The Right Bike

[NB This document includes reference to a number of cycle-specific words and phrases that some readers may be unfamiliar with. To aid understanding of this technical language there is a 'Cycling glossary' under the 'Further information' section.]

In real terms, bicycles are more affordable today than they have ever been. That doesn't mean they're cheap, and the catalogue-shop 'bargain' that costs £99 will likely be more trouble than it's worth. It may be heavy and equipped with clunky components that barely work – slipshod gears or brakes, or suspension that sags like a punctured football.

A decent bicycle that you can use regularly rather than once in a blue moon will cost from around £200 when bought new. Bikes aren't toys. They cost the same kind of money as desktop computers, with the same implications when it comes to value versus performance.

The less you're going to spend, the more you need to remember this maxim: less is more. It's invariably better to buy something that's simple and that works properly rather than wasting money on something complicated that doesn't.

The more a bike's manufacturing budget is diluted by fashionable 'must have' extras, the more corners will be cut to bring the bike in on budget, and so the worse it will ultimately be. A £200 bike that has front and rear suspension and a set of disc brakes might be awful; a £200 bike that has V-brakes and no suspension at all could be great. Bargains do exist. But generally, as with most things, you get what you pay for.

Size matters

Your bike has to be the right size for you, just like a pair of shoes. Otherwise it will make cycling awkward and uncomfortable. There are simple adjustments that you can make to a bike to make it fit you better but it needs to be broadly the right size to begin with. For that reason, don't be tempted by any bike that's too big or small, even if it is a bargain. Shop at a proper bike shop where you can try bikes for size.

Bikes are traditionally sized on the frame's seat-tube length. Comparisons can be tricky, however, because of compact frames and different methods of measuring. A more reliable method for finding the right size bike is based on the fact that the medium-sized model in almost every bike range is one designed to fit the average-height man. This makes sense when you think about it. Manufacturers want to sell as many bikes as possible and they'll do that by making their bike range fit the majority of the population.

The average British man is 5ft 9in or 175.5cm. The bike that will fit Mr Average is the average frame size – the arithmetic mean. If the bike comes in 50-58cm sizes, for example, then it's the 54cm model. If it comes in 16, 18 or 20in, it's 18in.

If you're taller or shorter than Mr Average, halve the difference and add (taller) or subtract (shorter) from the medium bike size. That's the bike that should fit you. So in the above examples, if you're 180cm – about 4cm bigger than average – you want the 56cm frame; if you're 5ft 5in, you want the 16in frame.

If you fall between sizes, try the ones either side and see what feels best. See also **'The right fit'** for the adjustments you can make to tweak the fit.

What to look for

Again, bikes are like shoes: there are different types for different occasions. Mountain bikes are the most popular, but they're not always the best option, in the same way that hiking boots aren't always the ideal footwear.

Whatever type of bike you choose, there are additional considerations if you're going to be using that bike to carry or tow children. Firstly, gears. It doesn't much matter how many your bike has, but they must go low enough. Even small children are heavy, as anyone who has carried a baby in a papoose will know. On flat roads the extra weight isn't a big issue but you will feel it on even the slightest gradient. Live on a hill? Get a bike with a triple chainset.

Brakes need to be powerful so that you can slow down your heavier and more preciously-loaded bike reliably and quickly. This is as much a matter of correct set-up and brake quality as it is brake type. Disc brakes, drum brakes, V-brakes, cantilever brakes – all are fine. Even sidepull brakes can work okay. Old-fashioned rod-brakes look cute but function abysmally.

Wider handlebars give you more leverage for steering a steady course when you're riding with a child seat or trailer cycle. Child seats skew the weight distribution on the bike, while trailer cycles can exert a 'tail wags dog' effect. Having your hands a bit wider apart helps compensate.

Your bike will need threaded frame eyelets to fix a rear carrier rack onto it if you want to use a rack-mounted child seat or trailer cycle. If you want to use a child seat that clamps to the seat tube (and possibly seat stays too), you should avoid expensive and superlight frame materials that could crimp or fracture under the clamps; sturdy steel or more basic aluminium tubing is safer.

Consider how much room there is in the frame for fatter tyres. A 23mm wide racing tyre inflated to 120psi is super-efficient but gives a milktooth-rattling ride in a child seat. A wider, lower-pressure tyre will absorb bumps and vibrations much better. Whatever the tyres' width, both will need to be covered with full mudguards if you're going to cycle on wet roads. Otherwise you'll spray dirty water all over your passenger. To fit mudguards, it's easiest if the frame comes with the relevant eyelets.

Here's a breakdown of some of the more suitable bike types for new and returning cyclists.

Mountain Bikes

Mountain bikes are designed for riding off-road on rough tracks. There are lots of sub-genres. But for beginners there are just two to consider: the cross-country hardtail and the urban mountain bike.

An entry-level cross-country (or XC) hardtail will have a relatively lightweight aluminium frame and a functional suspension fork. Bike control is critical on the trickier surfaces off-road, so the handlebar will be wide. Gears (21, 24 or 27) go low enough to scale any hill, and brakes (V-brake, cable disc or hydraulic disc) pack lots of power to stop you coming down. Tyres are wide and knobbly for better grip off-road; you're better off switching them for slick (but still fat) road tyres if that's where you'll spend your time. Look carefully for frame-eyelets, too – some have them, some don't. Expect to pay from £250.

The real strength of a bike like this is that you can use it for family cycling and for proper mountain biking by yourself. Quite a lot of cross-country hardtails between £250 and £500 come with the carrier rack mounts you'll need if you are going to fit a child seat.

The oddly named urban mountain bike is just a cross-country style mountain bike that's kitted out for street use. A suspension fork isn't needed on road, so that's often switched for a rigid fork. Gears tend to be slightly higher, reflecting the higher speeds you ride at on road, but the range is still good,

as are the brakes. Some urban mountain bikes use internal hub gearing, which is more weatherproof and reliable but has a smaller gear range. Most urban mountain bikes do have frame eyelets for a rack and mudguards. With their mountain bike sturdiness and road-ready components, this makes them one of the better choices for a family bike. Expect to pay from £200.

Hybrids

As the name suggests, a hybrid pick-and-mixes the features of other bikes. It's the bicycle that sits right in the middle of the Venn diagram of overlapping bike varieties – the default, non-specialised bike. There are sub-genres of hybrid: sports hybrids or fitness bikes are essentially road bikes with flat handlebars; comfort bikes are more like roadsters; trekking hybrids are more like touring bikes; and the archetypal hybrid is a town-and-trail bike that looks similar to an urban mountain bike, but usually has bigger wheels.

Don't worry about the exact type of hybrid, or whether the bike has 26-inch (mountain bike size) or '700C' (road bike size) wheels. All hybrids are viable as beginner and family bikes except perhaps the sports hybrid, which has the same pros and cons as a road bike. An entry-level hybrid has an aluminium frame, a cheap suspension fork, and fairly wide (37mm or so) lightly-treaded street tyres. Gearing is the same as that on a comparably priced urban mountain bike. Common features include an adjustable-angle stem, which lets you move the bars closer to your body for a more upright riding position, and a cheap suspension seat-post to take the sting from bumps. Some come with accessories like mudguards and racks, and almost all can be fitted with them. As hybrids are a kind of jack-of-all-trades bike bought primarily by beginners in Britain, price and performance tend to be modest. Expect to pay from £180.

Roadsters

The default transport bike in Britain up to and including the 1950s, the roadster is now a rarity. We tend to think of this sit-up-and-beg hub-geared machine as a Dutch roadster, because it's so popular there.

Roadsters are meant to be ridden fairly short distances in normal clothes. To this end they have wide saddles, an upright riding position with back-swept handlebars, and a chaincase and mudguards to keep the grime off. Many come with additional features such as a skirt guard, a kickstand, a rear carrier rack, dynamo lighting, even an integral wheel-lock.

However, all these useful extras add weight so roadsters are quite heavy. Aluminium ones are seldom light, while the more traditional steel ones can weigh in at over 40lb (18kg). Street tyres mean that they still ride okay on road or well-surfaced cycle paths, however, and their get-on-and-go simplicity makes them the short-distance utility bike par excellence.

They're not so good in hilly areas. While some come with wider-range hub gears, many have 3-speed hubs and some are single-speeds. Add high weight and hill climbing is hard, so these are best suited to flatter areas. Expect to pay from £300.

Touring Bikes

Touring bikes are designed to carry a load and rider comfortably and efficiently as far as they want to go. British touring bikes have drop handlebars, which makes them look a little like racing bikes. Touring bikes are sturdier than road bikes, with fatter tyres – often 32mm – on their 700C wheels. The gearing is from mountain bike groupsets, operated either by road bike or bar-end gear levers. The brakes are usually cantilevers, as V-brakes don't work effectively with ordinary drop-bar brake levers.

All touring bikes have provision for fitting mudguards, a rear carrier rack, and often a front rack; many are sold with them. Some touring bikes – branded 'expedition bikes' – use 26-inch wheels and more closely resemble mountain bikes than road bikes

Touring bikes are a bit longer than road bikes, which means that heels won't bash rear panniers when pedalling and toes won't overlap the front mudguard when turning. The longer wheelbase, combined with slacker frame angles, gives touring bikes steadier steering than road bikes. As with hybrids, touring bikes are capable of being ridden on towpaths, gravel tracks and the like.

Touring bikes make great family bikes, assuming you can ride confidently with a drop handlebar (possibly taking one hand off it to change gear) when you've got a child behind you. If not, the flat or butterfly bar of the trekking hybrid is the solution. Expect to pay from £400.

Road Bikes

The greyhounds of the cycling world, road bikes – which might better be called road-racing bikes – are all about speed. Tyres are narrow and high pressure, gears are high, steering is sharp, and the narrow saddle and aerodynamic riding position are only really comfortable when wearing cycling clothes.

Road bikes are very light, thanks to a complete absence of any accessories (or even the scope to fit them) and frames constructed from expensive steel, aluminium and/or carbon fibre. Although not as fragile as they may look, road bikes are meant for use on tarmac roads only.

For fitness or for riding fast, road bikes are unbeatable. They're better for riding by yourself than for family or social group cycling, however. If you do want a road bike rather than hybrid or tourer for taking the kids along, look for: a triple chainset; long-reach dual-pivot sidepull brakes; the facility to fit 25 or 28mm tyres and mudguards. Expect to pay from £350.

Folding Bikes

Folding bikes have one or more hinges so that the bike can folded in half – or more – to reduce its size. Most also use small wheels (16 or 20in) to make the final package as small as it can be. While the performance is seldom as good as a conventional bike when you're riding it, a folder is much easier to cart around when you're not. You can put several in the back of car, or carry one onto a train just as you would a suitcase. Many will go on buses or coaches too, though they may need to be bagged.

The best folding bikes, such as the British-made Brompton, are marvels of metallurgical origami. They're also the easiest, and sometimes only, way for a family or group of friends with more than a couple of bikes to move about the country using any transport other than the car.

Folding bikes have some limitations when it comes to family cycling. Handling tends to be a bit skittish anyway, and that's exacerbated by a child seat or trailer cycle – which will need to be seat post mounted, due to the low height of a small-wheeled folder's rack and the bike's lack of heel clearance. Brakes may not be as powerful due to convoluted cable runs, and gears often have a narrower range. Expect to pay from £300.

Recumbents

A recumbent bike reclines the cyclist in a kind of 'bucket seat' with the pedals out in front rather than below you. Claimed advantages include better comfort and aerodynamics. Handlebars are either

above the thighs/knees, steering the front wheel directly, or under the seat, usually steering via a rod-linkage.

Bicycle recumbents typically use a small (16 or 20in) front wheel, so that it doesn't overlap the feet or push the front of the bike too high in the air; the rear wheel may be the same size or, more usually, is larger. Tricycle recumbents usually have two wheels at the front, with the rear wheel either the same size or larger.

A recumbent is more of a format than a bike type as such. The majority are effectively either touring bikes or racing bikes. Most recumbents will tow child trailers, and those that will accept a standard rear carrier rack can accommodate rack-mounting child seats or trailer cycles. They don't have a seat post, so you can't fit anything there. The main disadvantage of recumbents is cost: small-scale manufacture means high prices. They're also not so good in traffic, because slow speed stability isn't as good (at least with two-wheelers) and because your field of vision is reduced: you can't see over cars. Car drivers can usually see you just fine. Expect to pay from £1,000.