

## Off-road skills

If you can ride a bike you can ride an off-road Green route. As trails become progressively steeper, bumpier, looser-surfaced and more hazard-strewn, different skills from riding on road are required. The guidelines here should get beginners and families started but are not a substitute for experience or training.

For families, until your child is on a 24-inch wheel bike, any off-road riding will be fairly gentle. From then on, they may be able to tackle segments of Red routes. Children often pick up off-road skills quickly they may lack the endurance for a longer ride. It's best to choose your trail sections and shortcuts by riding the route yourself in advance. When you ride together you will generally ride behind your children. You can't tell what's happening if you're in front, and it can be hard to look back on a narrow, bumpy track. It is sometimes useful to lead to demonstrate how to negotiate a certain part of the trail. Behind is usually better. You can see what your child is doing, give instructions, and are on hand immediately if required.

Before you set off, make sure all the bikes are not just roadworthy but off-roadworthy. A malfunctioning brake or loose quick release could cause a serious accident.

### **General principles**

Don't sit on the saddle like a sack of potatoes. You have to stand up on the pedals quite often off-road. Partly that's because there are steep climbs that you'll need to power up, as you would on road. There are two more important reasons why you have to stand up on a mountain bike. One is so that you can move your centre of gravity around to keep your balance. The other is so that you can use your bent arms and legs as shock absorbers, to minimise the impact of bumps. Arms and legs can absorb bigger bumps than bicycle suspension but they do single hits better than a rapid succession of bumps, which quickly become fatiguing. The more suspension travel you've got on the bike, the less bump absorption your body will have to do.

Stay loose. If you lock your arms and legs and hold onto the handlebars in a death-grip, bumps and vibrations will come straight through the bike into you. The bike becomes a bucking bronco that could easily kick you off. If you're out of the saddle, knees bent like a jockey, hands firm but not white-knuckled, you ride the bike instead of the bike careering away with you on top of it.

You go where you look. It's the same principle as for younger children learning to ride a bike for the first time. Off-road, however, there are more obstacles. It's easy to get distracted by that tree stump in the middle of a trail. Look past it. Focus instead where you want to go. Look along the trail on the imaginary line that you will be following. That's where your wheels will then go. It helps to keep your head up too – so you're looking ahead rather than down.

Whatever skill you're trying, start small. Before charging down a hill on a Red route, try hanging off the back of saddle while descending a grassy slope. It will look weird, like a downhill skiing position on a nursery slope, but it will get you used to the idea before you have to implement it. Similarly, practise riding over a drop-off that's a few inches high before you tackle anything bigger.

Adjust your brakes. Set the levers so that they're a bit more horizontal, that is: just below the level of the handlebar. This relaxes your arms and wrists, moves your weight back a little and lifts your head up. All these things will improve your ride by increasing comfort and, because your position is better,

confidence. With children's bikes, and sometimes women's, you may also need to adjust the reach of the brake levers to suit smaller hands.

### **Steering**

Bicycles are steered not only through the handlebars, but also through the hips and shoulders, by leaning. The faster you go the more you steer by leaning and the less by turning the bars. On road you'll do this unconsciously. Off-road you may need to remind yourself.

Practise standing on the pedals – keep them at ten to three, so they're level – and use your hips to move the bike around underneath you. Try this on a grassy slope. Put a couple of markers down so you can slalom between them.

At slow speeds, balance and steering become harder. Yet the slower you are able to cycle, the less often you will stall on the trail and be forced to dismount. It's possible to come to a complete stop balanced on the bike, with your pedals level and your front wheel turned into the slope. It's called a trackstand because it's used by cyclists on velodromes – also known as tracks. Being able to cycle really slowly is useful for picking your way through difficult terrain, especially while you're climbing.

### **Cornering**

Watch a racing driver go round a corner on a Formula One circuit. The driver starts wide, cuts in across the apex of the bend, and finishes wide. It makes the bend a shallower angle. The same technique works for the same reasons on a mountain bike.

As in car, it upsets the handling if you brake on a bend. You don't need to 'power around the bend' on a bike – you just need to keep your wheels turning. So do the bulk of your braking, and ideally all of it, before the bend. Then release the levers so that your wheels can roll rather than skid around the curve. Don't overuse the front brake or grab at it on a steep or fast bend.

As you go into the bend, lean the bike over and put your pedals at six o'clock with your outside pedal at the bottom of the stroke. This gives the leaned over bike more pedal clearance as you corner. Pushing down with your outside foot (on the pedal that's at the bottom of the stroke) helps the tyres dig in a bit and so gives better traction.

Don't look down into the corner as you go into it. Instead, look at your exit from the corner. Remember: you go where you look. The more you can keep your focus on a point along the trail ahead of you rather than the point where you are right now, the smoother your riding should be.

Try to avoid cornering on a slippery surface, like thick mud. You want to ride in as straight a line as possible, pedalling in an easy gear.

### **Descending**

For freewheeling downhill, the default position is: level pedals; bum off the saddle and pushed back a bit; knees and elbows bent; one or two fingers of each hand covering the brake levers. The steeper the slope, the further back your centre of gravity – that is, your backside – needs to be. If it's really steep, you need to hang your backside right off the saddle, just above the back wheel, with the saddle up by your chest and your arms out straight. If it's not too steep, just keep your weight back – perhaps gripping the saddle between your thighs for stability.

It's easier to get your weight back and down if you lower your saddle, which is why some bikes have a quick-release lever on the seat-tube. Once you've lowered the seat-post there's more room to move around.

### **Braking**

When you're braking on a bike you normally use just the forefinger and middle finger of each hand. If you've got hydraulic disc brakes, it's possible to use only one finger. Either way, you can keep the rest of each hand wrapped around the grip so that it won't be bounced off the handlebars.

The limit of your ability to slow down isn't the power of the brakes so much as the traction of your tyres. You can lock a bicycle wheel with just about any brake. Best avoided. If you're skidding you're not in control. Instead of snatching the brakes, periodically squeeze the levers to keep your speed down. A gentle touch – 'feathering the brakes' – might be enough.

Which brake to use? Both. Most of your actual stopping power comes from the front brake. However, you need to apply it progressively rather than grabbing at it and to keep your weight back. The rear brake just helps to keep your speed down.

Avoid the temptation to slow down too much on a steep slope, as you're likely to stall. A bicycle that's moving forward is more stable than one that isn't, and if it's rolling a little faster it's even less likely to fall over. Momentum is your friend.

### **Climbing**

What goes down has to go up, sadly. You can always get off and push, but with practice most climbs can be ridden. Short climbs can be 'rushed'. You attack them at speed, pedalling out of the saddle as you start to climb, and hope you don't run out of gas before the top.

For longer climbs you will need to pace yourself and to go down through the gears. Get in the right gear as you approach the climb. If you find yourself pedalling too slowly, change down. Don't wait until you can barely turn the pedals. You need to ease off the pedalling pressure a little to change gear and you can't do that if you're grunting your way up a climb.

Given a low enough gear, it's possible to get up most climbs sitting on the saddle. Keep your head up, your wrists relaxed and drop your heel into the pedal stroke. Keeping your wrists loose and dropping them slightly stops you pulling on the bar and lifting it, while dropping the heel as you pedal helps drive your power through the back wheel rather than lifting it. Try to breathe normally and don't fight the slope. Look through the climb: don't just focus on the summit. Spinning the pedals rather than slowly cranking them keeps the bike moving when the terrain is loose or steep.

If the slope is too steep, or if your legs start to ache too much, you'll need to pedal standing up. This is less efficient in that it uses more energy, but it still delivers more power and it does so using slightly different muscles. If your bike has suspension, it's easier to pedal out of the saddle if you can lock it out, otherwise some of your energy will go into activating that.

Climbs with a rocky or rooty surface are especially hard. It's easy for the front wheel to be balked or to hit a bump and come upwards off the ground. The rear wheel, meanwhile, may scabble for traction and wheelspin to a halt. It helps to pedal smoothly and to keep some weight over your rear wheel. A slightly softer rear tyre also aids grip.

## **Bumps and jumps**

Look at a mountain bike magazine cover and you might think that it was essential to spend a good deal of time in the air when riding off-road. Well, no, not really. Even most Black routes can be ridden wheels on the ground. It's only skills parks and downhill runs where you're meant to be in the air. On less difficult routes, it's your choice. So here's the careful parent's guide to bumps and jumps.

Drop-offs are a common feature on Red routes as well as Black. A drop-off is a big step down. You can roll over ones about as high as your front wheel (but don't start with ones that high!). You need to get your centre of gravity back as you go through the drop-off. Keep your weight back. Dropping your wrists and heels helps as it pivots you back on the on the bike. Keep your head up and focus on where you're going rather than where you are. Keep your breathing normal, so that you stay relaxed. Approach the drop-off at an easy pace, standing on level pedals, and as the front wheel nears the lip of the drop, get your weight back. The front wheel will land, compressing the fork, and you'll roll through.

Humps are common in trails too. Skilled riders use them as launch pads. If you'd rather not, you can 'swallow' the bump. Approach it out of the saddle on level pedals, weight around the middle of the bike rather than way back. As you rise up the bump, bend your elbows and knees so that the bike comes up towards you and you're crouched over it. As you go over the bump – but not before – shift your weight backwards so your weight balance is right for the down-slope. If you go into a bump with your weight back, you will take off.

Should you find yourself in the air by accident, don't panic. If you look right down in front of you, you'll pivot the bike that way and nosedive. Keep your head up and look out along the trail – or even upwards – and try to drop your heels and pivot your wrists down. This should keep the bike level and you'll land wheels together.

## **Advanced Techniques**

Jumping isn't the only time you might get a wheel or two in the air. Lifting the front wheel up enables you to roll over trail obstacles better. There are two ways to do it: without pedalling, which is known as a manual; and with pedalling, which is a wheelie.

Performing a manual isn't a matter of hauling on the handlebar. You 'weight' and 'unweight' the front end of the bike by pushing down and through the handlebar and moving your weight back. As you push down and through with your hands, stand up off the saddle on level pedals, leaning back, dropping your heels, and pushing your bodyweight down and through the bike. With the front wheel unweighted, your lean will lift the front wheel. Skilled riders can find their balance point and roll along on the back wheel, but to begin with just getting the front wheel up is enough.

A wheelie adds pedalling into the equation. While it's easier to get your front wheel up, it's also easier to pedal your back wheel past your balance point. With practice, either technique is useful for clearing small logs or potholes; the back wheel can simply roll over or through.

You can also use a manual or wheelie to launch off drop-offs too, so that you land your wheels together. It's essential to do this if you're travelling too fast to roll over the drop-off or if it's too high. I wouldn't recommend it except on small steps to begin with.

'Bunny-hopping' lets you clear trail obstacles completely. This means getting both wheels in the air. Get the front wheel up as you would with a manual. Then you need to unweight the rear wheel by first

pressing down and through on your heels to weight it. Then you unweight it and spring up. It's easier said than done, but it's a neat trick if you can pull it off. If not, you can always get off and lift the bike over the obstacle!

### **Skills Instruction**

Experience is a good teacher but it isn't the only one – or even the best. There's no faster way to learn how to ride a bike off-road than by getting proper instruction. Use a coach with a recognised qualification, such as a CTC Mountain Bike Skills Instructor. CTC is developing a national network of instructors with training centres across the UK. For more details, see

<http://www.ctc.org.uk/mtb>.

Different skills courses are suitable for different riders (some are women only) or age ranges (some aren't suitable for children) so be sure to match the session to your party.