



Noseless Saddles Provide Protection

by Sgt. Joe Andruzzi

Chicago (IL) Police Department

On duty we wear bicycle helmets to keep our heads safe, bullet-resistant vests to keep our vital organs safe, and triple-retention holsters to keep our weapons safe. Off-duty, many of us work out, even though we ride bicycles at work, and we eat right to keep our bodies healthy. We do this because it is the smart, safe and healthy thing to do. So with all of this, why would any male bicycle officer resist the use of a noseless saddle to keep a very important part of his body healthy and safe?

In January 2006, male Chicago police officers assigned to bicycle patrol had an opportunity to take part in a National Institute for Occupational Safety and Health (NIOSH) study. The purpose of the study was to examine the use of bicycle saddles as they relate to genital numbness and sexual dysfunction. Briefly stated, the study concluded that groin pressure from traditional (nosed) saddles was the primary contributor to sexual dysfunction experienced by bicycle officers.

As a study participant, I was required to remove the traditional nosed saddles from my department and personal bicycles and replace them with no-nose saddles. While study participants were offered a vast variety of no-nosed saddles to choose from, I chose the ISM Touring saddle. I'll admit I did not have a "love at first sight" relationship with this saddle. I had even joined some of my fellow bicycle officers in ridiculing a couple of officers who rode with no-nose saddles long before this study was brought to my department. However, I now knew the risks associated with continued use of a nosed saddle, so I reluctantly installed the new seat.

The first time I rode with this saddle, I realized how much I had relied on the nose of my traditional saddle to help slowly maneuver my bicycle through congested traffic. I was never aware of how much I had used my inner thighs to help control and balance the bicycle. After just a few hours on the noseless saddle, I was ready to get rid of it and accept the health risks associated with traditional nosed saddles. But still wanting to truly gauge the saddle, I grudgingly rode on. After that first day, my lower buttocks were very sore.

Nevertheless, I stuck it out, and after about a week I had grown accustomed to the saddle. At the same time, my balance and maneuvering on the bicycle dramatically improved. To test my riding ability with the new seat, I put myself through the various cone courses the department uses for bicycle training along with other riding drills. I was able to successfully complete each one.

Nearly two years later, I am still riding with the same saddle and consider myself a better rider for it. I believe the switch to a no-nose saddle is so important that I've lobbied my department for funding to equip our fleet of more than 450 bicycles with no-nose saddles. In addition, all newly purchased bicycles must come equipped with no-nose saddles.

I realize reading a short article won't change the minds of those who vehemently oppose switching to a no-nose saddle for reasons ranging from ignorance to obstinacy. However, I encourage any officers who are concerned about their reproductive health to try a no-nose saddle. If you do, be patient. Your body needs time to adjust. Just know that if you make the switch, your penis will thank you for it.

For detailed information about the NIOSH studies and published results, visit <http://www.cdc.gov/niosh/topics/bike/>.



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Where to find no-nose (noseless) saddles

Bisaddle: www.bycycleinc.com

Cloud 9: www.obviousengineering.com

Comfort Saddle: www.comfortsaddle.com/index.cfm

DDWings: www.ddwings.com

Easy Seat: <http://hobsonseats.stores.yahoo.net/easyseat.html>

Easy Seat II: <http://hobsonseats.stores.yahoo.net/easyseatii.html>

Ergo, The Seat: www.ergotheseat.com/index.htm

ISM Tourist and Sport Saddles: www.ismseat.com/products.htm

Moon: www.moonsaddle.com

Real Seat: www.realseat.com

Revla Saddle: www.revla.com

RideBall: www.rideball.de

Schwinn No Pressure: (not listed on Schwinn Website) www.amazon.com/Schwinn-No-Pressure-Bicycle-Seat/dp/B000DZGLVY

Spiderflex: www.spiderflex.com/pr.html

Spongy Wonder: www.spongywonder.com

Un-saddle: www.theunsaddle.com

This list is maintained and updated at www.healthycycling.org.

Further Reading:

Cutting off the Nose to Save the Penis, by Schrader, Steven M.; Breitenstein, Michael J.; Lowe, Brian D. The Journal of Sexual Medicine, Volume 5, Number 8, August 2008, pp. 1932-1940(9). Full text available from Steve Schrader, 513-533-8210 or sms4@cdc.gov, or at the following links:

HTML:

<http://www3.interscience.wiley.com/cgi-bin/fulltext/120126353/HTMLSTART>.

PDF:

<http://www3.interscience.wiley.com/cgi-bin/fulltext/120126353/PDFSTART>.

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WORKPLACE SOLUTIONS

From the National Institute for Occupational Safety and Health

No-nose Saddles for Preventing Genital Numbness and Sexual Dysfunction from Occupational Bicycling

Summary

Workers who ride a bicycle as part of their job may be at risk for genital numbness or more serious sexual and/or reproductive health problems from pressure in the groin (perineum) from the traditional bicycle saddle. NIOSH has conducted studies that have demonstrated the effectiveness of no-nose bicycle saddles in reducing pressure in the groin and improving the sexual health of male bicycle patrol police officers. While most workers in jobs that involve bicycling are men, recent evidence suggests that no-nose bicycle saddles may also benefit women.

Description of Exposure

About 40,000 workers in public safety occupations ride bicycles as part of their job. They include police officers, emergency medical service personnel (EMSs), and security staff who patrol by bicycle. A number of these workers have reported groin/genital numbness and

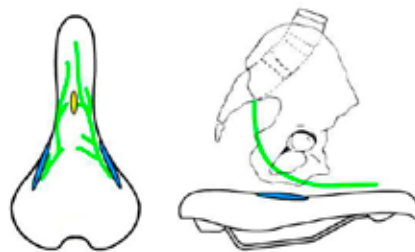


Figure 1. Nerves and arteries for the genitals (shown in green) compressed under the traditional saddle nose. The blue region represents the contact areas on the sit bones. The yellow region represents the pubic bone. The pelvis is shown in the side view.

more severe sexual problems related to prolonged use of a bicycle saddle in their work [NIOSH 2000]. In a study conducted by Schrader et al. [2002], police bicycle patrol officers reported spending an average of about 25 hours per week sitting on a bicycle saddle. Many of them also ride a bicycle for recreation while off duty, and therefore may spend more than 25 hours per week on a bicycle saddle.

The traditional bicycle saddle has a narrow nose that protrudes under the groin as the cyclist straddles the bicycle. Ideally, the weight of the cyclist should be supported on the saddle

under the pelvic sit bones. However, part of the weight is supported where the groin contacts the saddle nose. Bearing weight on this region of the saddle compresses the nerves and arteries in the groin (see Figures 1 and 2). These nerves and arteries run through the groin between the sit bones to the genitals. Pressure on these nerves and arteries over time may lead to a loss of sensation and a decrease in blood supply to the genitals. This can contribute to the sexual and reproductive health effects that have been reported.

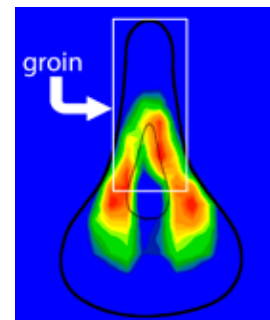


Figure 2. Example of pressure measured on a traditional saddle with a protruding nose. The white box shows the groin region. The blue color is the lowest pressure, followed by green, yellow, orange, and red (highest pressure). This saddle has a cut-out hole as shown by the thinner dark outline of the saddle.

NIOSH Studies

NIOSH studies [2000, Schrader et al. 2002] showed that male bicycle patrol security officers who complained of groin numbness had night erections that lasted less time than those of a similar group of non-bicycling men. Other NIOSH studies [Lowe et al. 2004; Schrader et al. 2008], showed that pressure on a traditional (nosed) bicycle saddle in the area under the bicyclist's groin is typically 2.90 pounds per square inch during cycling and may reach as high as 5.37 pounds per square inch. (As a point of reference, the pressure on an arm blood pressure cuff needed to restrict blood flow in the arteries is about 120 mm Hg, which is equal to 2.32 pounds per square inch). This level of pressure is affected by the weight and body shape of the cyclist, the shape and cushioning of the saddle, and the degree to which the cyclist's body is tilted forward.

Fewer studies of the effects of bicycle saddle use on female cyclists have been conducted. However, recent evidence suggests that women cyclists may also be at risk for a decrease in sensation of their genitals from use of a traditional nosed bicycle saddle [Guess et al. 2006].

Reducing Pressure in the Groin from the Bicycle Saddle

The no-nose bicycle saddle

A number of manufacturers have designed bicycle saddles to support the weight of the cyclist on their sit bones without a narrow nose of the saddle protruding forward under the groin region. A no-nose bicycle saddle is designed so that the portion of the nerves and arteries for the genitals that are forward of the sit bones are not compressed against any part of the saddle surface (see Figure 3). A no-nose bicycle saddle should have no saddle material protruding between the thighs of the cyclist to create pressure in the groin.

NIOSH studies of no-nose saddles

A study by NIOSH [Lowe et al. 2004] showed that saddles without the protruding nose greatly reduced pressure in the groin that compresses the nerves and arteries for the genitals. In a more recent NIOSH study [Schrader et al. 2008], the no-nose saddles were associated with pressure in the groin region of 1.02 pounds per square inch. In a typical pressure picture for a no-nose saddle, there is very little pressure forward of the sit bones (see Figure 4). The pressure on the nerves and arteries for

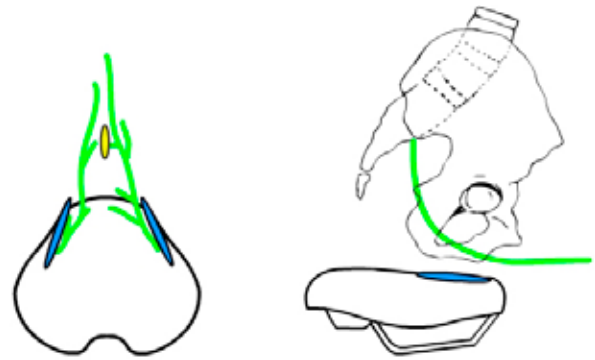


Figure 3. Removal of the protruding saddle nose reduces pressure under the nerves and arteries for the genitals. See Figure 1 for further description.

the genitals may be even lower than 1.02 pounds per square inch because some of the measured pressure was caused by the back of the thighs making contact with the rounded-off front of the no-nose saddle. The study showed that the no-nose saddle reduced pressure in the groin by at least 65% (see Figure 5). In the 2008 NIOSH study, more than 90% of officers on bicycle patrol who tried a no-nose saddle were still using the saddle after 6 months. These officers believed that no-nose bicycle saddles could be used safely and effectively in their work. Several of these officers said that it took some time to get used to the no-nose saddle because it has a different feel than a traditional saddle.

Recommendations

Contrary to some cyclists' belief, it is *not* normal for any part of your body to go numb or lose feeling. Numbness in the groin or genitals is a warning sign that should not be ignored. Workers who ride a bicycle as part of their

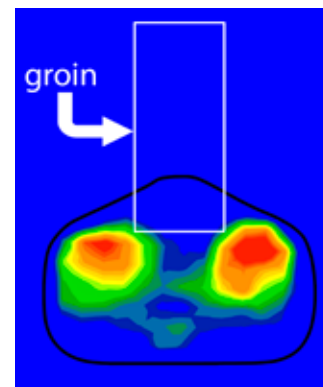


Figure 4. Example of pressure measured on a no-nose saddle. In this example there is almost no pressure in the groin region.

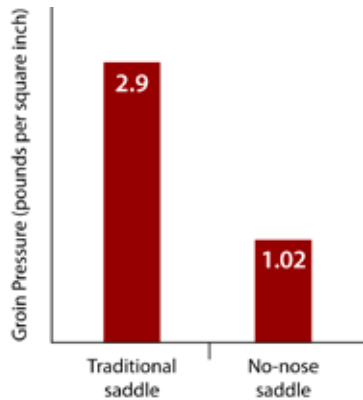


Figure 5. Comparison of groin pressure for a traditional and no-nose saddle.

job* can take the following steps to help prevent sexual and reproductive health problems:

- Use a no-nose saddle for workplace bicycling. Give yourself time to get used to riding with a no-nose saddle. At first, it may seem very different from the saddle you have used in the past. No-nose saddles may not always be available at retail bicycle shops, but they are readily available for purchase through the Internet.
- Seek guidance on proper bicycle fit from a trained bicycle fit specialist. Use of a no-nose saddle may require different saddle height and angle adjustments. Be sure that the no-nose saddle is adjusted according to the manufacturer's instructions.
- Dismount the bicycle when at a standstill. Do not lean against a post or other object to stay seated on the bicycle saddle when you are not riding.
- Dismount the bicycle if you begin to have numbness, tingling, or loss of feeling in any part of your body.

*NIOSH has not studied competitive cycling and can not make recommendations for the relatively small number of workers who ride a bicycle competitively in their occupation.

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For More Information

More information about bicycle saddles and reproductive health can be found at the following Web site: <http://www.cdc.gov/niosh/topics/bike/>.

The reproductive health topic page can be found at the following Web site: <http://www.cdc.gov/niosh/topics/repro/>.

A video demonstration of saddle pressure on no-nose saddles can be found at the following Web site: http://video.cdc.gov/rangen/niosh-video/saddle_pressure.rm.

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