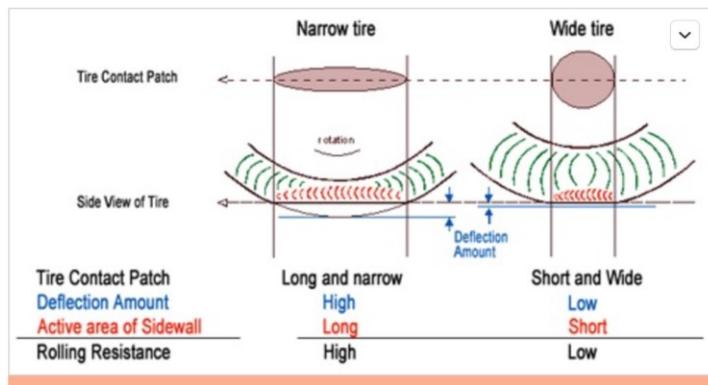


## More Tiresome Advice

In the last article I said we'd talk more about tire width, tire pressure science vs. conventional wisdom, and rolling resistance in the lab vs. the real world. There was [still is?] a time when conventional wisdom said the higher you pumped up your tires, the easier the bike would roll and the faster you'd go. And the same reasoning said don't forget to buy the narrowest tires you could find. So, naturally, I bought 700c Conti tires in 21 or even 19 mm width and pumped them to 130 psi. Umpteen years of cycling and too many sore joints later, I have embraced the science and now ride wider 25 mm tires at lower pressure, for which my body thanks me. And I'd go wider still if my frame would let me.

Rather than go into a long, boring technical discussion on hysteresis as the determinant of rolling resistance, I'll give you a couple links that go into more detail on the topic at the end of this article. The short version says a wider tire deflects less and has a more efficient contact patch with the ground compared to a narrower tire. Here's a visual to illustrate this:



Rous Artisanalis, Jan. 1, 2006

As you can see, the narrow tire on the left deflects [flattens] more from its normal shape when it contacts the ground so more energy goes into flattening and unflattening [is that a word?] it.

According to Bicycle Quarterly, the disadvantages of wider tires are outweighed by the advantages:

- **Higher speed** on rough surfaces, equal speed on smooth surfaces.

- **Fewer flats** because wider tires run at lower pressures.
- **Longer wear** because the wear is distributed over a larger contact patch.
- **Greater safety** as tracks, cracks and holes no longer pose a serious risk.
- **Greater comfort** and enjoyment, especially when riding on poorly surfaced backroads.

The main disadvantages are the tire is heavier, and may shimmy at high speeds descents [not an issue around Sarasota]. You have to find the optimal tire size and pressure that works for your riding style and your weight. If your pressure is too low, you risk snakebite flats and poor handling. If tire pressure is too high, the tire will actually lose contact with the road when you hit holes or cracks or ride over rough pavement. If your tire is not in contact with the ground, it is not moving you forward; it's that simple. Laboratory rolling resistance tests will show that rolling resistance keeps decreasing with increasing pressure but those test drums are not the same as real roads. Plus, as noted at the beginning, your joints get pulverized like Siesta Key sand.

So, experiment and find what combination of tire size and pressure give you the best combination of comfort and efficiency. Here are some additional sources, beginning with the late, great Sheldon Brown.

<https://www.sheldonbrown.com/tires.html>

<http://road.cc/content/feature/180830-how-choose-your-tyre-pressure---balancing-speed-comfort-and-grip>

<http://www.velonews.com/where-the-rubber-meets-the-road-what-makes-cycling-tires-fast>