Which wheel size is ideal for a touring bike? Almost no other question has been discussed as widely among touring cyclists. When Adventure Cycling got started as Bikecentennial in 1976, most touring bikes used 27-inch wheels. Then mountain bikes popularized the 26-inch wheel size. The racing-bike wheel size of 700C has now replaced 27-inch wheels. Then mountain bikes popularized the 26-inch wheel size. The racing-bike wheel size of 700C has now replaced 27-inch wheels. The 26-inch wheel is only 10 percent smaller than a 700C wheel. For the magazine Bicycle Quarterly, we tested different wheel sizes on various surfaces with a power meter in a carefully controlled experiment. We found that there was no difference in speed between the three popular wheel sizes (26 inches, 650B, 700C), even on equivalent cobblestones and certainly not on smooth pavement.

If your front wheel has too much rotational inertia, it becomes difficult to change your line in mid-corner, for example, to avoid a pothole or to round a curve with decreasing radius. With too little rotational inertia, your bike requires constant corrections to stay on course. You want a wheel/tire combination that is just right, with neither too much nor too little stability.

Another Bicycle Quarterly test had three people ride three bikes with identical geometries (fit, trail, bottom bracket height, etc.). What about large frames? Many makers tend to put small wheels on their small bikes and large wheels on their larger ones to keep the proportions of the bikes similar. The larger wheels do make the larger bikes more stable, but there is no reason that taller riders need more stable bikes. I am six feet tall, and I ride relatively small 650B wheels with wide 42-millimeter tires because they give my bike stable, yet nimble, handling.

But with different wheel sizes (26 inch, 650B, 700C). All test riders independently found that they preferred smaller wheels for wider and heavier tires, and larger wheels for narrower, lighter tires. When we calculated the rotational inertia of the wheels, we found that these preferences all yielded similar values. Based on that test, we concluded that 700C wheels are best for narrow tires up to about 30 mm. For wider tires (30 to 42 millimeters), our testers preferred the somewhat smaller 650B wheels. Tires wider than 42 millimeters handled best on even smaller 26-inch wheels. It is no coincidence that the outer diameter of bicycle wheels has remained relatively constant, somewhere between 26 and 27 inches, since chain-driven bicycles were first developed 130 years ago, despite much experimentation with other sizes. Motorcyclists have arrived at similar conclusions; they went to smaller wheels when their tires became wider and heavier, so that the rotational inertia remained the same.

This means that you should first decide how wide you want your tires to be. The wheel size will follow from that. If you love narrow tires, you should use a larger wheel. If you prefer wide tires, your wheels should be smaller.

Bike Fit
Small riders also have to think about fitting the wheels into their frames. The front wheel must clear the downtube, which runs at a steeper angle on a smaller (shorter) frame. Using smaller wheels requires fewer fit compromises. Keep in mind that if the wheel gets too small, you may compromise handling. Because wider tires (and thus smaller wheels) make a lot of sense on touring bikes, you can avoid many of the fit issues that can crop up on small racing frames with narrow tires and large wheels.

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If you travel abroad, it makes sense to pick a wheel size that is well supported in the countries you will visit. If you are able to find any bicycle tire on the Bolivian Altiplano, it’s probably going to be a 26-inch one. That size appears to be the most common size, as far as availability goes. No matter where you tour, you probably should take a narrow, lightweight folding tire as a “space-saver” spare, just in case. When you are stranded on top of a mountain pass miles from town, you won’t be able to buy any tire, no matter its size.

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