Psychology of an injured athlete: how you can help

Athletes react to injuries with a wide range of emotions, including denial, anger and depression. An injury often seems unfair to anyone who has been physically active and otherwise healthy. Although these feelings are real, it’s important to help the injured person move beyond them and find more positive coping strategies.

Injured individuals will exhibit three general categories of response:

- **Injury-relevant information processing.** The injured patient focuses on information related to the pain of the injury, awareness of the extent of the injury and questions about how the injury happened. The individual recognizes the negative consequences or inconvenience.

- **Emotional upheaval and reactive behavior.** Once the patient realizes he or she is injured, he or she may become emotionally agitated and experience a strong range of emotions that may include isolation and disconnection as well as shock, disbelief, denial or self-pity.

- **Positive outlook and coping.** The patient accepts the injury and deals with it, initiates positive efforts, exhibits an optimistic attitude and is relieved to sense progress.

Athletes may also feel identity loss, fear and anxiety, and lack of confidence. Most people show some negative emotions while working through their response to injury, but do not have great difficulty coping. Others, however, have serious difficulties that may require special attention. It’s important to recognize the difference.

Warning signs of poor adjustment include:

- Feelings of anger and confusion.
- Obsession with the question of when he or she can return to play.
- Denial.
- Repeatedly coming back to play too soon and experiencing re-injury.
- Exaggerated bragging about accomplishments.
- Dwelling on minor physical complaints.
- Guilt about letting others down.
- Withdrawal from significant others.
- Rapid mood swings.
- Indicating their feeling that no matter what is done, recovery will not occur.

There are several basic techniques that athletic trainers can use in their patient’s rehabilitation program to help with the healing process. For example:

- **Build rapport with the injured patient.** Empathy is helpful. Be realistic with goals.

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Growth plate injuries
By Carrie McCloskey, ATC

A growth plate, also known as an epiphyseal plate, is the area of growing tissue near each end of the long bones in children and adolescents. A growth plate determines the future length and shape of the mature bone. When growth is complete — sometime during adolescence — the growth plate closes and is replaced by solid bone. Because the growth plates are the weakest areas of the growing skeleton, they are vulnerable to fractures.

In a child, serious injury to a joint is more likely to damage a growth plate than the ligaments that stabilize the joint. Trauma that would cause a sprain in an adult might cause a growth plate fracture in a child. Growth plate fractures occur twice as often in boys as in girls. Girls’ bodies mature at an earlier age than boys, and their bones finish growing sooner. This means their growth plates are replaced by stronger, solid bone earlier.

One-third of all growth plate injuries occur in competitive sports such as football, basketball or gymnastics, while about 20 percent of growth plate fractures occur as a result of recreational activities such as biking, sledding, skiing or skateboarding. Fractures can result from a single traumatic event, such as a fall, or from chronic stress and overuse. Most growth plate fractures occur in the long bones of the fingers (phalanges) and the outer bone of the forearm (radius). They are also common in the lower bones of the leg (the tibia and fibula).

While growth plate injuries can be caused by a specific event or injury, they can also result from overuse. For example, a gymnast who practices for hours on the uneven bars, a runner training for long distances or a baseball pitcher perfecting his curveball can all have growth plate injuries.

An athlete may need to see a doctor if he or she is unable to continue playing because of pain following an acute or sudden injury, decreased ability to play over the long term because of persistent pain following a previous injury, or severe pain from acute injuries.

Since the 1960s, the Salter-Harris classification, which divides most growth plate fractures into five categories based on the type of damage, has been the standard. The categories are as follows:

Type I - Fracture through the growth plate: The epiphysis is completely separated from the end of the bone or the metaphysis, through the deep layer of the growth plate. The growth plate remains attached to the epiphysis. The doctor has to put the fracture back into place if it is significantly displaced. Type I injuries generally require a cast to protect the plate as it heals. Unless there is damage to the blood supply to the growth plate, it is likely that the bone will grow normally.

Type II - Fracture through the growth plate and metaphysis: This is the most common type of growth plate fracture. It runs through the growth plate and the metaphysis, but the epiphysis is not involved in the injury. Like Type I fractures, Type II fractures may need to be put back into place and immobilized. However, the growth plate fracture heals a great deal, especially in younger children. If it is not too displaced, the doctor may not need to put it back into position. In this case, it will strengthen with time.

Type III - Fracture through growth plate and epiphysis: This fracture occurs rarely and usually happens at the lower end of the tibia, one of the long bones of the lower leg. It happens when a fracture

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runs completely through the epiphysis and separates part of the epiphysis and growth plate from the metaphysis. Surgery is sometimes necessary to restore the joint surface to normal. The outlook or prognosis for growth is good if the blood supply to the separated portion of the epiphysis is still intact and if the joint surface heals in a normal position.

Type IV - Fracture through growth plate, metaphysis and epiphysis: This fracture runs through the epiphysis, across the growth plate, and into the metaphysis. Surgery is often needed to restore the joint surface to normal and to align the growth plate. Unless perfect alignment is achieved and maintained during healing, prognosis for growth is poor, and angulation (bending) of the bone may occur. This injury occurs commonly at the end of the humerus (the upper arm bone) near the elbow.

Type V - Compression fracture through growth plate: This uncommon injury occurs when the end of the bone is crushed and the growth plate is compressed. It is most likely to occur at the knee or ankle. Prognosis is poor, since premature stunting of growth is almost inevitable.

Treatment for growth plate injuries depends on the type of injury. In all cases, treatment should be started as soon as possible after injury and will generally involve a mix of immobilization, physical therapy or even surgery. Longterm follow-up may also be necessary.

About 85 percent of growth plate fractures heal without any lasting effect. The most frequent complication of a growth plate fracture is premature arrest of bone growth. The affected bone grows less than it would have without the injury, and the resulting limb could be shorter than the opposite, uninjured limb. If only part of the growth plate is injured, growth may be lopsided and the limb may become crooked.
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- **Educate the patient about the injury and recovery process.** When someone is working through a first injury, it is especially important to tell them what to expect during the recovery process. Help them understand the injury in practical terms.

- **Teach specific psychological coping skills.** The most important psychological skills to learn for rehabilitation are goal-setting, positive self-talk, imagery visualization and relaxation techniques.

- **Teach the patient how to cope with setbacks.** People recover at different rates, and setbacks are not uncommon. It is important to prepare an injured person for the setbacks he or she may experience. Inform the patient during the rapport stage that setbacks are likely to occur. At the same time, encourage the patient to maintain a positive attitude toward recovery. Setbacks are normal and not a cause for panic, so remind the patient there is no reason to be discouraged.

Several other techniques can also be suggested to coaches:

- **Keep the athlete involved.** Have the athlete assist with drills, be present for meetings and participate in any other activities that will keep him or her part of the team.

- **Contact the athlete often.** Phone, e-mail or just talk to the athlete in person to show they have not been forgotten. Athletes who feel forgotten because of the injury will not be as motivated to return to play. If the athlete is a minor, talk to the parents or guardians as well.

- **Let the athlete participate in conditioning or weightlifting, if possible.** For example, if the athlete has an ankle injury, have him or her come to the weight room and do seated upper body exercises while the team does its normal workout. If it is an upper body injury, have the athlete participate in running or jogging with the team as tolerated. Athletes who remain conditioned will have an easier time rejoining the team after their recovery.

Whenever an athlete sustains a serious injury with playing time lost, it can be traumatic for the team and staff as a whole. Helping athletes deal with injuries in positive ways will make their return to sport much smoother.

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**Biography**

**Meet Daniel Rueff, MD**

Dr. Daniel Rueff is a sports medicine fellow for UK Orthopaedics & Sports Medicine. Dr. Rueff was born and raised in Louisville, where he attended Trinity High School. He earned a bachelor’s degree in biology from UK and attended the University of Louisville Medical School. In 2001, he completed his orthopaedic surgery residency training at the University of Florida in Gainesville.
UK Sports Medicine

UK Sports Medicine is staffed by sports medicine fellowship-trained physicians. Physical therapy and rehabilitation services are available.

- We’re located at 601 Perimeter Drive, Suite 200, in Lexington (right off Alumni Drive).
- Call 859-323-4433 or 859-218-3131 for more information or to make an appointment.
- Our sports injury walk-in clinic requires no appointment – just walk in between 7:30 - 8:00 a.m. Monday-Friday.
- Visit us on the Web at ukhealthcare.uky.edu/sportsmedicine.