, and a lot else. If obese people visit their doctor for some other reason, they might get prescriptions for drugs to lower blood pressure, cholesterol, and blood sugar, but many can stop taking such drugs if they lose weight. And if they drop the pills, their quality of life will likely increase, as the drugs have many bothersome harms.1,2

 Extreme diets are not the solution to obesity. Some people boast of considerable weight losses on a vegan diet, which is plausible considering how uninspiring it is to eat only plants. Once, when I lectured for a vegan audience, a man proudly said, “I’ve been a vegan for 40 years!” to which I responded, “And I’ve eaten everything for 67!” But of course, it is prudent to eat very little red meat because global warming is the biggest threat we are currently facing.

Slimming pills are not the solution either. The effect of most drugs is trivial, typically 2-3 kg even in flawed trials,1 and they are far too dangerous. Most of the drugs were taken off the market after they had killed many people, sometimes after horrible suffering where people felt they were being slowly suffocated or were drowning.1 The newest one, for which a [weight loss of 13 kg](https://www.accessdata.fda.gov/drugsatfda_docs/label/2021/215256s000lbl.pdf) has been reported,3 also has significant harms, one of which is the price, [$1,400 for a month’s supply](https://www.ibihealthcare.com/wegovy-cost/) of injections in USA.

 The food and soft drink industry has had a major role for our obesity epidemic. In the 1970’s, the US Sugar Association convinced the US Food and Drug Administration to issue a statement that sugar was not hazardous to health.2 Conveniently, the chair of FDA’s committee was also the chair of the sugar association.

The corruption is everywhere. Coca-Cola sponsored researchers conducting studies intent on trivialising the effects of sugary drinks on obesity, and heart and cancer associations were also corrupted by sugar industry money. The Global Energy Balance Network has received many millions in support from Coca-Cola and it claims – in disagreement with the evidence - that sugary drinks and fast food are not the main reasons for overweight. If that were the case, I wonder why people who only consume this become overweight.2

 A 2014 TV documentary, “[The World’s Best Diet](https://www.imdb.com/title/tt3849572/),” explored the health consequences of various diets. The Marshall Islands, a US protectorate, had the highest rate of diabetes associated deaths in the world and one of the most overweight populations as well. The islanders mostly eat canned foods from USA, whose health is also far down the ranking list.

At the top of the list were the Nordic countries, France, Italy, and Spain. France is particularly interesting because the French defy the usual dietary advice. They enjoy fatty cheese, fat poultry and beef, and yet have a long life expectancy.

The populations who did well have a minimal intake of processed food. Regulating the food and soft drink industries could have dramatic effects on our obesity epidemic, health, and longevity.

1 Gøtzsche PC. Deadly medicines and organised crime: How big pharma has corrupted health care. London: Radcliffe Publishing; 2013.

2 Gøtzsche PC. Survival in an overmedicated world: look up the evidence yourself. Copenhagen: People’s Press; 2019.