

Classic Ketogenic Diet

Very low carb, very high fat — run the body on ketones instead of glucose.



MAINLY USED FOR

Epilepsy, metabolic health, weight loss

CORE RESTRICTION

Carbohydrate under ~20-30 g/day

EFFORT

4 of 5

01 How it works

Cutting carbohydrate to roughly 20-30 g a day empties liver glycogen within a day or two. With glucose scarce, the liver converts fatty acids into ketone bodies — beta-hydroxybutyrate, acetoacetate and acetone — which cross the blood-brain barrier and fuel the brain.

The therapeutic version used in epilepsy clinics is prescribed as a ratio: 4:1 means four grams of fat for every combined gram of protein and carbohydrate. That is far stricter than the 'lazy keto' most people mean online.

Ketones appear to stabilise neuronal membranes, reduce glutamate excitability and shift the body away from insulin-driven fat storage. That single mechanism is why one diet shows up in seizure disorders, insulin resistance and some metabolic cancers research.

02 Nutrition at a glance

Therapeutic keto is weighed to a fat ratio; the everyday version below is the pattern most adults are given to start with.

Carbohydrate	20-30 g/day	Total, not net, in clinical settings
Fat	70-80% of calories	The bulk of every plate
Protein	1.2-1.7 g/kg	Enough to hold muscle, not so much it blunts ketones
Fibre	20-25 g/day	From low-carb vegetables, flax and chia
Fluid and salt	2-3 L, 3-5 g sodium	Ketosis flushes both faster than usual

Nutrients that often run short: Potassium · Magnesium · Calcium · Vitamin D · Selenium · Fibre.

A word on electrolytes

Electrolytes are the whole story behind 'keto flu'. As insulin falls, the kidneys dump sodium and water fast, and potassium and magnesium follow. Most people need 3-5 g of sodium a day on keto — more than they have ever deliberately eaten — plus 300-400 mg of magnesium and potassium-rich foods like avocado, spinach alternatives and bone broth. Headache, cramps, palpitations and fatigue in week one are almost always this, not carbohydrate withdrawal. If you take blood pressure medication or have kidney or heart disease, agree your sodium target with your doctor first. If you have kidney disease, heart failure or high blood pressure, or you take a diuretic, ACE inhibitor or ARB, set your targets with your clinician — and avoid potassium-based salt substitutes unless told they are safe for you.

03 Key cautions

The things that most often catch people out — worth raising at your next appointment.

TALK TO A CLINICIAN

Diabetes medication needs adjusting first

Insulin and sulfonylureas can cause serious hypoglycaemia within days of cutting carbohydrate. SGLT2 inhibitors carry a risk of euglycaemic ketoacidosis on keto. Doses should be reviewed before your first low-carb day, not after.

TALK TO A CLINICIAN

Not a DIY diet for children with epilepsy

Ratio-based ketogenic therapy is prescribed and monitored by a ketogenic dietitian, with growth tracking and supplements built in.

WORTH TESTING

Lipids move in both directions

Most people see triglycerides fall and HDL rise; a minority see a sharp LDL jump. Test at baseline and again at three months.

WORTH TESTING

Kidney stones and bone density

Long-term ketogenic therapy raises stone risk and can affect bone density, particularly in children. Citrate supplements are often used preventively.

KEEP AN EYE ON

The first two weeks feel rough

Headache, fatigue, cramp and constipation are usually salt, fluid and magnesium — not a sign the diet is failing.

04 Conditions it is used for

- Drug-resistant epilepsy, especially in children
- Glucose transporter type 1 deficiency (GLUT1) and pyruvate dehydrogenase deficiency, where it is the primary treatment
- Type 2 diabetes and insulin resistance, under medical supervision
- Obesity and metabolic syndrome
- Under active research for migraine, PCOS and some neurodegenerative conditions

05 Your food lists

Eat freely

Fats and oils

- Olive oil
- Avocado oil
- Butter and ghee
- Coconut oil and MCT oil
- Heavy cream
- Lard and tallow

Protein

- Eggs
- Beef, lamb, pork
- Chicken and turkey with skin
- Salmon, sardines, mackerel
- Shrimp and shellfish

Eat with care

Portion-controlled

- Nuts and seeds — macadamias and pecans are lowest in carbs, cashews are highest
- Berries — a small handful of raspberries or blackberries
- Tomatoes, onions, peppers, carrots
- Full-fat yoghurt and cottage cheese
- Sugar alcohols — maltitol raises blood glucose, erythritol and allulose mostly do not
- Alcohol — dry wine and spirits only, and tolerance drops sharply in ketosis

Best to skip

Grains and starch

- Bread
- Pasta
- Rice
- Oats
- Corn
- Potatoes
- Sweet potato
- Flour of any grain

Low-carb vegetables

- Spinach
- Zucchini
- Cauliflower
- Broccoli
- Asparagus
- Cabbage
- Lettuce and salad greens
- Cucumber
- Mushrooms

Other

- Avocado
- Hard cheeses
- Olives
- Bone broth
- Salt — you need more of it

Sugar

- Table sugar
- Honey
- Maple syrup
- Agave
- Fruit juice
- Soda
- Most sauces and dressings

Most fruit

- Banana
- Apple
- Grapes
- Mango
- Pineapple
- Dried fruit of any kind

Legumes

- Beans
- Lentils
- Chickpeas
- Peas

06 Three days of meals

Day 1

Breakfast: Three eggs scrambled in butter with sauteed spinach and mushrooms, half an avocado.

Lunch: Tuna salad with full-fat mayo on romaine leaves, olives on the side.

Dinner: Ribeye with garlic butter, roasted asparagus, side salad with olive oil.

Snack: A dozen macadamia nuts.

Day 2

Breakfast: Full-fat Greek yoghurt with a tablespoon of chia and six raspberries.

Lunch: Chicken thighs with skin over cauliflower rice fried in ghee.

Dinner: Baked salmon with lemon butter, zucchini noodles, parmesan.

Snack: Cheese cubes and a cup of bone broth.

Day 3

Breakfast: Bacon and eggs fried in the bacon fat, black coffee.

Lunch: Cobb salad — egg, bacon, avocado, blue cheese, olive oil dressing.

Dinner: Pork belly with braised cabbage and butter.

Snack: Two squares of 90% dark chocolate.

07 Getting started

- Get a baseline. If you take insulin, sulfonylureas or blood pressure medication, talk to your prescriber first — doses often need to come down within days, not weeks.
- Track carbs for the first two weeks. Guessing does not work; hidden carbs in sauces and 'low carb' products are the usual reason people never enter ketosis.
- Salt aggressively. 3-5 g of sodium a day plus magnesium and potassium prevents most of what people call 'keto flu'.
- Drink more water than feels necessary. Glycogen holds water; you lose several pounds of it in week one.
- Give it three weeks before judging energy or performance. Fat adaptation is slower than ketosis.

08 Common mistakes

- Eating too much protein. Excess protein is converted to glucose and stalls ketosis, especially in therapeutic epilepsy use.
- Fearing fat. A low-carb, low-fat diet is just a hungry diet.
- Ignoring electrolytes and then blaming the diet for headaches, cramps and fatigue.

- Relying on keto bars and maltitol-sweetened sweets, which spike glucose for many people.
- Skipping vegetables entirely and ending up with no fibre, no potassium and a miserable gut.

09 Questions people ask

How do I know I'm in ketosis?

Blood ketone meters are the only reliable home method; 0.5-3.0 mmol/L is nutritional ketosis. Urine strips work for the first couple of weeks then stop being accurate as you get better at using ketones.

Is therapeutic keto the same as the keto I see on Instagram?

No. Clinical ketogenic therapy for epilepsy is weighed to the gram at a set ratio and supervised by a dietitian. Popular keto is a general low-carb pattern. They are not interchangeable when you are treating seizures.

Will it wreck my cholesterol?

It varies enormously between people. Some see triglycerides fall and HDL rise; a minority see a sharp LDL jump. Test at baseline and again at three months rather than assuming either outcome.

Can I do keto long term?

Many people do, but bone density, kidney stones and micronutrient status deserve periodic checks — particularly for children on therapeutic ratios.

10 How it overlaps with other diets

- Keto plus low oxalate is a real conflict: spinach, almond flour and chia are keto staples and oxalate bombs. Swap to cabbage, romaine, coconut flour and sunflower seed flour.
- Keto plus SIBO works well because both cut fermentable carbohydrate, but watch sugar alcohols and inulin-sweetened keto products.
- Keto plus renal diets needs supervision. Standard keto is protein and phosphorus heavy in ways CKD stages 3-5 cannot tolerate.

This guide is educational and is not medical advice. Therapeutic diets can change how medication works and can leave gaps in nutrition, so please plan any of this with your doctor or a registered dietitian.