

## How to Fix a Flat - Step by Step

1. Remove your tools and flat fixing supplies from your saddle bag. After you turn your bike upside down, they will be difficult to access.
2. Open your brake calipers with the release lever.
3. Place your bike in gear ratio "small - small" (only needed when you have a flat on the rear wheel).
4. Flip bike upside down.
5. Undo the quick release lever and remove the wheel by unscrewing bolt/lever on both sides of the wheel.
6. Using your tire levers, completely unseat one side of the tire from the rim. Start on side opposite from the valve. (Do not remove the tire from the wheel completely.).
7. Remove the punctured tube from the tire. If there is a "knurled nut" or circular nut around the valve stem, you will need to take this off.
8. **Inspect the tube and determine the cause and location of the puncture.** You may need to put some air into the tube to find the cause of the flat. Once you have found the cause of the puncture, line up the valve with the valve hole on the wheel to determine where on the tire the puncture occurred. This is why you leave the tire on the wheel when removing the tube. If you remove the tire from the wheel to have no reference as to where the puncture occurred. **Remove the obstruction from the tire.** If you fail to solve the cause of the puncture and you will likely flat again!
9. Unscrew the valve on the new tube. Inflate the new tube with a little bit of air by blowing into it (save your CO<sub>2</sub>). Just enough to give it shape. This is to prevent it from folding or twisting when installing it.
10. Seat the new tube into the tire starting at the tube.
11. Once the tube is inside the tire and there are no folds or bunches, begin to seat the tire onto the wheel. Take care NOT to pinch the tube between the tire and the rim. You should start at the valve and work your way around, alternating sides, to finish opposite the valve. It's better to do this with fingers and avoid using tire levers as they may pinch and cause a leak in new tube.
12. (Ensure the regulator is in the "off" position before screwing it onto the CO<sub>2</sub> cartridge so you don't waste the CO<sub>2</sub>!). Fully inflate the tube to the recommended tire pressure. Screw the valve closed. Put the nut back on the valve stem.
13. Install the wheel and close the quick release lever. (If you are installing your rear wheel, be sure to align the chain with the smallest gear on the wheel.
14. Spin the wheel to ensure it is in straight. If it is rubbing, re-install it. Make sure you gently tighten both the bolt/lever to ensure even pressure on both sides of the wheel. The lever should end up parallel to or just behind the bike frame.
15. Flip the bike over again.
16. Close your brake caliper with the release lever. Never ride with this open!
17. Spin the wheel again to ensure it is straight. If it isn't, flip bike and reinstall wheel.
18. Keep your old tube just in case you need to take your bike in for servicing. It could give technicians a clue as to why multiple flats may be occurring.
19. Clean hands on moist wipe or rub on grass or black shorts!
20. Ready to roll!