



# cycling



## what is it?

Cycling is the action of riding a bicycle, tricycle, unicycle, quadracycle, or other human-powered vehicle.

There's some debate as to the first bicycle. In the early 1800s the Draisine, or Dandy Horse was invented in Germany by Baron Karl von Drais, and this is considered to be the first two-wheeled transport. It was a plank of wood with a seat and handlebars, atop two steel-rimmed wheels.

Again, it's unclear who invented the first pedal-powered bicycle but in the mid-19th century the velocipede or boneshaker, with pedals attached to the front wheel, became popular, although the wheels were small, and speeds low.

The high-wheel or penny-farthing followed to enable higher speeds, with solid rubber tyres, but it was dangerous and expensive, so it wasn't until the advent of the safety bicycle in the 1880s, with a chain driven back wheel, that the cycling revolution began. In 1888 John Dunlop invented the inflatable rubber tyre which led to the standardisation of the modern diamond frame, and the price of bicycles fell.

The safety bicycle gradually became the roadster model, and this design lasted well into the middle of the 20th Century. The bicycle's ubiquity accelerated the emancipation of women from the 1890s as it increased the range of mobility, and their corsetry and voluminous dresses became unwearable when riding a bicycle.

Frames became more aerodynamic with a more hunched-over riding position and thinner tyres. Drop handlebars were added and after the 1940s, derailleur gears too, and the 'racer' overtook the roadster in popularity around the middle of the 20th Century. Modifications followed, such as flat handlebars, in the 1960s, then the mountain bike in the 1970s, which relaxed the riding position and made the frame more sturdy for riding off-road.



*Dandy horse.*

## what are the benefits?

**Social:** the private car, since mass production began in the 1920s, has moved from a convenient way to run around town and visit the countryside on the weekend to a way to sit in traffic for 20 minutes during the daily commute to the office. Planning and transport policy has suppressed cycling, and the decline in physically-active transport has been a contributor to ill-health of many types. Public and media attention often focus on obesity but the impact is much wider. We need to reverse this trend, and to come up with a radical vision centred on bicycle travel.

Today, motor transport still takes priority in the allocation of investment. The UK lags behind many European countries in levels of active travel. Changes are needed in policy and practice, that would save billions of pounds in healthcare and social care costs, as well as reducing our dependence on the oil industry. The world has prioritised mobility when we should have prioritised accessibility – access to the goods and services people need without unnecessary travel. Cycling improves road safety, both in terms of greater awareness (as drivers are also cyclists) and in terms of lower numbers of vehicles and the slower speeds of cyclists. Fewer cars mean less stressful and more cohesive neighbourhoods.

**Environmental:** bicycles emit no CO<sub>2</sub> in use. Governments are not yet really tackling global climate change but in coming years will be forced to do so by extreme weather events, mass migration, crop failures and other consequences of a changing climate. More cycling will mean improved air quality, especially in urban areas. Cycling vastly reduces resource use (including petrochemicals) compared to the manufacture and use of cars.

**Health:** cycling is an easy and accessible way for individuals to incorporate physical activity into their daily lives, reducing the risk of many forms of cancer, cardiovascular disease, type-2 diabetes, depression and other forms of mental ill-health.

Cycling also helps:

- build and maintain bone strength
- maintain a healthy weight
- increase fitness, and therefore quality of life
- improve mental alertness and motivation
- encourage independence – esp. in children
- reduce cholesterol levels
- increase life expectancy

**Financial:** bikes are cheaper than cars, don't need fuel, you don't need to buy tickets and repairs are cheaper than for a motor vehicle.



Some cities are more cycle-friendly than others, like Copenhagen (notice the lack of cycle gear).

## what can I do?

**Getting a bike:** bikes are cheaper now than ever. Your great-great-great-grandma might have had to pay a year's wages for a bike if she worked below stairs. As the saying goes – buy cheap, buy twice. Avoid catalogue bikes. A budget bike can be less than £300, a quality hybrid from £400. You don't need fashionable components like suspension or disc brakes. If a used bike's price seems too good to be true, you're probably sponsoring crime. Ask to see the original receipt.

**Kit:** all you need is the bike, lights, mudguards and wet weather gear in winter, a lock and a rack and panniers if you're going to carry a lot of gear. You really don't need cushioned spandex unless you're riding very long distances. Look to cycling nations for what you need, not North America.

**Maintenance:** do a basic maintenance course, make sure you can fix a puncture, lubricate moving parts relatively regularly, and carry a pump (and tyre levers and spare tube, unless you're happy to push your bike home if you get a puncture). Most bike shops will provide an annual service relatively cheaply.

**Safety:** by all means get a helmet, but a training course is more important. Of the tiny number of fatalities in London (around 10 per year) a helmet would almost never have helped. Motorcyclists are most vulnerable on the roads, then pedestrians and only then come cyclists. Cycle the width of a car door from parked cars. Look behind you regularly. Don't wear headphones. The greatest risks are from fellow cyclists and pedestrians. The safest way of transporting kids is in trailers, which make great prams when fitted with a third wheel.

**Storage / security:** most bikes are stolen from shared hallways. A quality bike doesn't have to look quality. Avoid posh racing bikes (you don't need one unless you're a professional racer). Bromptons are highly sought after by thieves.

**Cycling:** cycling can fit into daily routines, is relatively gentle and requires no special clothing. Changing habits requires an initial effort, and the first few times are the hardest. After 2-3 weeks it becomes habitual, so starting is the challenge. Overcome this by attempting changes of habit in a group, or, if you don't like the sound of that, create your own realistic targets, such as cycling once a week, where you would normally go by other means. As it gets easier you can start to add more days. Start in the summer to make it easier.

Learn to use your gears. Motorists make good cyclists – they start off in a low gear. If you have to get out of the saddle to ride, you either live in the alps or you're in the wrong gear. Once cycling becomes a habit, you'll find yourself wanting to cycle everywhere, including social engagements.

## resources

- see [lowimpact.org/cycling](http://lowimpact.org/cycling) for more info, courses, links & books, including:
- Robert James, *the Total Bicycling Manual*
- Peter Walker, *How Cycling Can Save the World*
- Jenni Gwiazdowski, *How to Build a Bike*
- [cyclinguk.org](http://cyclinguk.org) – promoting cycling in the UK
- [whycycle.co.uk](http://whycycle.co.uk) – info and advice
- [bikeride.com](http://bikeride.com) – video repair guides
- [sustrans.org.uk](http://sustrans.org.uk) – national cycle network



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