



COMMON INJURIES IN CIRCUS ARTISTS

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Ankle Sprain

An ankle sprain is caused by twisting or rolling the ankle in a way that is uncontrolled or outside of the joint's normal motion, resulting in a stretch or tear of the ligaments that support the ankle joint. The pain is usually at the lateral ankle and is worse with activity.

Who is affected: Acrobats of all levels. Sprained ankles occur with imperfect landings (over or under rotating, twisting, falling) or with unexpectedly stepping off the edge of a mat for any artist.

Achilles Tendinopathy

Achilles Tendinopathy is irritation of the Achilles tendon, due to repetitive high loads through the tendon as with running, jumping and landing. Pain is generally felt along the tendon anywhere from the insertion at the heel to further up on the tendon. It can be described as stiffness and soreness or pain especially with first steps and can present with or without swelling.

Who is affected: Acrobats. The level of repetitive load is high, especially on landings, during both training and performing. Acrobats who are either increasing their training or performing at a high level are most at risk.

Patellar Tendinopathy

Patellar tendinopathy is caused by high repetitive loads on the knee extensor muscles. Pain is generally localized at the anterior knee inferior to the patella.

Who is affected: Acrobats. The level of repetitive load is high, especially on landings, when training and performing. Acrobats who are either increasing their training or performing at a high level are most at risk.

Proximal Hamstring Tendinopathy or Strain

A proximal hamstring strain occurs when there is an overload of force at the hamstring near its insertion at the ischial tuberosity. This can lead to a stretch or tear of the muscle or tendon. The pain is usually deep and localized at the ischial tuberosity. It is worse with end range motion and with increased activity.

Who is affected: Beginning to intermediate level acrobats and aerialists are most affected as they are learning to control and gain strength in their end range of motion.

Femoroacetabular Impingement

Impingement occurs from premature contact of the head of the femur with the acetabulum during hip motions. This may be due to certain variations of the morphology at the hip joint and/or due to impaired movement patterns. Pain is generally deep in the groin and the patient may present with clicking or locking sensation at the joint.

Who is affected: Aerialists of all levels.

Facet Osteoarthritis/Hypertrophy

Common “wear and tear” at the lumbar facet joints.

Who is affected: Experienced and professional artists, in all types of acrobats including aerial performers. Management includes appropriate loading program, periodization, rehabilitation, and avoiding aggressive training and performance peaks. Depending on the type, acrobats (e.g. porters) may be able to rely on some amount of stiffness and stability created from bony structures. In attempts to stabilize their bodies, jumping acrobats (teeterboard, trampoline, tumblers/fast-track) can overload the bony structures of their spine upon landing due to high ground reaction forces.

Injuries to the Pelvis and Sacroiliac Joint (SIJ)

The pelvis and SIJ may possibly sustain acute flares from poor landings due to the many unstable surfaces acrobats land on (crash mats, trampoline, nets).

Adductors Injuries (strains)

When using apparatus, acrobats, especially Chinese pole acrobats, may sustain localized trauma to the adductor and/or pelvic muscles causing injuries such as contusions or strains.

Cervical /1st rib Injuries

The cervical rib /first rib is commonly injured in porters and bases. Common mechanisms include poor partnering skills (e.g. training with a new flyer), abrupt increase in amount of loading or repetitions in a novice porter, or excessive weight-bearing on shoulders. It may or may not be related to muscular imbalance or strength. In chronic cases, such injuries may often be associated with thoracic outlet syndrome.

Rotator Cuff Tendinopathy

Injuries occur due to excessive loads on the rotator cuff muscles as a result of both intrinsic and extrinsic factors. Pain is generally associated with rotation and elevation of the humerus.

Who is affected: Aerialists of all levels. By hanging from their arms, aerialists load their shoulders and rotator cuff muscles in an extreme end range. This seems to make both chronic and acute rotator cuff injuries common in this population.

Medial Epicondyle Tendinopathy

This is a tendinopathy that occurs with the overload of the common flexor tendon at the elbow. Pain is usually present at the insertion of the tendon at the medial epicondyle.

Who is affected: Beginning aerialists and those returning from a break in training. “Over-gripping” on a vertical apparatus due to fear or undertraining is one probable cause.

Circus Injury Citation List

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