

# PT *in motion*

For members of the American Physical Therapy Association | May 2014



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# Back in the Saddle Again

Put a 110-pound jockey on a 1,300-pound horse running 40 mph, and injuries are inevitable. Here's what physical therapists do when injuries occur.

By Keith Loria

**Y**ou know it's been a long winter when you get out of bed and automatically put on your boots, not your slippers. And you know you've got a dangerous job when an ambulance follows you around.

The first is a joke. The second one? Not so much. Yes, any time your job requires an ambulance to follow you, it's pretty clear you have a dangerous occupation. And that's the case with jockeys, who put themselves at risk each time they climb on a horse.

The average jockey weighs between 108 and 118 pounds. The average race horse weighs approximately 1,200-1,300 pounds. That's a bit of a weight disparity.

Furthermore, anyone who thinks that a jockey just "sits on the horse" is very much mistaken. Galloping a large animal—itsself an athlete—with a mind of its own is physically demanding and requires strength, balance, agility, and aerobic endurance.

Inevitably, injuries occur.

This past May, jockey Mike Luzzi was mounted on Lady on the Run for the No Reason Stakes at Belmont Race Track, about to take the filly on a ride to what he hoped would be victory. While waiting for the race to begin, the horse became a little restless, and Luzzi banged his shoulder on the starting gate.







Although he didn't think much of it at the time—in fact he finished third that race and piloted 4 other races on the day, including 2 to victory—as of mid-August, Luzzi hasn't ridden again.

“The next day, I could hardly move my arm. It was surprising, because things like that happen all the time,” he says. “It was a combination of some wear and tear, but it couldn't have come at a worse time. I finally had some pretty good horses going into the summer, but there's no way I could have continued riding.”

Luzzi was referred to James Markwica, PT, owner of LaMarco Physical Therapy in Ballston Spa, New York, close to the Saratoga Race Track. A big fan of the racing game, the physical therapist has designed a treatment program specific to jockeys.

“The first thing I do with anyone, especially when the patient is a professional athlete, is take a look at what he or she is doing mechanically to generate force and power,” Markwica says. “We talked about his timeline and

what needed to be done for him to compete safely at the professional level so when he goes back, there's no risk of further injury.”

The 2 headed off to Saratoga to put Luzzi on an Equicizer. An Equicizer, Markwica explains, is a nonmotorized, mechanical horse designed by jockey Frank Lavato. The device simulates a real horse's movement through a spring-designed mechanism, which is controlled by the user's level of effort and fitness. This piece of rehabilitative equipment often is used to help jockeys, competitive equestrians, and those recovering from an equine-related injury get back in the saddle.

“I could see Mike in action on the Equicizer and break down and analyze what he needs to do with a whip, or just being in different positions during his ride,” Markwica says. “We went back to the gym and I designed some exercises that mimicked [those motions] using sports cords and unbalanced surfaces, all designed to incorporate

balance and strength and create forcible moments to crack the whip.”

Exercises included standard dumbbells, but the exercises were modified so Luzzi was performing them while in the jockey stance. Sports cords were used, and Markwica had Luzzi pulling in different directions while on an unstable surface, so the jockey could work on maintaining his stability and strength with his arm.

“His imagination helped a lot,” Luzzi says. “We did basic stretching and did a lot of simulated jockey activities with balls and bands. Everything I'm doing now is related to the motions I do as a jockey, with natural positions and natural motions. I'm just about ready to get back out there.”

Farley Wagner, PT, Cert MDT, a physical therapist at Thompson Health's Farmington Rehabilitation site, has worked with jockeys for decades and says injuries among jockeys vary considerably.

“The 2 most common areas in my experience have been lower extremity fractures and spinal fractures.

Mike Luzzi aboard Daaher coming in first at Aqueduct



However, I have treated sprains, strains, severe contusions, lumbar sprains, SI sprains, and shoulder injuries from sprains to dislocation,” she says. “The most challenging are multiple injuries. I have treated 2 jockeys who in 1 accident fractured multiple sites.”

Injuries can occur any time a jockey is mounted on or in the vicinity of a horse, although most injuries occur during a race or in the starting gate. Rarely does a jockey become injured as a result of being randomly unseated.

“In the starting gate, horses can get restless and act up and unseat a jockey. Or the horses rear up in the close confines of the gate, squeezing the jockey between the gate and the horse,” Wagner says. “And on occasion a horse can flip over on top of the jockey while loading into the gate. Most injuries occur while racing when the horses are bunched in close quarters at high speed. Then suddenly something goes awry, such as horses clipping heels, leading to a horse tripping and falling. Or a horse suddenly and tragically breaks down.”

## Flailing Hooves at 40 mph

For jockeys, such accidents happen abruptly, usually with no time to react. One moment they are guiding their mounts—sometimes at speeds exceeding 40 mph—doing their jobs. The next, they are on a projectile hurtling toward the ground, sometimes among flailing hooves, sometimes with 1,200 pounds of horse rolling on top of them. These and other circumstances can result in trauma.

Wagner says with lower extremity fractures and spinal fractures, initial interventions typically involve restoration of range of motion (ROM) through stretching and joint mobilization and progressive strengthening. Interventions for lower extremity fractures begin with a progression of gait

through weight-shifting activities and gait training to restore normal movement patterns and progressive balance. With spinal fractures, deep soft tissue mobilization may be needed to regain ROM and lessen pain.

## 4 Keys to Return Jockeys To Riding

According to the PTs interviewed for this article, 4 elements are significant in returning jockeys to riding: core strengthening and stability, sport-specific balance, aerobic conditioning, and use



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of the Equicizer, which, as one PT put it, “brings it all together.”

“Core strengthening is essential for jockeys. Many naturally develop core strength through their riding, but when they’re out with injury, their core weakens,” Wagner says. “I use planks of all sorts: Prone, side, and bridging are good places to start. I also incorporate lateral hip strengthening with focus on all the gluts.”

That means therapy balls, supine ball walk-outs to table tops, and upper extremity activity while holding the position with a goal to maintain the position for up to 5 minutes. Other exercises, as appropriate, may include prone ball walk-outs to alternating legs, pull-ins, and push-ups; Roman chairs and rotations; prone over ball with feet on floor against a wall; progress to weight in hands held against chest and extend; and bridges with feet on the ball, then adding hamstring pull ins.

Wagner says she is a stickler for proper ride position with balance activities.

“With me, the jockeys think they are back in jockey school. They know they can’t get away with poor position. I tell them this is the time to practice correctly because it will only make them stronger and more confident riders,” she says. “That is the benefit of sport-specific balance therapy.”

Because racehorses can pull hard on the reins, Wagner uses half foam roller stance to simulate this activity for the jockeys.

“In ride position pulling against tubing, the jockey simulates the position starting initially with 30 seconds and working up to 2 minutes,” she says. “As the jockeys master this, they then are moved to pulling against a BTE work simulator set in a perturbation mode. The jockeys don’t like this exercise, but they all admit it is a good simulation of a horse pulling. They grudgingly understand my reason for having them do it.”

Another intervention for sport specific balance is pulley steps, which involves walking out over objects against the pull of weights, or stepping up and down off of a balance mat for proprioceptive feedback. This is an excellent exercise for ankle injury rehabilitation, she says.

## Aerobic Conditioning

Aerobic conditioning is important to prepare jockeys for return to work. Some may have been off of a horse 4 or more weeks before beginning work

with a physical therapist. Others may have been out for as long as 6 months.

“Aerobic condition diminishes quickly in anyone laid up with injury. With the jockeys, I like to start this soon as possible. If they have a lower extremity injury, I start them with the upper body bike. If the injury involves an upper extremity, then I begin with a bike,” Wagner says. “I encourage them to try to walk at home once cleared to do so if healing from a LE fracture. Many jockeys either jog or ride a bike for fitness and to keep their weight controlled, so this is usually something they are willing to resume. It means they are headed in the right direction for return to work.”

Wagner’s clinic has its own Equicizer, nicknamed Polissen’s Pleasure.

Additionally, the device has an actual racing saddle and a whip donated by jockeys so “Polli” is ready for them.

“The jockeys start in 1-minute increments 2 to 4 times mixed between their other rehabilitation activities. In time they build up to 2 to 4 minutes 4 to 6 times with the jockey simulating various parts of a race from a steady gallop to the push toward the end of the race,” Wagner says. “Again, I encourage proper ride position and will position a mirror so jockeys can check their position.”

Speed and agility with cone weaves, lateral hops, unilateral transitioning, and box jumps are also added to the program as needed.

“Our goal is to build strength, balance, and endurance without muscle bulk, which can add body weight the jockeys don’t want. We do not use many machines or heavy weights,” she says. “Jockeys entering the clinic even after having been laid up for 4 to 6 weeks are more fit than most patients coming for rehabilitation. Often the jockeys are



Farley Wagner, PT, Cert MDT,  
with Omar Camejo aboard “Polli.”

frustrated by their situation and eager to start their rehabilitation program.”

Paul Nicol is another world-class jockey who has gone to Wagner for treatment through the years, most recently for a problematic back. With over 3,400 wins to his credit, Nicol is rated as one of the top 100 jockeys in the country.

“Her work and that Equicizer made a big difference,” he says. “I came off a horse and hit the ground hard during a race. She had me doing a lot of stretching and coordination exercises and had me ready to get back fairly quickly.”

As with anyone suffering from an injury, jockeys who are experiencing little sprains and strains during the season should consult a PT immediately and not wait until the issue is too immense to manage easily.

“We have had jockeys wait until the end of the race meet because they are too busy to take the time to come to treatment. A PT can teach fundamental stretching and strengthening activities to help a jockey through a minor issue,” Wagner says. “Last winter I worked with a jockey who had a very bad shoulder which most likely will need surgery within a year, but he didn’t want to be laid up this year. I taught him strengthening, scapular stabilization, and postural exercises he can do after morning exercise and prior to afternoon racing to keep the shoulder stronger.”

## Reining in the Patients

Markwica says that what’s true of all athletes is also true with jockeys. A physical therapist has to make sure that they don’t rush their rehabilitation and aggravate their injury. “They are used to putting the reins on a horse. You need to put the reins on *them*,” Markwica says. “These guys are aggressive and want to go full steam ahead. You need to hold them back so they don’t over do it.”

When it is time to return to work, jockeys can’t simply return to actual racing. Toward the completion of their rehabilitation, prior to discharge, they need to make an effort to ride in morning work.

Wagner recommends return to morning work riding 1 or 2 quieter, more sensible horses initially. Then, over a few weeks, build to a normal morning routine with rides of up to 10 horses. Once this is achieved, a jockey may start afternoon racing again with 1 or 2 races for the first few days, building up to a normal full workload.

Jockey Omar Camejo has won over 625 races in his career and currently races at Finger Lakes Race Track in Farmington, New York. The Cuban born jockey has raced in the United States since 2000 and has experienced his share of racing-related accidents,

including falls, getting kicked, and banging into things. Last July, before a race, Camejo was kicked in the ribs by a horse.

“I never saw a physical therapist until I came to New York and I started seeing Farley. She helped me a lot,” he says. “We did a lot of exercises and I was able to get back to racing soon after. Now, when something happens to me, I won’t just sit on it, I’ll get help and get better.” **PT**

*Keith Loria is a freelance writer.*

## Resources

- 1 General jockey facts. Animal Planet. <http://web.archive.org/web/20121008170040/http://animal.discovery.com/tv/jockeys/horse-racing/jockeys-101/general-facts.html>. Accessed March 11, 2014.
- 2 How much does a horse weigh? Ask. <http://www.ask.com/question/how-much-does-a-race-horse-weigh>. Accessed March 11, 2014.

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