



The Impact of COVID-19 on Podiatric Sports Medicine

Athletes must deal with both the physical and mental effects of the pandemic.

BY MARK MENDESZOOM, DPM

The COVID-19 virus has impacted the world and hundreds of thousands of lives have been lost. The ultimate goal is to attenuate the skyrocketing number of cases and to reduce the death rate that this horrific virus has brought upon mankind. Hopefully a cure, treatment protocol, or vaccination will be developed so that we can start to return to the “new normal.”

As all details of life have been impacted by this pandemic, our medical colleagues have had their Hippocratic Oath exercised at extreme levels. Many doctors of podiatric medicine have been called to assist on the front line to serve those in dire need. Those not on the front line also have taken risks to their own health and still see patients in need for lower extremity medical or surgical care.

A group of individuals who have also been impacted are athletes of all ages. No matter the level of play at which athletes compete, their lives have been turned upside down as well. The biggest concern is that there is no set date to return to practice or competition. Initially, as most of the public thought that COVID-19 was a strain of the flu, life continued as normal. Practice sessions, competitions, travel to large invitationals and tournaments were the norm. In

February, the International Athletic Association (IAAF) cancelled the World Indoor Track and Field Championships in Nanjing, China. Even before the crisis took hold, many athletes were apprehensive about attending this event because the travel there was very long and stressful, and because the Olympic Trials and the Olympic Games would be commencing

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in late spring and this summer. As the virus continued to make its way to the United States, apprehension was starting to intensify as the initial cases were diagnosed in the Northwest Pacific region cities; and then the epicenter of the pandemic in the United States targeted New York City and the entire have come New York, New Jersey, and Connecticut tri-state area.

The professional sporting organizations such as the National Basketball Association, National Hockey

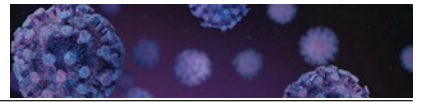
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Spring Sports Injuries

Typically this time of year, young athletes who are starting up with spring sports are being treated for overuse injuries such as: iliotib-

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ial band syndrome, patella tendonitis, Osgood-Schlatters disease, chondromalacia, shin splints, posterior tibial tendonitis, calcaneal apophysitis, Achilles tendonitis, plantar fasciitis, sesamoiditis, peroneal tendonitis, and stress reactions or stress fractures. These overuse conditions are typically due to poor biomechanics, improper footwear, and zealous coaching techniques. Seasoned athletes who have been training deal with the aforementioned conditions, but typically are on a maintenance program that requires physical therapy.

Modalities such as ultrasound, electric stimulation, laser treatment, iontophoresis, deep tissue massage, cupping, dry needling, and stretching are routinely incorporated in their training. These advanced athletes are distinctively utilizing a routine and are in touch with their bodies. Any pending unusual aches or pains would be recognized by the advanced athlete and attention brought to their medical team and coach. Training programs are well orchestrated with coaches, nutritionists, therapists, masseuses and physicians, so that injuries can be recognized early and treated accordingly to minimize time away from practicing and competing.

Acute Injuries

Acute injuries routinely seen in each respective sport have been dramatically reduced as activities have been virtually negated in today's current state. This obviously is positive since acute athletic trauma is not being regularly seen with the lockdown. Surgical treatments have been limited with the restrictions on surgery due to the diminished amounts of protective personal equipment and the angst of being in a hospital, which have of course heightened with the fear of contracting COVID-19. Conversely, the athletes who were scheduled for surgical correction during this time period for their chronic, overuse, or sub-acute injuries have to wait idly until surges are allowed to operate again.

Now that everything that is considered non-essential in the world is shut down, including the ability to utilize athletic facilities, weight rooms, nutritional centers, most therapy cen-

ters, and stores to purchase equipment, being quarantined can be either a blessing or a curse.

As the new normal emerges for the world, it is probable that there will be a gradual return filled with significant uncertainty until treatment

a significant downward spiral for the athlete. Athletes are creatures of patterns and routines and these have been taken away from them abruptly. Each individual will handle this crisis differently and as his/her podiatrist, we have to recognize this and validate

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can be rendered and/or a vaccination developed. It may remain unclear as to when athletes of all levels may return to practice and competitions, and that uncertainty will trickle down as well to coaches, family, spectators, and medical professionals.

Mental Well-Being

The medical concerns we as podiatrists will have to deal with include not only treating the musculoskeletal injuries sustained by the athletes but also assisting with the mental issues that will develop in response to the pandemic. Many athletes do not have the ability to follow their normal routines and their fitness levels will diminish in time. As the inability to train and utilization of their training facilities continues to be restricted, some athletes are starting to understand that not only will their current seasons be lost but their future seasons may be affected as well.

As athletes become more sedentary or unable to regularly train, anxiety, fear, and depression may ensue. It is noted that regular exercise may help ease depression and anxiety by releasing endorphins such as serotonin, dopamine, and norepinephrine. The elevations of these chemicals in the brain can enhance the sense of well-being and levels of euphoria. When physical activities are diminished, not only do musculoskeletal strength, flexibility and fitness diminish but so does mental fitness. These intrinsic factors combined with external factors—such as the sense of identity of being an athlete, being part of a team, competing, attempting to earn a collegiate scholarship, or earning a living—can cause

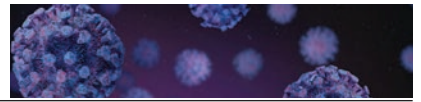
their concerns as well as assisting in their overall well-being.

To further substantiate these concerns, I asked two professional athletes their take on the COVID-19 virus and the direct impact it has had on them. Katerina Stefanidi, 2016 Olympic women's pole vault gold medalist, when I asked about her current status as a professional athlete and the postponement of the Olympic Games stated, "The postponement of the Games was the correct choice. It was not safe for the Olympic Games to go on as it was not fair to the different countries and athletes as each country will handle this pandemic differently. We athletes are making responsible choices and trying to stay fit in the safest ways possible."

Jenn Suhr, a three-time Olympian and the 2012 Olympic women's pole vault gold medalist, told me that her concerns were heightened when she saw the devastation in Italy and needed treatment in order to prepare for her fourth Olympic Games. She made arrangements to fly round trip in one day from Texas to Chardon, Ohio to receive treatment on her chronic Achilles issues. The pending impact of the virus made her take extreme measures to receive treatment before everything was shut down. The very next day, her flight was cancelled. Her response to the Olympics being postponed was that "when the Games were postponed, it provided a peace of mind because now the current issue was solved and I did not have to worry about it anymore and can prepare for when it is safe to compete again."

At some point in the future, there will be a return to life and the "new normal", which will include athletes

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returning to their sports. After being restricted from daily routines, we as part of the medical team need to provide comfort, support, reassurance, and guidance so that injuries will be minimized. It is known that deconditioned athletes are at higher risk of injury if they are zealous in their initial workouts and training. Establishing realistic training goals such as intensity and load management along with proper nutrition and rest will mitigate initial overuse injuries. Ensuring that training gear is up to standards will also minimize injuries.

Podiatrists should emphasize to the coaches, trainers, and athletes that proper training footwear should be uti-

in conjunction with physical therapy can give the athlete's condition time to improve without the need for invasive techniques. Recent physical therapy modalities have been added with significant success in assisting an athlete's recovery. Laser treatment, dry needling, soft tissue instrument assisted mobilization, ART-active recovery treatment, cupping, shock wave therapy, anti-gravity treadmill, and spinal decompression are all valuable recent additions to a podiatrist's or PT's armamentarium against sports injuries.

Prolotherapy

If injuries continue to persist, incorporating regenerative medicine options could benefit athletes during their recovery and especially during

Elective Procedures

The return to performing surgical procedures will be dictated by the government's policy re: perform elective procedures. Another limiting factor for elective procedures is the availability of amount of personal protective equipment, ventilators, and surgical products. As the number of elective cases continue to increase due to the current shutdown of operating rooms, the challenge for the surgeon will be to prioritize which cases should be performed when operating rooms become accessible. The other real concern will be the ability of individual patients, universities, clubs, organizations, and insurance companies to pay for medical treatment and surgery. These challenges will be met head on in the months ahead.

As these are exceedingly difficult times for everyone, athletes of all levels will have their own concerns and issues related to the pandemic. They will be looking for guidance and direction from many of those in their respected circles. As doctors of podiatric medicine, not only can we assist athletes individually for lower extremity maladies, but we can also be team members to assist them back to a healthy return. We must be informed, educated, positive, and confident to help athletes regain their mental health and confidence to definitely prevent, improve, or correct their musculoskeletal injuries. This will be achieved by appreciating and incorporating the best comprehensive medical plan for them. Most of all, we must realize that we are all going through this together and we will in time become stronger from it. **PM**

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lized initially as the shoes of choice. Training shoes will function much better than practicing in competition cleats, spikes, and competition shoes, as training shoes will provide better biomechanical control—they are designed with better support, cushioning, stability, and comfort. In addition to proper footwear, an appreciation of clothing material, socks, compression socks, insoles, custom orthoses, splints, and braces can facilitate a return very effectively with minimizing injuries. The current "downtime" should allow the podiatrist to be able to research and/or discuss these issues with colleagues, physical therapists, local running or sports shops, coaches, parents, and the athletes themselves. Understanding the particular athlete's sport, goals, and new practice schedules can temper many future overuse injuries.

For those athletes who were dealing with injuries in last few months, perhaps the cancellation of the upcoming seasons may allow their injuries to improve or resolve. If these conditions do not completely resolve, establishing an extensive rehabilitation program

this pandemic downtime. It may take several weeks for the effects of regenerative medicine options to improve conditions. In addition, several treatments may be necessary. Prolotherapy, which is known as proliferative therapy, is a procedure that stimulates the body's healing capacity to strengthen and repair painful joints and connective tissue disorders. An injection is targeted to the injury site and the stimulation of the injection may cause the body to develop new collagen which can heal the tendon or ligament and provide stability which in return diminishes pain. Prolotherapy may also diminish inflammation in the joints, which can alleviate pain and improve range of motion. Several materials may be utilized in the injection. Examples are: dextrose, saline, platelet rich plasma (PRP), stem cells from adipose tissue, or bone marrow aspirate. Traumeel injections can be used as well. Traumeel is an all-natural plant homeopathic treatment which has proven to be beneficial with none of the side-effects that may occur with steroid use.



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