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Contact: Caroline Arbanas

[arbanasc@wustl.edu](mailto:arbanasc@wustl.edu)

314-286-0109

[Washington University School of Medicine](#)

## **Sports hernia repair surgery plus innovative rehab program helps athletes return to play**

St. Louis, July 15, 2007 — In recent years, sports hernias have sidelined many high-level athletes for months and, occasionally, prevented a return to competitive sports all together. New research at Washington University School of Medicine in St. Louis shows that surgical repair of sports hernias using tension-free mesh, coupled with an innovative rehabilitation program, successfully returned athletes to competition in 93 percent of cases.

Lead investigator L. Michael Brunt, M.D., professor of surgery, presented the study Sunday, July 15 at the annual meeting of the American Orthopaedic Society of Sports Medicine, held in Calgary, Alberta, Canada.

He and his colleagues evaluated the results of 61 sports hernia repair surgeries and a follow-up rehab program to determine how quickly they speed an athlete's return to play. The surgeries were performed at Barnes-Jewish Hospital.

"Sports hernias have received a lot of attention recently because of some high-profile athletes that have been sidelined with this condition," Brunt says. "The benchmark for these athletes is return to play in their sport at the same level they were before the injury. By using the tension-free mesh to strengthen and reinforce the groin and lower abdominal muscles, we found that most athletes were back to their sport within eight weeks of surgery."

A sports hernia is not a true hernia because there is no hole in the abdominal wall through which underlying tissues protrude. A diagnosis can be tricky because symptoms – particularly pain in the groin and lower abdomen – can masquerade as a groin pull, strained abdominal muscle or other injury.

Those with sports hernias typically experience intense pain only at extreme levels of exertion. The condition is most common among hockey, football and soccer players. Repetitive twisting, turning or kicking motions at high speed are most likely to contribute to the condition.

“Usually there is no discomfort walking around but significant pain when an athlete moves from a stationary position to full stride,” Brunt says. “For a high-performance athlete that can be enough to make a difference in their ability to compete successfully.”

Although sports hernias occasionally occur among recreational athletes, it is far more common among those who play professional or college sports. In recent years, quarterback Donovan McNabb (Philadelphia Eagles) has had surgeries to repair sports hernias, as have forward Darren McCarty of the Calgary Flames and Los Angeles Galaxy soccer players Joseph Ngwenya and Benjamin Benditson.

The injury may also be related to changes in strength training. Most athletes focus more on the lower body and less so on the trunk. “This lack of balance can create extra stress across the pelvis that is transmitted to the abdomen and the pelvic floor, which may be a factor in the development of a sport hernia,” Brunt adds.

On average, the athletes Brunt operated on had experienced symptoms for eight months and most had undergone conservative management and rest during that time. A full 70 percent played at the college or professional level, and 95 percent were men. Because women have a different pelvic structure, they may be less vulnerable to sports hernias, he notes.

The surgery involves a two-inch incision to remove some of the damaged muscle tissue and instead of a primary repair with stitches, tension-free mesh is used to strengthen and reinforce the area. “We think the mesh provides considerable support to let the area heal,” Brunt says. “Because there’s no tension on the repair, this helps athletes return to full physical activity faster than surgery with a sutured repair alone.”

The rehabilitation protocol used in the study was developed by Ray Barile, an athletic trainer for the St. Louis Blues hockey team. The multistep, graduated program is more structured than others used to return athletes to activity after groin surgery. It starts with early walking and movement and gradually moves athletes to resistance and core muscle building before progressing to speed and functional activities. Athletic trainers, physical therapists and athletes appear to have the most success when they are given well-structured guidelines about what can and can’t be expected or allowed at each stage after hernia surgery, Brunt says.

A survey of athletic trainers who treated 21 of the athletes after surgery showed they rated the program highly (average score 4.5/5.0) in its ability to quickly and safely return athletes to their sport.

More recently, Brunt and his colleagues have accelerated the rehabilitation program to help athletes in midseason get back to competition sooner. This has helped some athletes return to play as early as five weeks after surgery. The tension-free nature of the repair helps facilitate a more aggressive progression to full activity, but Brunt cautions that the proper treatment of athletes with sports hernias requires a multidisciplinary approach. "This includes sports orthopaedists, physical therapists and surgeons. It is important that physicians who see these athletes understand the entire spectrum of groin injuries and the methods that work best for returning them to competitive play," he says.

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