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ORTHOPAEDIC MONTHLY



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Bow Legs in Children

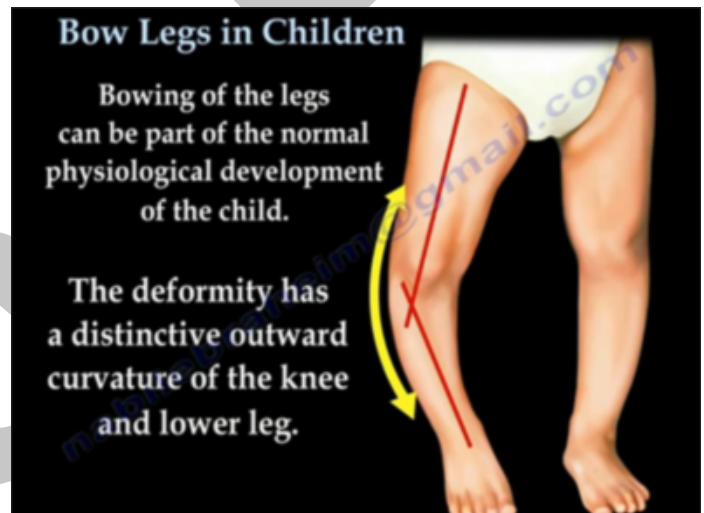
Why are my child's legs bowed? Is this normal? Bowing of the legs can be a normal part of the physiological development of the child. The deformity has a distinctive outward curvature of the knee and lower leg.

As the child becomes older, this will normally improve without treatment. The deformity is usually symmetrical and appropriate for the age of the patient. There will be no pain and no stiffness in a normal screening process.

In an infant born with bowed legs (genu varum), bowing begins to slowly improve. At about 18 months of age, the legs become straight. By ~~three to four~~  year, a child will have a knock-knee (genu valgum). This will correct itself by the age of ~~five to six~~  years, giving a slight appearance of a knock-knee. The normal adult alignment is between five and seven degrees.

Half of children correct their bowing earlier and the other half will correct it later. Children should be observed. No treatment is necessary and physicians should give it time.

Pathological bowing of the legs is due to a disease process and will get worse with time if not treated. Physicians will be concerned if the deformity is severe and if it runs in the family, especially short families, or if it occurs on one side of the body.



When bow leg is severe, it may result from underlying conditions such as Blount's disease. Blount's disease is a condition occurring in toddlers, as well as adolescents. It refers to an abnormality of the growth plate in the upper part of the tibia causing deformity that is often mistaken for bow leg.

Stinger/Burner

A "stinger" or "burner" is a common transient injury that occurs in contact sports such as football. The injury occurs from stretching the upper trunk of the brachial plexus or compression of the C5-C6 nerve root.

Stretching of the brachial plexus is the mechanism of injury typically seen in high school-aged athletes suffering from the condition. It occurs from a direct blow causing depression of the shoulder while the neck is forced into lateral flexion causing the neck to bend toward the opposite side. Compression of the nerve root is the basis of injury most often associated with older athletes.

Patients will complain of burning pain, numbness, and weakness with painful symptoms starting above the shoulder, radiating down to the arm. Symptoms will start immediately following the trauma.



Symptoms can last from several minutes up to several weeks, but usually resolve themselves.

A stinger or burner is a transient, intensely painful nerve injury that may result in time loss from competition. It is not a cervical cord injury and it is not a transient quadriplegia.

When considering treatment options, athletes should stop

participating in sports until full recovery of strength, sensation, and pain-free range of motion of the cervical spine is achieved. Protective equipment should be provided in addition to: ice/heat, anti-inflammatory medications and rehabilitative exercises. A MRI may be needed to rule out a herniated disc and surgery is not usually necessary.

Female Athlete Triad

Female athlete triad is a condition that generally affects athletes with subjective judgment such as gymnasts, dancers, or athletes with weight classifications such as body builders.

It is a syndrome in which eating disorders, amenorrhoea, and osteoporosis affect certain groups of athletes. The eating disorders, amenorrhoea (loss of a girl's menstrual period) and the development of osteoporosis will all negatively affect the athlete.

Each component of the female athlete triad can occur from mild to severe. Not all components need to be present, but if one component is found, the doctor should check for the others.

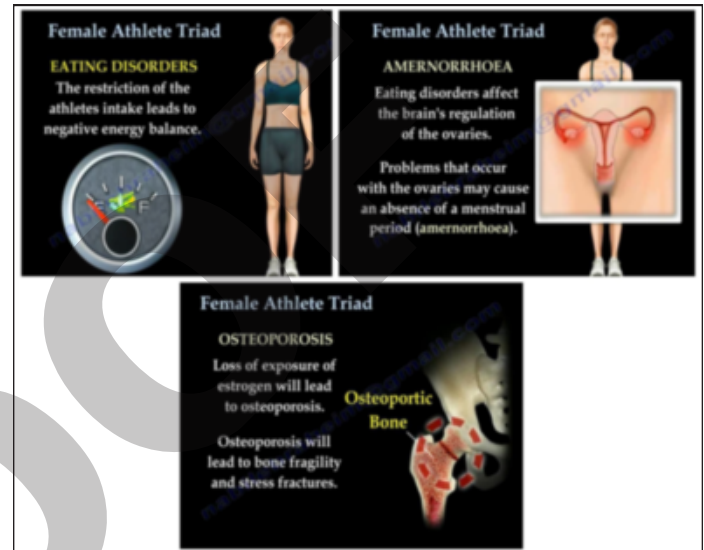
Eating Disorders: Athletes try to restrict their diet in order to maintain lower body fat which causes an imbalance of energy. The restriction of the athlete's intake leads to negative energy balance.

Amenorrhoea: Eating disorders affect the brain's regulation of the ovaries. Problems that occur with the ovaries may cause an absence of a menstrual period. It occurs in about 65 percent of athletes such as runners and ballet dancers. There are two types of amenorrhoea: primary and secondary. In primary, menstruation cycles never start. In secondary, there are no menses for 6 months or absence of 3 or more consecutive menstrual cycles.

Osteoporosis: A loss of exposure of estrogen will lead to osteoporosis which leads to bone fragility and stress fractures. Approximately 90 percent of bone mineral content occurs by the end of adolescence.

Treatment should include the following:

- Recognition of the disorder
- Prevention
- Correction of the energy deficit



- Increase dietary calcium
- Maintaining bone mass
- Resuming normal menstrual function

To overcome the effects of the female athlete triad, patients will need a team consisting of an athletic trainer, nutritionist, psychiatrist, and a physician.

A female patient with a history of stress fractures should undergo a work-up. This including obtaining a menstrual cycle history, nutritional consult, bone density and psychological consult for eating disorders.

US News Ranks UT Orthopaedics Top in Region

US News and World Report recently recognized the University of Toledo's Orthopaedic Center as the best hospital in the Toledo metro area for 2011-2012.

As a whole, the University of Toledo Medical Center was also ranked as the best hospital in the Toledo metro area, recognized as a high performer in seven clinical specialties.

We believe US News and World Report's rankings confirm the Orthopaedic Center as the preferred destination for orthopaedic care in the area. We offer services from neck-to-toe and appointments within 24 hours; emergencies are seen immediately. We want to congratulate the physicians and support staff for job well-done! We will continue to strive for excellence in patient care.

Pectoralis Muscle Tear

The pectoralis major is a large muscle which lies just in front of the chest wall. It is a powerful adductor, internal rotator, and flexor of the shoulder. The pectoralis major has two heads: the upper part (clavicular head) and the lower part (sternal head); it inserts into the humerus. The pectoralis major muscle works to push the arm in front of the body.

Ruptures of the pectoralis major muscle are due to weight training, particularly during bench press maneuvers. However, ruptures or tears of this muscle are not very common.

Patients will experience pain while extending the arm with ecchymosis present down the arm and upper chest. Pain is worsened with resisted adduction and extension. There will also be a loss of normal contour of the axillary fold.

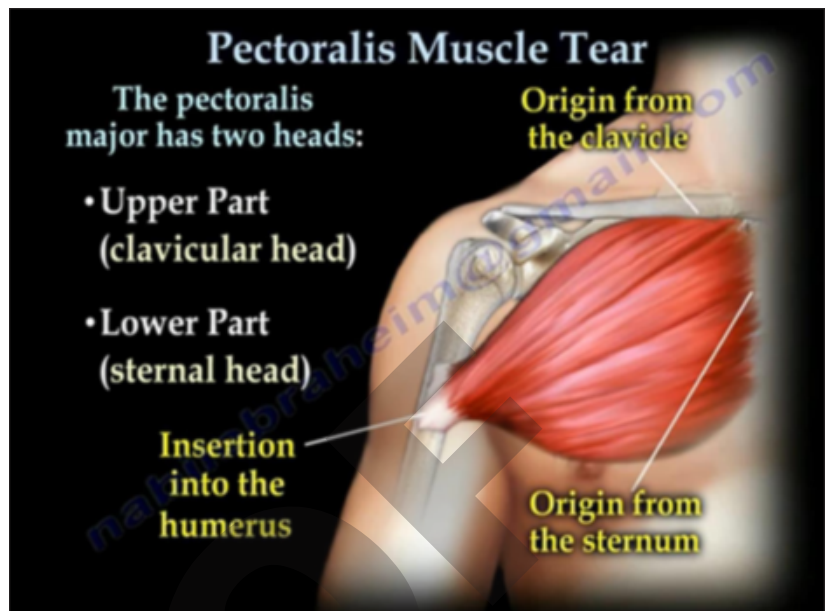
Ruptures usually occur in the following groups:

- Males between the ages of 20-50 years
- Weight lifters (especially bench press)
- Football players and wrestlers, etc.

Ruptures can occur in the absence of taking steroids. They usually occur as a complete tear from the bony insertion of the humerus.

There are ways, however, to prevent ruptures. Patients should practice proper bench press techniques such as limiting the distance the bar is lowered and narrowing the grip of the hands on the bar.

For a complete tear, repair needs to be done early. For delayed or



chronic ruptures which usually occur longer than a few months, physicians will likely need to use a tendon graft. The muscle is retracted, the operation is difficult, and the results are not usually as good as in acute repairs.

In acute repairs, the tendon is sutured and attached to the humerus with anchors. An incision is made, anchors are inserted into the humerus, the anchors are placed, and the tendon is sutured. Sutures are then tightened to approximate the tendon to the bone.

Pudendal Nerve Palsy

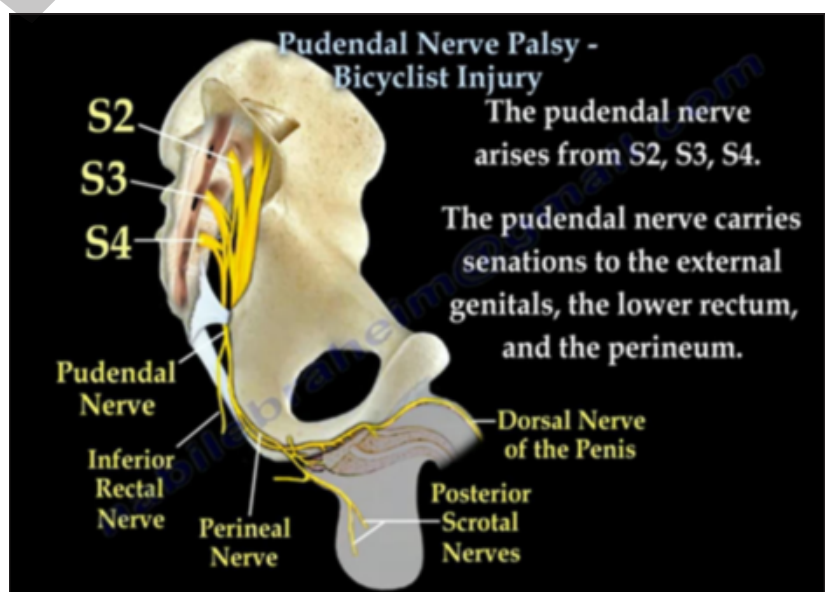
Damage to the pudendal nerve can occur suddenly as a result of trauma to the pelvic region, prolonged bicycling, fractures or from falls.

The pudendal nerve re-enters the pelvis under the sacrotuberous ligament and gives three branches. The first branch, the inferior rectal nerve, provides rectal tone and perianal sensation. The second branch, the perineal nerve, gives scrotal sensation. The third branch, the dorsal nerve of the penis, gives branches to the corpus callosum.

The pudendal nerve arises from S2, S3 and S4. The pudendal nerve carries sensations to the external genitals, the lower rectum, and the perineum.

Symptoms of pudendal nerve palsy can start suddenly or develop over time. Symptoms include loss of sensation or numbness, burning or stabbing pain, difficulty with bladder and bowel function, and sexual dysfunction.

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Pudendal Nerve Palsy continued

Causes of pudendal nerve palsy include prolonged sitting exercises such as bicycling or following fracture table traction where the nerve is compressed between the ischium and the hard object.

Pudendal nerve palsy is usually transient and improves with time. Treatment options include:

- Rest
- Physical therapy
- Stretches and exercises
- Anti-inflammatory medications
- Injections/nerve blocks
- Surgery (last resort)

Prevention suggestions for bicyclists include changing the sitting position while riding the bicycle and changing the seat from narrow to wide.

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