Energy in food (kilojoules and calories)

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Tags:
A kilojoule (or Calorie) is a unit of energy. In Australia, we use kilojoules (kJ) to measure how much energy people get from consuming a food or drink. The kilojoule content of foods depends on the amount of carbohydrates, fats and proteins present in the food, and the portion size.

Foods that are high in fats, added sugars or alcohol are by far the highest in kilojoules.

Foods such as fruits, vegetables and legumes are lower in kilojoules.

You can find out how many kilojoules are in packaged foods by checking the label.

When eating out or grabbing food on the run, check for kilojoules on the menu or food display tags.

Energy as kilojoules

In Australia, we use kilojoules (kJ) to measure how much energy people get from consuming a food or drink. A kilojoule is a unit of measure of energy, in the same way that kilometres measure distance.

Food energy used to be measured in Calories (Cal) and some countries still use those units. The conversions are as follows:

- 1 kJ = 0.2 Cal
- 1 Cal = 4.2 kJ

Kilojoules in food

The food and drinks we eat provide energy, which is measured in kilojoules. How much energy they provide depends on the amount of carbohydrate (sugars/starch), protein, fat and alcohol the food or drink contains, as well as the portion size.

Different ingredients in food and how they are prepared mean some have more kilojoules than others. Larger serving sizes also mean more kilojoules.

We know drinks contain energy (kilojoules), but because liquid is not as filling as food, we often don’t realise how many kilojoules we are consuming from drinks. Some drinks are surprisingly high in kilojoules.

It can be hard to tell how many kilojoules are in each food just by looking, but in general:

- Fats and alcohol are high in kilojoules.
- Protein and carbohydrates provide moderate amounts of kilojoules.
- Dietary fibre is low in kilojoules.
- Water provides no kilojoules (energy).
- Foods such as fruits, vegetables and legumes are less energy-dense foods (lower in kilojoules).
- Foods that are high in fats, added sugars or alcohol are by far the most energy-dense foods (highest in kilojoules).

You can find out how many kilojoules are in specific foods by checking the label (nutrition information panel) on packaged foods in the supermarket. When eating out or grabbing food on the run, check for kilojoules on the menu or food display tags.

Our energy requirements vary

Your energy (kJ) needs each day and how much energy you burn vary and depend on:

- how active you are in your daily activities
- the amount and type of exercise you do
- your height and weight
- your sex – men generally have higher energy requirements than women, because they have more muscle tissue
- your body composition – muscle tissue has a big appetite for kilojoules. The more muscle mass you have, the more kilojoules you will burn
- if you are pregnant or breastfeeding
- genetics and your health status
- your age – young children and teens need high amounts of energy to fuel growth. As we age, activity levels are often reduced, which causes a loss of muscle tissue, and so our energy requirements tend to decrease.

Where to get help

- Live Lighter
- Your GP
- Dietitians Association of Australia
- Nutrition Australia
- Eat for Health
- Heart Foundation – Healthy Eating

References

- Balancing energy in and out, Nutrition Australia. More information here.

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Energy needs

- Kilojoules on the menu
  Large Victorian fast food and supermarket chains are required to display the kilojoule content of ready-to-eat food and drinks on their menus, along with the average adult daily energy intake (8,700kJ).
- Kids and energy needs
  It’s important for kids to eat a wide variety of foods for a healthy, well-balanced diet and to be physically active. Creating healthy habits during childhood helps to ensure lifelong healthy.
- Kilojoules in common energy-dense meals
  The average Australian eats out more than four times a week, and almost half these meals are energy-dense meals such as burgers, fried chicken, pizzas, noodles and bakery items. A single energy-dense...
- Men’s nutrition needs
  Nutrition needs differ with gender and age. A healthy diet for a man is different from a healthy diet for a woman. And what a middle aged male needs from his food for good health and growth...
- Teenagers and healthy eating
  A teenager who consumes healthy meals and snacks will maintain their weight and meet their requirements for essential nutrients like calcium and iron...
- Cooking tips for busy people
  If you lack the time or motivation to cook, try these tips...
- Energy in food (kilojoules and calories)
  A kilojoule is a unit of measure of energy, in the same way that kilometres measure distance.

Weight management - adults

- Body mass index (BMI)
  Body mass index or BMI is an approximate measure of your total body fat...
- Body mass index calculator for adults
  Body Mass Index is used to estimate your total amount of fat. It is only an approximate measure of the best weight for your health. This calculator is designed for men and women over the age of 18, A...
- Weight loss - a healthy approach
  Crash dieting makes you gain more weight in the long run because it lowers your metabolism...
- Weight loss and fad diets
  With a balanced eating plan, it's what you leave in that makes all the difference..
- Nutrition Week
  Nutrition Week...
- Body mass index calculator for children and teenagers
  This calculator measures body mass index (BMI), which is a measure of body fat. It is only an approximate measure of the best weight for your health. The calculator can be used for anyone from two...
- Reading food labels - tucker talk tips
  Labels on packaged food can give you useful information about the nutrition, ingredients, storage and weight of the food. Add full stop to pull quote..
- Carbohydrates and the glycaemic index
  The glycaemic index (GI) can be a useful tool to control blood sugar levels..
- Protein
  The human body can't store protein, so it must be supplied daily from the foods we eat..
- Food variety and a healthy diet
  If you eat a variety of good food, your diet will provide you with adequate nutrition..

Weight management - children

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• **Body mass index calculator for children and teenagers**
  
  This calculator measures body mass index (BMI), which is a measure of body fat. It is only an approximate measure of the best weight for your health. The calculator can be used for anyone from two to...

• **Growth charts for children**
  
  Babies and young children do not usually grow in a perfectly smooth way, but instead grow in "bursts".

• **Growth and development - primary school children**
  
  Always see your doctor if you are concerned about your child's growth or weight.

• **Growth and weight changes in teenagers**
  
  The end of a growth spurt may trigger a drop in appetite, so don't immediately assume that your child is trying to lose weight.

• **Overweight children - healthy lifestyle tips**
  
  You can help your child to develop healthy patterns for life and avoid obesity.

• **Body image and diets**
  
  Some people diet because they have a poor body image, not because they want to be a healthy weight.

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**Healthy eating - general**

• **Food and your life stages**
  
  The nutritional requirements of the human body change as we move through different life stages.

• **Healthy eating tips**
  
  A good balance between exercise and food intake is important to maintain a healthy body weight.

• **Food labels**
  
  Food labels carry useful information to help you make good choices about food.

• **Lunch at work**
  
  Did you know lunch is just as important as breakfast? In other words, don't skip lunch: you need it every day! A nutritious lunch will give you the energy to get through an afternoon of work.

• **Healthy eating – what to put on your plate**
  
  Healthy eating – what to put on your plate, nutr...

• **How to cut down on salt**
  
  Even if you are careful about the salt you consume, you may be surprised that some of the food you eat contains hidden salt that you’re not even aware of. Learn how to cut down on salt.

• **Tips to keep our snacks on track**
  
  Most of us are prone to the odd snack or two. Check out these simple tips to keep your snacks on track.

• **Food to have sometimes**
  
  Junk food should be kept to a minimum. It usually contains a lot of fat, salt or sugar.

• **Cholesterol - healthy eating tips**
  
  Replacing foods that contain saturated fats with foods that contain polyunsaturated and monounsaturated fats will help to lower your cholesterol.

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**Healthy eating - kids**

• **Eating tips for babies**
  
  First foods for babies can be prepared easily and cheaply at home without salt, seasonings and sweeteners.

• **Eating tips for preschoolers**
  
  Children are able to decide how much food they need for activity and growth if allowed to eat according to their appetite.

• **Eating tips for school children**
  
  Snacks are an important part of a healthy diet for active children, so offer nutritious as well as high energy snacks.

• **Healthy eating – school lunches**
  
  Simple ways to make your child's school lunch healthier.

• **Lunch boxes - healthy ideas**
  
  Healthy foods that are great for school lunch boxes.

• **Lunch boxes - menu planner**

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By planning ahead, you can make sure that your child's lunch box has each of the six key elements of a healthy lunchbox.

- **Lunch box tips**
  Encourage children to help choose and prepare their own healthy snack or lunch.

- **Childcare and healthy eating**
  Childcare centres should provide healthy meals for your children.

- **Soft drinks, juice and sweet drinks - children**
  Encourage children to drink and enjoy water. Sweet drinks such as juice, cordial and soft drinks may cause health problems for children if consumed in large amounts.

- **Children's diet - fruit and vegetables**
  If you eat and enjoy fruit and vegetables every day, your child may eventually follow your lead.

**Related Information**

- [Nutrition Week](#)
- [Body mass index calculator for children and teenagers](#)
  This calculator measures body mass index (BMI), which is a measure of body fat. It is only an approximate measure of the best weight for your health. The calculator can be used for anyone from two to...
- [Kids and energy needs](#)
  It’s important for kids to eat a wide variety of foods for a healthy, well-balanced diet and to be physically active. Creating healthy habits during childhood helps to ensure lifelong healthy...
- [Balancing energy in and energy out](#)
  A kilojoule is a unit of measure of energy, in the same way that kilometres measure distance.
- [Weight and muscle gain](#)
  Gaining lean body weight is a slow process that takes months and years, rather than days and weeks.

**Home**

**Related information on other websites**

- [Dietitians Association of Australia](#)
- [Nutrition Australia](#)
- [University of Wisconsin Stevens Point](#)

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Check before you choose

Kilojoule labelling is now on the menu of large food chain businesses – both in-store and online.

Junk food calculator

Livellighter encourages people to make positive health choices. Use their junk food calculator to find out just how much fat, sugar and salt you’re putting into your body, and what it’s costing you.

Get started now!

How to cut down on salt

1. Many of us are eating almost twice the amount of salt (sodium) that we need for good health, largely because it’s hidden in many of the foods we eat. A whopping three-quarters of the salt we eat comes from processed foods. Too much salt can lead to high blood pressure, which puts us at risk of stroke, heart disease and chronic kidney disease. Try these simple tips and cut down your intake.
2. Limit bought food

Food eaten at restaurants, cafes and from takeaway outlets can be much higher in salt than food prepared at home. The best bet is to make them occasional treats rather than part of your regular diet. They’re also high in kilojoules, saturated fat and sugars. And if you think that sweets are immune from high levels of salt, think again – muffins, donuts and pancakes with maple syrup contain more than 400 mg, which is above ‘safe’ levels. Don’t be fooled by healthier options either – a Caesar salad bought over the counter may contain more salt than the average cheeseburger!

3. Read food labels

The amount of salt in foods can vary considerably between brands. Look for products with ‘no-added salt’, or at least ‘reduced’ or ‘low salt’. The best choices are those with less than 120 mg of sodium per 100 g. If you have kids, watch how much they’re consuming – too much salt in childhood can lead to a lifetime of health risks. If you need help choosing foods, check out the government’s Health Star Rating – the more stars a product has the healthier it is.

Hint: when using canned vegetables, choose ones with ‘no-added salt’.
4. **Ditch the salt shaker**

Try to break the habit of automatically salting your meals at the table. And when cooking, don’t add salt. A better option is to add **herbs**, a splash of **olive oil**, citrus juice or zest to enhance flavours. Spices such as pepper or cumin are great alternatives too.

Hint: grow some **thyme** in a pot it adds flavour to soups, stews, and meat.

5. **Get clever in the kitchen**

Don’t add salt to food when cooking. Instead, give your meals a boost with **herbs** (e.g. basil, coriander), spices (e.g. cumin, pepper), fresh ginger, **garlic**, **chillies**, vinegar and **lemon** juice or zest. If it’s hard to cut out salt altogether, do it slowly and introduce new flavours gradually. Seasonings are high in salt too – use low or reduced-salt stocks, stock powder and gravy powder and dilute them more than the instructions recommend. When cooking pasta, noodles, rice or vegetables don’t add salt to water.

Hint: don’t add the amount of salt stated in recipes – try adding half or less. If a recipe includes other salty ingredients like stock powder, Asian sauces, olives, capers, anchovies, bacon, ham or smoked salmon, then you shouldn’t need extra salt.
Think you can taste it?

As consumers, we put a lot of trust in businesses who make our food. But when it comes salt, can you trust your tastebuds? Foods don’t have to taste salty to be high in salt. Take control and get into the habit of reading labels.

Convenience a no go

In this busy world, a lot of us are looking for ways to spend less time in the kitchen and that’s why convenience products and packaged foods are so popular. Most of these foods are high in salt and best avoided. Cut back on things like – deli meats, flavoured instant pasta, instant noodles, savoury snack foods and crackers, instant cup-a-soups, dehydrated soup mixes and ‘heat and eat’ frozen or refrigerated meals. Use the government’s Health Star Rating to choose lower sodium products. Even better, cut down the amount of these products you’re consuming and go fresh – it really is best!
8. **All salt is the same**

Don’t be fooled by trendy claims – all salt is the same. Whether it’s pink, rock or vegetable, it’s still salt, and has the same effect on our health. Any salt contains sodium, and is just the same as ordinary table salt.

9. **How much is too much?**

We need sodium to regulate fluids in our body – most of us can get it naturally in our diet without it being added. We only need a small amount each day but many of us are eating way more. **Adults should eat less than 2,000 mg (or 5 g) of sodium – about a teaspoon of salt a day.** **Children need less than one quarter of a teaspoon of salt per day.** The adequate intake of sodium for children starts at around 0.5 g salt (1–3 year olds) to 2 g salt (9–13 year olds).

Hint: got **high blood pressure** – reduce your salt intake to 2,000 mg (5 g) per day. And don’t forget to **talk with your doctor or health practitioner** about what’s right for you.
It’s in the sauce

Most simmer sauces, gravies and condiments are stacked with salt to enhance their flavour. A squirt of sauce, a drizzle of dressing on a salad can really start to add up. Popular products that contain loads of salt include soy sauce, tomato sauce, relish, mustard, stir-fry sauces, marinades, stock, gravy, mayonnaise and salad dressings. Anything pickled such as olives, gherkins and capers is high in salt too.

Hint: try to make your own with fresh ingredients when you can. Start with our homemade tomato sauce using fresh tomatoes – make up a batch and freeze. It’s great with pasta.

Natural? Think again

Even though a label may say ‘natural’ doesn’t mean food is healthy - it could contain loads of salt. Download a free app like FoodSwitch, which scans barcodes and gives the nutritional value of loads of foods. If you have kids, get them to help with the shopping. They can search for healthy alternatives using your phone – it’s great for starting healthy habits early in their lives. The best way to ensure we’re eating ‘natural’ foods is to eat plenty of fruit, vegetables and wholegrains.
Don’t listen to those cravings

Salt has a craving effect on our bodies – the more we eat, the more we want. And, for some of us, it makes us eat more too. Try to cut down slowly, so you’re less likely to crave ‘bad things’, such as junk and fast foods! Don’t be disheartened, foods might taste different from the start, but our taste buds will adjust – it just takes time. So stick with it. If you find you are craving excessively, see a doctor – it could be a sign of an underlying medical condition, such as Addison’s disease.

Surely not breakfast!

Believe it or not, breakfast cereals can be high in salt, and that toast we’re eating could be too. When shopping, read the nutritional information and make sure to look for low sodium products. Your best bet is to choose cereals that are less likely to contain added salt such as oats or unsweetened muesli. If you have time, make your own Bircher muesli – it’s cheaper, healthier and filling!

Time for brunch or lunch?

A popular lunch staple is the humble sandwich or roll filled with deli meats. Even if you make your own lunch you may not know exactly how much salt you’re actually consuming. Limit your intake of deli meats that are high in salt such as salami, ham, corned beef, and chicken loaf. Go easy on those Sunday brunches too – smoked salmon, sausages, bacon and prosciutto are high in salt – just one rash of bacon alone is a third of our maximum daily intake! Be on the lookout for brands that are lower in sodium.

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15. **Converting sodium into salt**

If you’re still confused by food labels, try this simple calculation to work out how much salt is in a product:

Multiply the amount of sodium (in mg) by 2.5

*For example: 400 mg sodium in a serve of food $\times 2.5 = 1,000$ mg (or 1 gram) of salt*

16. **Cramps don’t need salt**

Contrary to what we might believe, *if your muscles are cramping* they need water not salt. Cramps are a sign that our body is dehydrated and needs replenishing. Drink plenty of water before, during and after exercise, and especially on hot days.

**BMI Calculator**

Body Mass Index is used to estimate your total amount of fat. It is only an approximate measure of the best weight for your health.

*Hint: vary fillings in lunches – such as tuna in spring water (it’s less salty than brine), hard-boiled eggs, or patties and dips made with legumes (e.g. falafels or hummus).*
This calculator is designed for men and women over the age of 18.

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