

## Hamstring Injury-Price's Model of Assessment of Severity

1. **Incident.** This model is more applicable in the presence of a sudden onset of posterior thigh pain that prevents continuance of training or playing. Gradual onset of vague pain particularly with symptoms extending proximal or distal to the posterior thigh associated with positive adverse neural tension arouses suspicion of a proximal contribution of symptoms.
2. **Past History.** A previous hamstring strain (particularly in the preceding 12 months) is almost always associated with a >3 week rehabilitation interval.
3. **Walk pain.** Less than 1 day to walk at normal pace pain free is usually associated with a return to play in <3 weeks, if 1-2D, 3-4 wks and >3D then >4wks rehabilitation is usually required.
4. **AKE deficit.** The degree of Active Knee Extension deficit has a strong association with severity of hamstring injury. An AKE deficit  $<10^{\circ}$  ( $\pm$ pain) is usually associated with a 1-2 week rehab,  $10^{\circ}$ - $20^{\circ}$  =2-3wks,  $20^{\circ}$ - $30^{\circ}$  =3-4wks,  $30^{\circ}$ - $40^{\circ}$  =4-5wks,  $>40^{\circ}$  =5-6wks. This test is conducted in supine with the thigh at  $90^{\circ}$ , no pillow and may be reproduced with the hands clasped behind the posterodistal thigh comparing the non injured hamstring length (knee angle to point of pain reproduction where the pain reproduced is the same as that which prevented the continuance of athletic activity) with the injured lower limb.

**Figure 1** The reliability study confirmed AKE (left), the more commonly used clinical version (right).



5. **Lateral distal strain.** Strains in the Biceps Femoris are usually more significant than medial hamstring strains.
6. **MRI.** MRI +ve injuries are more likely to require >3wks rehab.
7. Strength tests are usually positive in hamstring strains although not reliably associated with prognosis.
8. **Age** Athletes >30yo often take a further week in addition to the above prognostic indicators.

**This model is based on Price Warren's clinical experience in the assessment of hundreds of hamstring strains. (Warren, 2008)**