

Common Back injuries in fast Bowlers



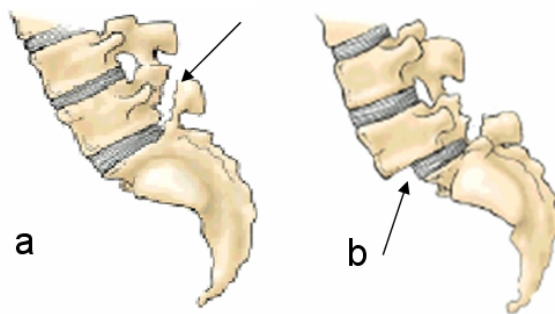
Frank "Typhoon" Tyson (English express bowler in the 1950's) was asked why he bowled so fast and answered: "For the pure animal thrill of it", Frank Tyson's career was cut short by a severe back injury.

The bowling action involves the spine moving from hyperextension and rotation with added impact loading as the back foot lands forward into flexion. This places significant stresses on the bones and joints of the lumbar spine principally.

Muscle and ligamentous injuries can occur, are not severe and will settle rapidly with standard treatments including rest from bowling, NSAID medication and physiotherapy. Pain that persists more than 2-3 weeks despite this treatment or recurs with further bowling needs referral for medical investigation. The main serious injuries sustained are as follows:

Spondylolysis (a)

This is the classical fast bowler injury suffered by Dennis Lillee and many other bowlers. It is a stress fracture of the lumbar vertebral body which needs medical imaging to diagnose. The bowler is rested from bowling and after the acute pain settles begins a rehabilitation program involving abdominal and lumbar muscle strengthening, possible bracing to prevent hyperextension, often swimming for aerobic fitness and repeated review with medical imaging to assess fracture healing. When the fracture has healed a graduated return to bowling begins. Fast bowlers deliver the ball using two classical actions; side on (Jeff Thomson) and front on (Curtley Ambrose). Bowlers with mixed actions are more prone to these injuries and coaching to instruct the bowler in one type of action helps prevent recurrence. Despite this regime some fractures fail to heal and surgery may be undertaken.



Spondylolisthesis (b)

If the vertebral body has ununited fractures through both sides the upper vertebral body may slide forward on the lower vertebral body. This places tensile stresses on the connecting soft tissue. Treatment involves avoiding extension activities and abdominal and lumbar muscle strengthening including Pilates exercises for trunk stability. Acute exacerbations are treated with standard treatment. Surgery is rarely indicated unless the slip becomes too marked.

Schuerman's syndrome/kyphosis

During development of the spine abnormalities of the growth plates of vertebral bodies can lead to anterior wedging of these bodies sometimes producing a "hump" in the back. This segment is stiff and repetitive extension/flexion movements of the spine can produce episodes of pain. The treatment is activity modification, spinal extension exercises and if the deformity progresses, bracing, but rarely surgery. This is the condition which troubled Rodney Hogg.

Other injuries such as vertebral disc injury and facet joint injury can occur but in the young spine are less common and therefore have not been discussed.



Schurmann's Disease (Kyphosis)

Important points

- The bowling action particularly if faulty can put major stress on the spine
- Persistent back pain indicates probable underlying vertebral spine injury
- Such pain needs medical referral for imaging to diagnose the injury
- The treatment of these injuries is conservative, surgery is rarely required

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