

TRAITS OF A BETTER SADDLE

The topic of saddles comes up at least once/month. Cyclists continue to search for the right saddle, but, as can be seen below, selecting the right saddle is at the end of a long chain of required events, starting, with a quality bike fit from a qualified/certified fitter. Having been to most bike fit courses, the best one currently, in my opinion, is Trek's Precision Fit system. Paralleling my beliefs, their courses are taught from the point of view of a Physical Therapist.

So, going forward, my belief is that you need a quality bike fit before you can select the right saddle, or, at least, select the right saddle during the bike fit.

There are several new tools to help in this process, one of the best is a saddle pressure mapping tool. This helps the bike fitter see exactly where and how you are sitting on the saddle and can assist in selecting the right saddle once the bike is fit to the client.

Here's a recent email where, as the reader, you can see there are many issues going on. In the letter below, several things jump out – I have underlined the most important points and [commented in-line](#).

During the 25+ years of cycling I've done (5,000 - 7,000 miles/yr.), I've tried upwards of 75 saddles, yet STILL haven't found one I could call "comfortable." By now, I know what I want, but can't seem to find it. Firstly, I don't like any with those cutouts, grooves, love channels, etc.,

[Never said why he doesn't like these? If shown how to position the hips correctly when cycling, he will actually LIKE these types of saddles.](#)

including those weird ones (SMP, ISM, Adamo, Cobb, SQLabs). And, yes, I've tried leather ones . . . not as bad as I expected, but I definitely need padding.

[These 'weird' saddles have a place and it's called Triathlons. There is a reason for this design and they work better on a TT/Tri bike than a road bike.](#)

Basically, I'm looking for a "medium" saddle -- another apparent rare commodity these days -- both padding and size-wise (i.e., not a hard, narrow racer, but not a big, soft "comfort" model, either).

[Not a rare commodity at all. Specialized and Bontrager, to name a few, make quite a few models that fit this requirement. You have to actually look into their product lines. For example, the Specialized Romin comes in 4-flavors as well as the Power and Toupe. Each has a different level of padding and different configuration of rail material, base material and cover. Note that I mentioned different level of padding.](#)

As for padding, the closest I've had is a Terry (men's) Fly and (woman's) Butterfly. Besides not liking the cutouts, the Fly was definitely too narrow, and the BF a bit too wide (and short). Shape/wide/profile-wise, the closest was a Blackburn Ciento. Also liked that the rails allowed a more rearward position (for my 91 cm+, 36 in. inseam), but the padding was some kind of memory foam that I found a little too squishy. I'm looking for about a 150-155 mm width, a flat profile viewed from the side, but a bit rounded (mainly near the sides) viewed from the back.

[Sounds like you are looking for a POWER COMP 155mm/168mm, Bontrager Evoke R 154mm, Specialized Oura 155mm/168mm, etc. Lots to choose from to satisfy his requirements.](#)

Could the problem be related to fit? I'm in a moderate position (bar 6 cm, 2.4" below saddle, back about 30-degrees above ground when on the hoods). I've had 5 bike fittings done, none of which I could call "comfortable" or "efficient."

[Actually, the issues do sound like they are attributed to bad bike fitters.](#)

Most had the bar 3 - 5 cm further away and/or lower than what I have now -- apparently thinking my position was too scrunched up -- which not only caused more rear/crotch discomfort/saddle-sore infestations, but also a 20%+ drop in power output.

OUCH, Yes, definitely bad bike fitter related.

(The Guru fits used the "Slowtwitch" system which -- for reasons I can't comprehend -- bases bar reach on a percentage of saddle height . . . this puts my reach a 60 cm, which is 6-7 cm longer than what I have now!) I've also experimented with my fit extensively (obsessively?), to no avail. (Can't seem to get that nailed down, either.)

This is one reason that the Trek Precision Fit method is the best.

Could something about my posture be not-quite-right? On a forum, someone said that I'm "not sitting the right way." (Not sure in exactly what way he meant that.)

Sounds like it. See below for a more detailed explanation.

Or, could it just be that my expectations are exceedingly high? (Yes, I know a saddle is not a waterbed or luxury recliner, but it would be nice ride without any pain/discomfort down there.)

Yes, it really does begin with a quality bike fit from a fitter that knows what they are doing!

Biggest issue is that this unlucky cyclist went to 5 different bike fitters and every one of them screwed up his fit. The sad thing is that I hear this complaint from my clients all the time ... "I went to my LBS and I feel worse now and in more pain than I did before my fit." Another sad thing is that these 'bike fitters', and I use the term loosely, give those of us that know what we are doing a bad name.

Not 2 days ago, I had a cyclist call me with the following problem, "I told the bike fitter that I felt too stretched out so all they did was move the saddle closer to the handlebars. Now my knees AND back hurt." In one word, Unbelievable.

Saddle fore-aft has everything to do with knee placement over the pedal axle and nothing to do with how stretched out you feel. Too stretched out is caused by a frame that is too large, a stem that's too long and, in most cases, both.

Just for the record, most clients come in with a frame that is 1 to 2 sizes too big for them, AND a saddle that is 2-3 inches too high AND a stem 2-3cm too long. So, when you are shopping for your next bike or frameset, it pays to go to a certified bike fitter and get a bike sizing.



Most good fitters will be able to do a bike sizing for you. I have invested in a Serotta Size Cycle (SSC) and what is great about this is that I can download the clients wish-list bike's geometry chart and setup the SSC to exactly match what the new bike will feel like. I can even go from 145mm to 185mm crank arm lengths, 55mm to 155mm stem length and +/- 25° stem rise, ensuring the client gets the right parts configuration as well. It's better to spend a few dollars at this point in the process vs getting a frame that is 2 sizes too big, etc.

BIKE FIT/SADDLE PRIMER

TOUCHPOINTS

There are 3 generally accepted sets of touchpoints between human and machine.

- 1) Feet
- 2) Hands
- 3) Pelvis, aka Sit Bones, aka Ischial Tuberosity

IMPORTANT QUESTIONS TO ASK THE FITTER

Is the saddle wide enough?

Is the saddle too wide?

Is the saddle flat or curved?

Can I try different saddles?

What's your return/exchange policy,
in case the saddle doesn't work for me?

We can further define these as 5 actual touchpoints

- 1) Left Foot
- 2) Right Foot
- 3) Left Hand
- 4) Right Hand
- 5) Sit Bones

But, is this correct?

11 NOT 5

Bike fitters continuously reference these 5 touchpoints but again, is this correct? In my opinion there are actually 11 touchpoints.

1)	Left Foot	Feet
2)	Right Foot	
3)	Left Hand	Hands
4)	Right Hand	
5)	Left Sit Bone	Bony Structure
6)	Right Sit Bone	
7)	Left Pubic Rami	
8)	Right Pubic Rami	
9)	Pubic Symphysis	
10)	Soft Tissue	Nerves, Genitals, Blood Vessels, Arteries
11)	Muscular Tissue	Glutes (MAX, MEAD)

Regarding #5-#11 above, depending on your sitting/rotated position on the saddle, you will be engaging some combination of sit bones, pubic ramus, soft and muscular tissue.

ACTUAL SADDLE ZONES OF INTERACTION

As you can see from the diagram below, the further your hips are rotated forward, the more you shift from sit bones to pubic rami to soft tissue where it's even more critical to get the right saddle.



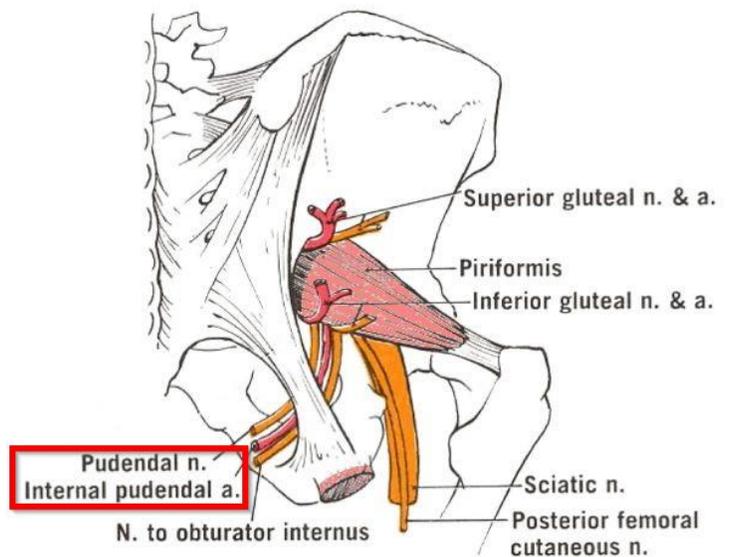
BASICS

- 50% of your body weight is on the saddle so this is an important component to get right.
- Saddle is the muscular contact point for the gluteus maximus which is the largest force producer (25-30%).
- Anywhere there is contact, there is pressure. If you want to decrease pressure in one area, you must either (1) increase the contact area, and/or (2) increase the pressure in other area(s), i.e., the feet, and/or the hands. One other less discussed solution is to decrease the rocking on the saddle via a bike fit where a new saddle might be recommended. This is usually accomplished with a saddle pressure mapping tool like [gebioMized](#).

In summary, the saddle and the saddle fit are paramount in pain free and powerful cycling.

WHAT INFLUENCES SADDLE PRESSURE?

- Saddle Height
- Saddle Fore/Aft
- Saddle Choice – wrong style, wrong size (see below)
- Bib shorts – quality of chamois, positioning, damping properties
- Pelvis Anatomy
- Mobility / Flexibility of the rider
- Interaction to other contact points
 - Hoods positioning
 - Cleats positioning – too much cleat float can make you unstable on the saddle
- Fitness level of cyclist
 - Core strength needed to keep the body solid, i.e., keep upper body from moving around / rocking on the saddle.



SADDLE TYPE vs RIDING POSITION

To simplify the equation, let's say there are 3 basic riding positions, each with a generally accepted saddle design. From the pictures above, you can see that the further forward rotated your hips are, the more likelihood there is of pinching off the pudental nerves and arteries leaving numbness and loss of blood flow to the genitals. This is true for men as well as women. Definitely not a good thing.

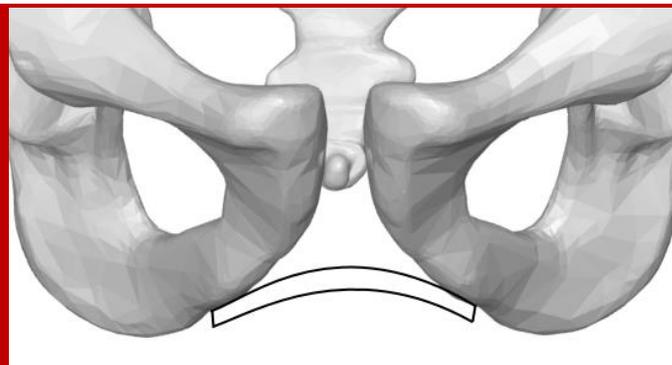
BIKE TYPE →	CRUISER, URBAN, HYBRID, COMFORT	MOUNTAIN BIKE, FLAT-BAR ROAD, CITY BIKE	ROAD BIKE, TT/TRI, OTHER RACING
RIDING POSITION	SITTING UPRIGHT	SLIGHT FORWARD BEND	AGGRESSIVE, BENT OVER, HIPS ROTATED FWD
CONTACT AREA	SIT BONES EXCLUSIVELY	SIT BONES, maybe slight INFERIOR PUBIC RAMUS	PUBIS and SOFT TISSUE
SADDLE STYLE	SHORT & WIDE, LOTS of PADDING	NARROWER THAN CRUISER, WIDER THAN ROAD RACING	NARROWEST. FOR TT SHORT 'U-SHAPE' SADDLE
CUTOUT/HOLE?	NONE REQUIRED	MAYBE	DEFINITELY

SADDLE DESIGN vs CONTACT AREA

The following table is meant to illustrate how the saddle design, especially saddle width impacts the cyclist.

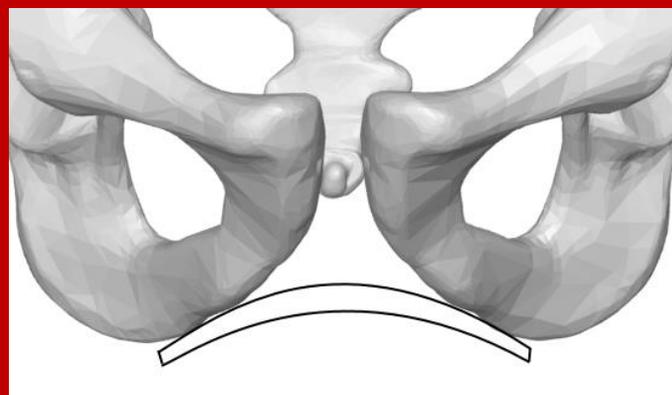
1. Saddle WAY TOO narrow. This is the **WORST-CASE SCENARIO**. If you look at this picture, the sit bones are not even in contact with the saddle! Sad thing is that I have seen this situation with way too many cyclists. One common trait, they all complain of back pain and being numb all the time.

This, coupled with a highly-curved saddle places virtually all the pressure on the soft tissue, pudendal nerves and arteries. This is the first item for discussion that I have with parents of juniors.



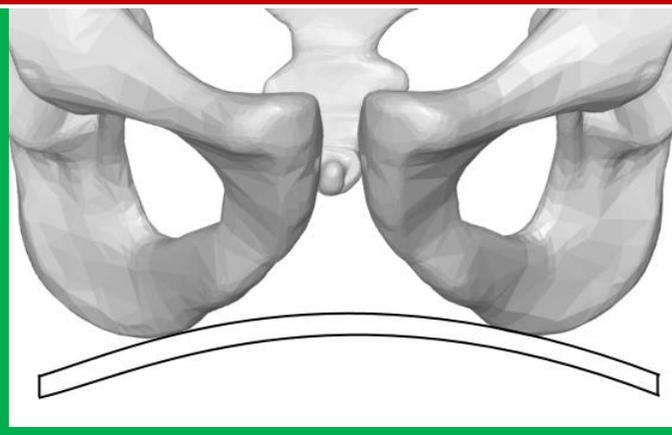
2. Saddle STILL TOO narrow. Slightly better than #1 above but not by much. In this case, the sit bones are supported, but, situated too far to the outside causing the cyclist to sit low on the saddle thereby placing increased pressure on the soft tissue - especially when riding in the correct hips rotated forward position. Without a hole or cutout, when attempting to get into this correct riding position, this saddle will work against you by pushing you back into a less efficient riding position.

As you look at these 2 pictures, visualize the difference if the cyclist would be sitting on a flat saddle. An equivalent-width flat saddle would still be too narrow, but, the cyclist would be sitting higher in the saddle and placing less pressure on the soft tissue.



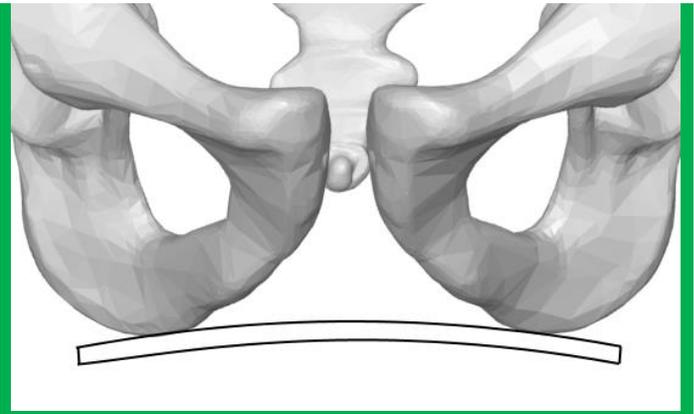
3. The next 3 saddle choices are the best. Even though this saddle is curved, it is wide enough providing great support as well as minimizing soft tissue damage from excessive pressure.

Note: with a curved saddle, you will usually need to go one size wider compared to a flatter saddle. For example, if you get sized for the (flatter) Specialized POWER or TOUPE and they say you need the 143mm, the equivalent in the Romin would be the 155mm. This will ensure that you are sitting high enough on the saddle to mitigate pressure to the soft tissue preventing numbness.



4. This flat saddle is like #3 above but provides even more relief from pressure to the soft tissue. Look how much space there is between the saddle and where the soft tissue would sit.

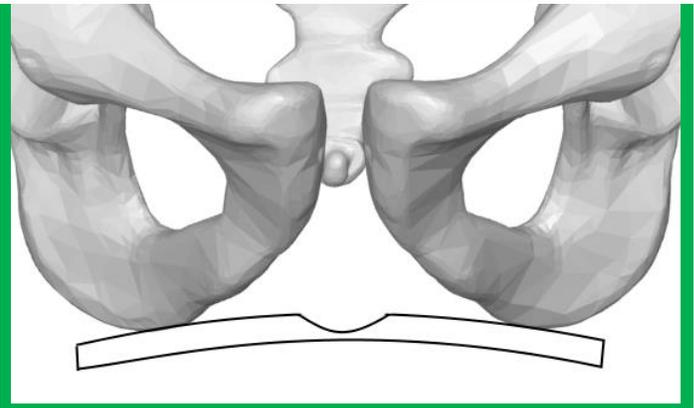
This saddle is flatter which means that you can probably get away with a narrower width compared to a saddle with more curvature.



5. This saddle has the same profile as #4 but has a cutout/hole down the center.

This is the best saddle design, period. Used by road racers who, when seated in an aggressive hip rotated forward position this saddle offers maximum pressure relief to the soft tissue area. This reason is that when in this correct riding position, there needs to be somewhere for the chamois and soft tissue to go.

Much like the saddles recommended below, this design offers the most pressure relief for the soft tissue.



6. Many cyclists, as well as some saddle companies think that if you add more padding, it will make for a better performing and comfortable saddle. One only needs to look at the drawing to the right and see that this type of saddle offers the least amount of room for the chamois and soft tissue.



WHAT ARE SOME HIGHLY RECOMMENDED SADDLES?

The list below is the authors recommended list of saddles. Make sure to try them all since they all have a slightly different profile and shape. Some will feel better, some will feel worse. You should try them all out.

BONTRAGER WOMEN'S ANJA PRO, ELITE, COMP – 144mm, 154mm, 164mm



BONTRAGER MONTROSE PRO, ELITE, COMP – 128mm, 138mm, 148mm



SPECIALIZED ROMIN EVO - 143mm, 155mm, 168mm



SPECIALIZED POWER – 143mm, 155mm, 168mm



SPECIALIZED OURA (WOMEN'S) - 143mm, 155mm, 168mm



COBB 55 - 135mm



ISM PS 1.1 – 130mm



ISM ROAD – 130mm



SUMMARY

It's sad to say but the cyclist who wrote the original question should start all over again with a perfect bike fit. As part of the process, he should get a saddle pressure mapping evaluation then, discuss saddle selection with the bike fitter.

I hope this helps answer some of the questions that you might have with respect to saddles and comfort.

Rick Schultz

BIKE FITNESS CACHING