

LETTER TO THE EDITOR

Re: VOL.4,#7 "SPECIALIZED PRESSURE TEST SHOWS DIFFERENCES AMONG SEXES"

We are responding to a recent article conversation with Specialized's Dr. Roger Minkow's regarding his collaborative investigation of female cyclist saddle design issues.

I am a practicing osteopathic physician, hospitalist and clinician. I employ a blend of traditional, evidence based, and osteopathic manual medicine therapies. I routinely treat cycling and other sports injuries using OMM, OMT, and routine medical techniques. I am a female cyclist and the co-developer of a new patent pending bike saddle design, suitable for women and men.

There are as many similarities as differences between female and male anatomic needs vis-à-vis saddle design. It is true that men have more delicate plumbing located in vulnerable territory than do women, which has some bearing on the research differential. I'd like to share my observations and findings about the gender based differences that result from our Selle An-Atomica™ R&D efforts of the past three years. I'm confident that male and female readers can relate.

The female pelvis and perineum are vulnerable to soft tissue injuries. The prominent labia majora and the delicate labia minora cannot be moved out of harms way as can the male penis and scrotum. This particular female anatomy is exposed to friction or bruising injuries. The women's urethra is shorter, and its opening is more exposed. This increases the risks of infections as well as chronic inflammation and scarring, making voiding painful and difficult. Finally, women's relatively wide oval shaped pelvic outlet and femur angulation at the hip joints further effects the dynamics of pedaling motions and weight bearing. Women and men need similar pressure relief and support mechanisms which are limited due to the basic saddle outline shape.

Women may intuitively choose a wider saddle with excess cushioning. Consumers and retailers seem to agree too often on this choice. A so called tractor seat is perceived as more comfortable in that it provides more surface area and support to accommodate a derriere. My curbside consultations with colleagues on the hospital floor routinely results in a wider is better majority.

I am inspired to recall a traumatic cycling experience when one sunny afternoon I hopped on my bicycle with its factory-installed saddle for a casual first time sixty mile ride through remote territory as if I were taking a routine spin around town. I rode within three miles of home and stopped at local café, desperate for an ice pack and an espresso with grappa!

Female and male pelvic basin regions in general are exposed to chafing and pressure related insult or injury to tissues, nerves, and blood vessels. These prospects are compounded by poor saddle designs and poor saddle and handlebar installation and road test adjustments.

In fact, the fenders (sides surfaces) of wider saddles are apt to rub against the groin where the adductors (inner thigh muscles), attach, which forces the rider to pedal bowlegged and apply pressure and friction unnecessarily. This is a set up for pelvic basin injury, adductors strain, knee pain, and other maladies.

The perfect saddle is just wide enough to support the rider at an individually ideal point along the bottom and medial aspect of the ischial tuberosities. An appropriately shaped and positioned relief slot running lengthwise to spare the external genitalia and pelvic basin region with adequate surface area from nose to tail wherein the rider can establish weight bearing support and balance of his or her core body mass is the critical design challenge.

The commonly held wider is better is a counterintuitive selection criteria. Our investigations have resulted in injury to ischial tuberosity tendon attachments when using saddles that are too wide to suit a given riders pelvic structure, especially among high mileage and aggressive riders.

The rider to saddle interface including the angles and surface area contact patches are essential to rider comfort on any saddle. No two ischial tuberosities are shaped identically on the bottom and medial radius such that no two females or males of the same height, weight and bone structure will necessarily be comfortable on the same saddle width. The angular bottom surface and medial radius of the ischial tuberosities are uniformly dissimilar. An unforgiving attribute or ill formed structure of any configuration coupled to a saddle that is too wide or too narrow will likely be problematic.

A high quality molded leather saddle will always provide a superior platform. Selle An-Atomica's molded, laminated, slot relieved leather structure provides the best of all worlds. The patent pending anatomic relieve slots take the shape and nature of the opposing saddle and human pelvic basin structures into careful consideration at the weight bearing focal points. Patent pending laminated under layers with particular outline shapes add to the saddle support mechanisms. These attributes are enhanced with a tension adjustment mechanism.

A well made molded leather saddle will conform beautifully to unique skeletal shapes, unlike the typical saddle sandwich which includes a rigid molded base, gel and foam padding, and cover material, wherein the rider's weight eventually bears on the rigid molded base structure as the foam and gel heat up which leads to loss of the implied cushion effect. These fillers also wear out like athletic sneakers, which manufacturers suggest consumers discard after a period of months or miles in the case of runners for example. Molded leather has a unique ability to form itself and thus to provide a perfectly matched self forming, flexible support mechanism providing maximum surface area contact and relief where they are needed most.

A saddle design that allows for the proper adjustments in five critical planes is essential. Properly positioned handlebars follow as a significant issue. These adjustments are essential coupled to good saddle design. The relationship of the various saddle adjustments and handlebars may seem obvious but is too often overlooked by cyclists, retailers, and manufacturers.

Balancing the rider's weight to distribute the weight-bearing forces may prevent a multitude of pressure-related injuries, such as numb, bruised, or abraded genitalia, pelvic basin, hands, thumb joints, wrists, and shoulders. Women and occasional riders may have relatively weaker upper bodies and legs, which makes them more vulnerable to this type of weight-bearing, over use injury. Saddle pads, handlebar pads, and gloves do not provide adequate cushion or make up for improper saddle and handlebar positions.

Medical research of the female form may be lacking in this context. Research and anecdotal evidence provided by our saddle customer's demonstrates that a diligently positioned saddle and handlebar coupled to a high quality molded leather saddle solves a multitude of female and male complaints using the same saddle designs.

The Specialized measurement tool is the only and therefore best device of the type we are aware of in the marketplace. It is a starting point for consumers. We refer consumers who ask to their local Specialized dealer where they can check themselves on this device. We also ask them to measure the width of saddles they've been most comfortable on. It often follows that we discuss other details with consumers to determine the best saddle width and relief slot combination. From there a cyclist must be committed or dedicated to working on fine tuning saddle and handlebar positions. They may also be frustrated in their effort to find an open minded, skilled mechanic.

Evidence has not demonstrated that female and male specific saddle designs are as important as a fundamentally good design concept AND time devoted to the most suitable saddle and handlebar position for the rider in question.

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