

LOOKING AFTER YOUR BIKE



There is no shame in not really understanding how your bike works, nor in wheeling it to the nearest bike shop as soon as something goes wrong. Most people wouldn't try to fix their car when it packs in, so why their bike? It's supremely tedious when cyclists get all high and mighty about maintenance, implying that anyone who doesn't know how to adjust a derailleur or 'true' a wheel is an inferior being.

That said, it can't hurt to know the basics. It is good at least to be able to recognize that something is wrong, even if you can't quite figure out what. And not knowing how to take your tyre off and replace the inner tube when you get a puncture, for example, is a real handicap unless you always cycle within walking distance of a bike mechanic. Wouldn't you like to be able to pedal off into the countryside for a picnic, confident that if you get a flat tyre you won't have to call for a minibus-sized taxi to pick you up?

Knowing how to perform other minor tweaks will also both save you money and make cycling more enjoyable – whether it's silencing squeaky brakes, finding out what's making that awful clicking noise, pumping your tyres up properly or simply knowing which bits of your steed need oiling. This chapter will help you with all of this.

If you want to know more, buy a bike maintenance book. Recommended manuals include The Bike Book by Fred Milson, Bicycle Repair Step-by-Step by Rob Van Der Plas and Richard's Bike Book by Richard Ballantine. All are dated-looking tomes featuring photographs of the ageing and bearded authors wearing criminal sweaters and jeans pulled up to their nipples, but don't let that put you off. They tell you everything you need to know, and can often be picked up very cheaply secondhand.

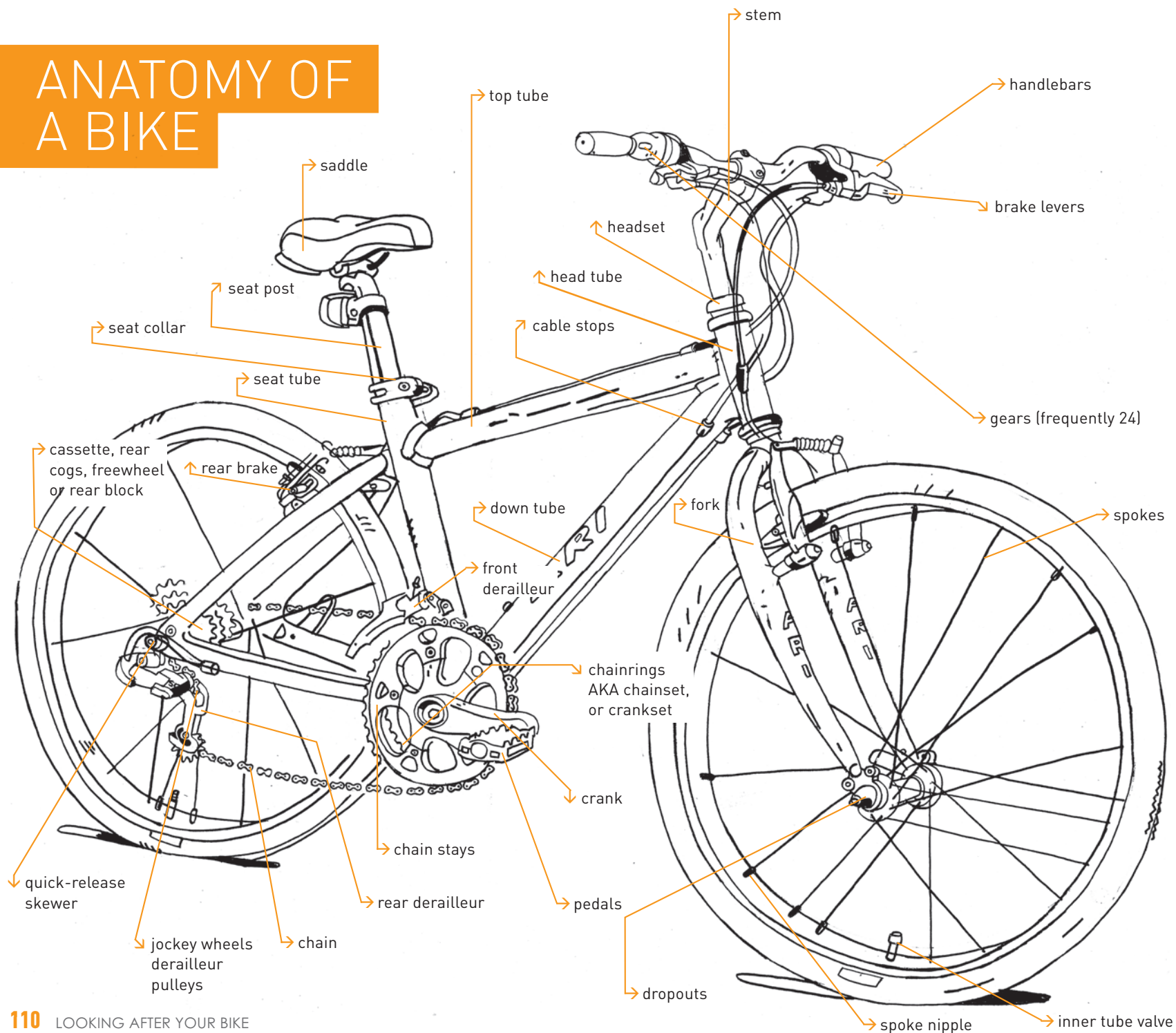
Better still, enrol on a bike maintenance course or get a knowledgeable friend to show you the basics. It is very empowering being able to diagnose and cure your bike's ills all by yourself. NB: if you choose the friend option, don't confuse 'show you the basics' with 'fix it for you', otherwise you'll never learn.

When fiddling by yourself, try not to unscrew too many things at once. If you take bits off, make sure you know where they came from and how to put them back on. I tend to line things up in the order they came off.

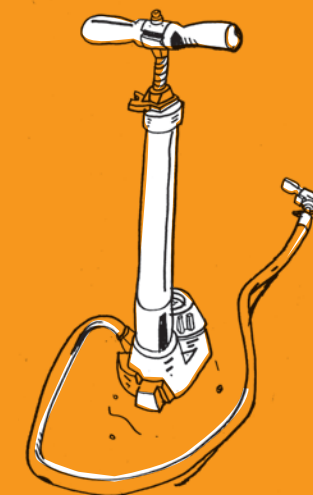
There are many useful videos on the internet showing you how to care for your bike. Some of the best are here: <http://www.youtube.com/group/bicyclemaintenance>



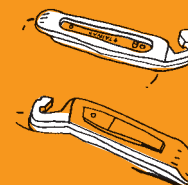
ANATOMY OF A BIKE



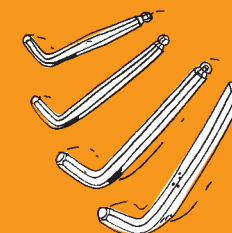
ESSENTIAL KIT



➤ A standing 'track' pump



➤ a set of tyre levers



➤ a set of Allen keys (either separate or on a 'multi-tool' device)



➤ an adjustable spanner



➤ a spare inner tube

OTHER ITEMS

- a puncture repair kit
- cleaning rags
- a flat head and a Phillips head screwdriver
- bike-specific lubricant

QUICK BIKE CHECK

1. ➤ Check the tyres are pumped up properly and look for wear on the tread or for any cracks in the tyre. Worn tyres puncture easily.
2. ➤ Spin the wheels. If they are wobbling around, they may have a buckle and need truing (straightening). This is not a job for a novice, but a bike shop can do it pretty quickly and cheaply.
3. ➤ Check the brakes are working by squeezing the brake levers and pushing the bike forwards and backwards. Have a look at your brake pads – can you still see the ridges, or are they worn down? Check the pads are not touching the wheel rims and that they hit the rims head on.
4. ➤ Make sure your headset is secure. Stand in front of your bike and put the front wheel between your knees, then try to move the handlebars from side to side. If the bars move without the wheel following, your stem needs tightening: this can usually be done with an Allen key.
5. ➤ Run through the gears and check they are properly adjusted.
6. ➤ Inspect the frame for any cracks.
7. ➤ Check the chain is clean and lubricated.



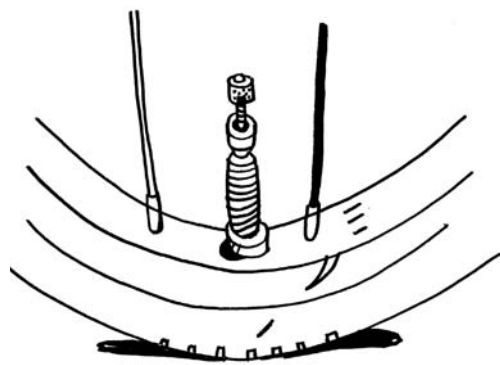
HOW TO PUMP TYRES UP PROPERLY

The number one maintenance mistake novice cyclists make is not pumping their tyres up to the correct pressure. Just like car tyres, different bike tyres have different required pressures. Some years ago, I was absolutely convinced I was getting fat, as my easy commute had mysteriously begun to feel like a marathon. I couldn't understand why my previously nippy machine had turned into a sluggish donkey. Turned out I had been rolling at half the pressure my tyres actually needed. My tyres didn't look flat but, to all intents and purposes, they were.

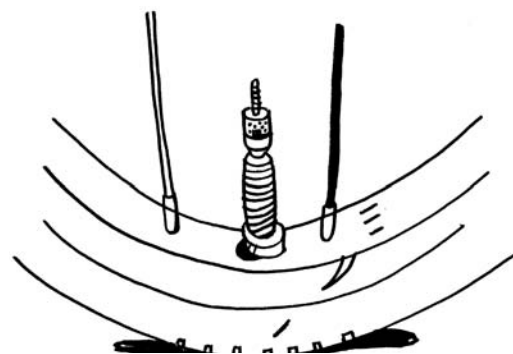
To get your tyres inflated properly, forget using a mini hand pump. These little devices are fine for carrying on your frame and pumping enough air into your tyres after an emergency, but to do a proper job you need a 'track' or standing pump fitted with a pressure gauge. All but the meanest of bike shops will be happy to let you use their track pump whether or not you buy anything from them.

To talk of pumping tyres up is a bit of a misnomer. You are actually pumping up the inner tube which sits inside your tyre. These tubes are fitted with a valve to control the air pressure. There are two main kinds of valve. Prestas are smaller and more fiddly looking, and are common on road and hybrid bikes. You'll see the fatter Schrader valves most often on Dutch and mountain bikes.

If you are struggling with a pump, make sure it matches the kind of valve you have. Most bike pumps come with two different sized nozzles. The smaller is for Presta, the larger for Schrader. Track pumps tend to have a two-headed twin nozzle, and you just use the bit you need. Mini pumps usually have one reversible valve fitting, which you can unscrew and then rescrew on the other way around to fit the other kind of valve.



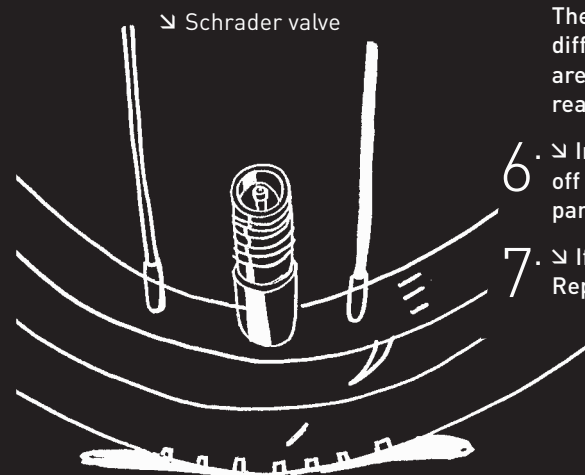
➤ Presta valve open



➤ Presta valve closed

PUMP IT

1. ➤ If your valve is covered with a dust cap, take it off.
2. ➤ If your inner tube has a Presta valve, undo the nut at the end of the valve as far as it can go (it won't come off unless you become violent). To check you've undone it enough, press the end down a little bit until you hear a hiss of escaping air. If the valve seems stuck, wiggle the stalk a little. If you have a Schrader valve, you don't need to unscrew anything.
3. ➤ Make sure you are using the right pump nozzle for your valve, then place the pump head square on to the valve. You'll hear a quick fizz of air rushing out of the valve; continue to press down. Don't worry. If there is a thumb-lock, put it on to stop everything moving around while you pump. If there is no closing mechanism, hold the head firmly on the valve as you pump.
4. ➤ Look on the side of the tyre for a series of numbers followed by the letters PSI. This tells you how much air you need to pump into your tyres. The skinnier your tyres, the harder they need to be. Generally, mountain bike tyres only need 30–40PSI, hybrids 50–85PSI and road bikes all the way up to 120PSI.
5. ➤ Pump air into the tyre by pulling the pump handle up and pushing down as if you are detonating a bomb. The pump should move easily. You should notice a difference in tyre firmness within seconds. If there are any problems and it's not working correctly, try reattaching the pump nozzle to the valve.
6. ➤ Inflate to the correct pressure, then carefully take off the pump nozzle. You'll hear another hiss. Don't panic – this happens to everyone.
7. ➤ If you have a Presta valve, screw the nut back on. Replace the dust cap.



HOW TO CHANGE A FLAT TYRE

When cyclists whinge about getting a flat tyre, they actually mean that they have a flat inner tube. There may or may not be anything wrong with the actual tyre. The simplest way to fix a flat tyre is just to replace the inner tube, rather than faff around trying to mend it. If you only learn one aspect of bike maintenance, make it this one. Once you get the hang of it, it shouldn't take you more than twenty minutes (less if you're better at it than me), and you'll likely save yourself a tenner in bike shop fees. It can be a very frustrating experience at first, particularly when you're wrestling with a belligerent tyre that doesn't seem to want to go back on, but once you manage, you'll feel like the king of the world, I promise.

Modern tyres do not puncture often. Before tyre technology improved, punctures really were an everyday occurrence. In the 1908 London Olympics, the final of the 1,000 metres had to be abandoned when two of the top British riders, Charles Kingsbury and Victor Johnson, got flat tyres.

WHAT YOU NEED

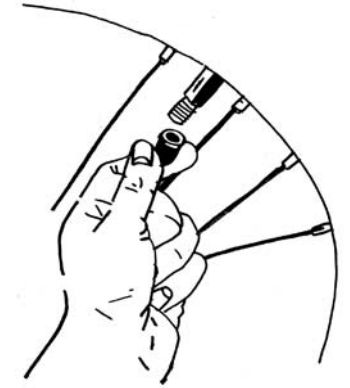
- A spare inner tube
- A set of tyre levers
- An adjustable spanner (only if you don't have quick release wheels)
- A bike pump: a diddy one to carry with you for roadside repairs; a standing track pump to inflate tyres properly at home – or a canister of compressed gas
- Latex gloves if you don't want to get your hands dirty

All this will fit in a small saddlebag or handbag with ease – apart from the track pump, of course.

TEN EASY STEPS

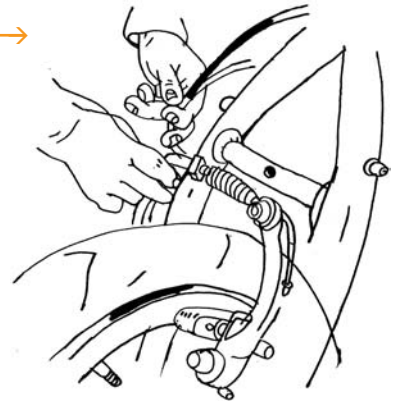
1. FULLY DEFLATE THE TYRE

- If you haven't got a full-on flat, take the dust cap off the valve, and let the rest of the air out.



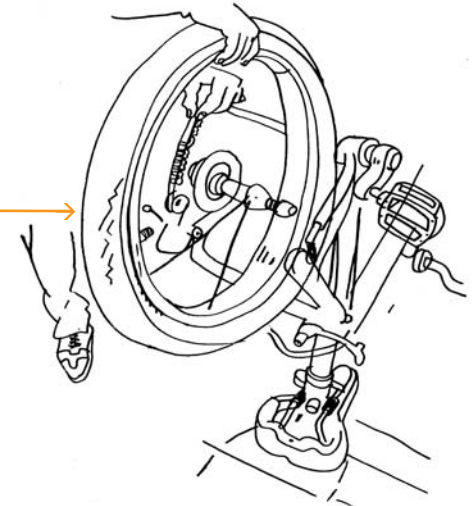
2. DISCONNECT THE BRAKES

- You need to disconnect the brakes so that the tyre has more space to pass through. With quick release brakes, you pull up the cable by flipping an apostrophe-shaped lever.



3. TAKE THE WHEEL OFF

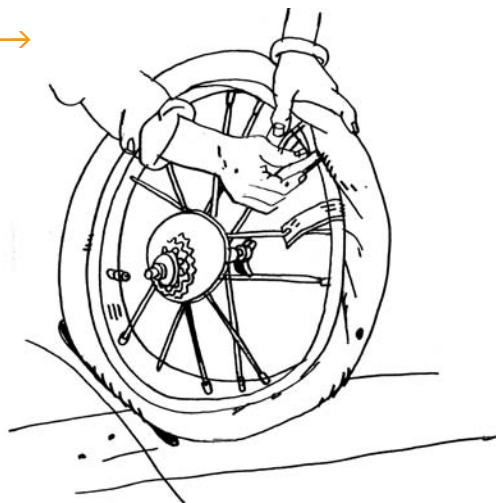
- Turn your bike upside down. If you have a rear wheel puncture, change into the highest gear (smallest cog); this will make the wheel easier to get back on after-wards. On most modern bikes, you then need to undo the wheel's quick-release lever. Depending on who tightened it last, this can be quite stiff, so be prepared for a battle. Once you've loosened it, undo the thumbnut on the other side of the wheel and wangle the wheel free. Don't take the nut all the way off: they have a nasty habit of rolling down nearby drains. If it's the back wheel, you'll have to hold the chain out of the way by pulling at the derailleur with one hand while you take it off. This is invariably messy. If you don't have quick-release wheels, you'll have to unscrew a nut on each side using a spanner.



4. TAKE THE TYRE OFF

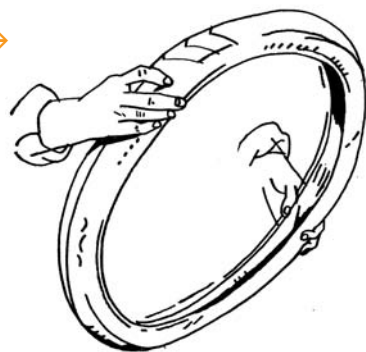
➤ You need the tyre levers for this bit, and the thinner your tyres, the harder this tends to be. Push the rounded end of the lever under the tyre and hook the other end on to a spoke.

Wiggle the rounded end along a few inches so that it loosens that stretch of tyre. Do the same with the other levers, then go right round the tyre until one side is completely freed from the wheel and you can get at the inner tube. It's up to you whether you then take the whole tyre off or leave it half on. I prefer to remove the whole shebang, as it's easier to check for stones, etc. Then take off the punctured inner tube and either bin it or put it aside to mend later.



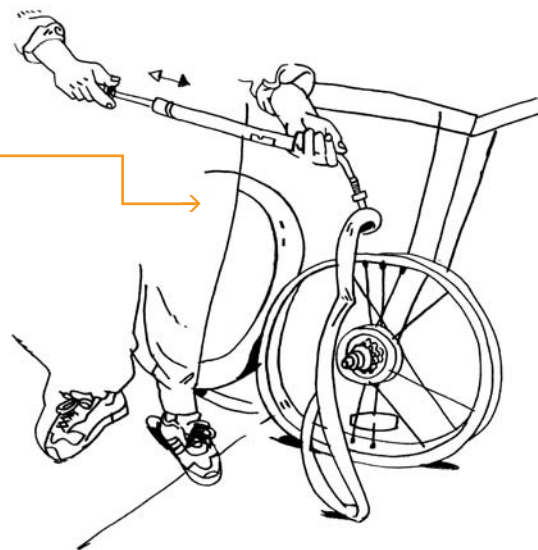
5. FIND THE BLIGHTER

➤ Run your fingers carefully along the inside and outside of the tyre to see if you can find what caused the puncture – a shard of glass, a drawing pin or a sharp stone are all common culprits. Failure to find the cause can result in the unspeakably exasperating experience of the tyre puncturing as soon as you set off again. If you've been really unlucky, the actual tyre might have been damaged and you'll have to patch it as best you can with gaffer tape – or a plaster or patch or whatever you can find – and then mentally prepare yourself to buy a new tyre as soon as possible. Often, pumping up the inner tube when the tyre is still on will show you where the puncture happened, so you then know where on the tyre to check.



6. PUT THE NEW INNER TUBE ON

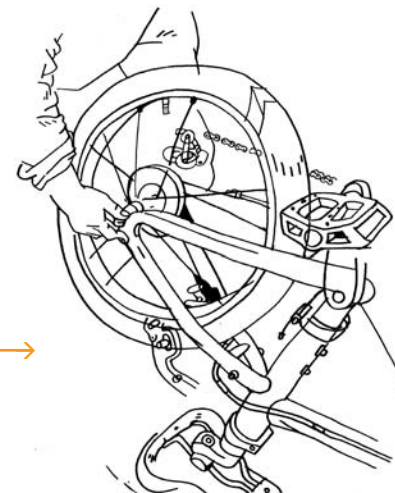
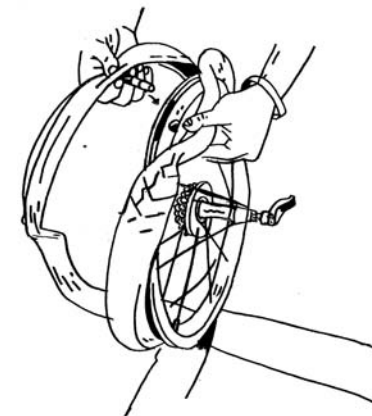
➤ First, ever so slightly inflate the tube to give it shape and so that it does not get pinched between the tyre lever and the rim. Then attach it to the wheel by putting the valve through the hole in the rim, and tuck the tube into the deepest part of the rim. Make sure the tube sits evenly and is not twisted. Don't screw on the rim nut yet.



7. PUT THE TYRE BACK ON

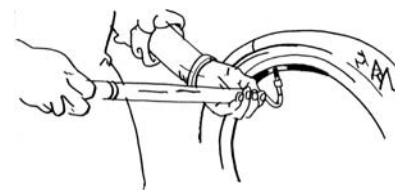
➤ This is the bit that occasionally reduces me to tears, as some tyres seem to go out of their way to not want to be put back where they belong. But persevere, and remember that if the tyre fitted before the puncture, it will again. Don't be tempted to use your tyre levers for this, or indeed any other tool, as you could accidentally puncture the new inner tube. Your fingers are all the tools you need.

Essentially, you carefully put the tyre back over the rim, starting at the valve. Pop it back in on both sides until it is in its place over the whole circumference of the wheel. Do one side completely first; it makes life a lot easier. Towards the end, it will likely get tough, and you might need to swear a little bit. I find it helps to smooth the entire tyre and tube down towards the valve to get more slack. Just when you think it will never ever go back in – Ta-da! It's on. Thank goodness for that.



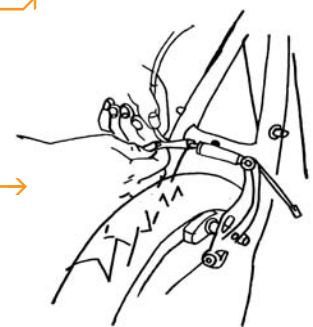
8. PUT THE WHEEL BACK ON

➤ Check the tube is sitting evenly, then inflate it a little more and check it has straightened out inside the tyre. Screw the rim nut back on, make sure the brakes are still open, then slide the wheel over the fork ends, centre it as best you can and tighten the quick-release lever and thumbnut at the same time, using both hands, or rescrew the bolts. It's important to screw them on as tightly as you can, while still being confident you'll be able to undo them again – I once saw a man catapulted through the air as his front wheel came loose.



9. FULLY REINFLATE THE TYRE

➤ On the go, use a hand pump to get the tyre as hard as possible. As soon as you're near a track pump, inflate to the proper pressure.



10. RECONNECT THE BRAKES

➤ And you're off!

HOW TO MEND A PUNCTURE

If – for reasons of economy, ecology or necessity – you want to actually mend the puncture, here is how you do it. Attempting a roadside repair is a nightmare. Wherever possible, do this in the comfort of your own home. The jury is out on whether you should get self-adhesive patches or ones which require gluing, though everyone seems to agree that the self-adhesive ones lose their stickiness if they hang around unused for long.

1. LOCATE THE HOLE

➤ If it's a biggie, you'll be able to see it. Often, though, the cause of your puncture will be a sneaky little hole invisible to the naked eye. The easiest way to identify it is to pump a little air back into the tube and then put it under water. When you see bubbles, you have found the hole. If you have no water nearby, you'll need to use your ears and listen for air escaping. If you are somewhere too noisy, hold the tube really close to your face and see if you can feel air coming out.

2. MARK IT

➤ I find the pencils you get in puncture repair kits almost useless, especially if the tube is wet. Better is a bit of chalk, though you should use whatever you can find at the time – lipstick and eye pencil both work in an emergency.

3. ROUGH IT UP

➤ Using the bit of sandpaper you get in the kit, rough up the offending area and then wipe it clean.

4. PATCH IT

➤ When the tyre is clean and dry, apply the patch as per the instructions in the repair kit. Don't go mad with the glue, and make sure you leave it for five minutes or so until it is almost dry before sticking the patch on. Use the end of a tyre lever to press down on the patch as hard as you can and hold until it is securely glued in place. Once you're sure it's stuck fast, bend the patch in half and carefully remove the transparent covering.

An exhaustive guide to diagnosing and fixing punctures can be found on the old-school but wonderfully useful website belonging to the late bicycling enthusiast, Sheldon Brown: <http://www.sheldonbrown.com/flats.html>



SOD'S LAWS OF PUNCTURING

- If you are going to get a puncture, it will be at the most inconvenient time, when you are late for a date, work or an important meeting, and have neglected to bring the necessary tools.
- You will get more punctures on your rear tyre than the front, as the rear carries more weight. And it is fiddlier and messier to remove the rear wheel than the front one.
- You will get more punctures in the rain, as more debris is washed on to the roads, and wet tyres are more susceptible to damage.
- If you go around boasting about never getting a puncture, you soon will.

HOW TO AVOID PUNCTURES

- Keep your tyres pumped up to the correct pressure. The optimal pressure (PSI) is marked on the side of the tyre. To reach this, you need a track pump with a pressure gauge.
- Buy puncture resistant tyres. Look for anything marked Kevlar, which is the material bulletproof vests are made from. Many people swear by Schwalbe Marathon Plus or a Specialized Armadillo tyre. These are slightly less slick than serious roadie tyres, but you won't notice the difference unless you're cycling for sport and speed is of the essence. You could always put one only on the rear, which is far more likely to puncture.
- Regularly check your tyres for wear and tear. If you have a spate of punctures on the same tyre, it's probably time to buy a new one. They're not that expensive.
- Be vigilant when cycling past pubs and bars, where there is likely to be glass on the road.
- In the rain, stay well clear of the gutter and drains, where debris is most likely to end up.
- If you have a mountain bike, you could investigate tubeless tyres. You'll need tubeless specific rims for these, though, or you will have to convert those you ordinarily have using special gunge.

Tubeless tyres

Mountain bikers sometimes use tubeless tyres (also called USTs), which, as the name suggests, do not use inner tubes at all. You can only use these on tubeless/UST specific rims, though some ordinary rims can be converted. Tubeless tyres are usually used in tandem with special tyre sealants, which improve the seal and are applied inside the tyre when installing on to the rim.

Tubular tyres

Serious road riders use these special tyres, which are glued on to the rims using tape or cement. Tubulars are lighter than conventional tyres and provide a smoother ride, but are far more expensive and are much harder to repair once punctured.

CO₂ cartridges

These little canisters of carbon dioxide are useful if you are racing and can't waste time pumping up a tyre after a puncture. Used with an adapter, they blow tyres up in seconds. But they only work once, so don't mess it up.

