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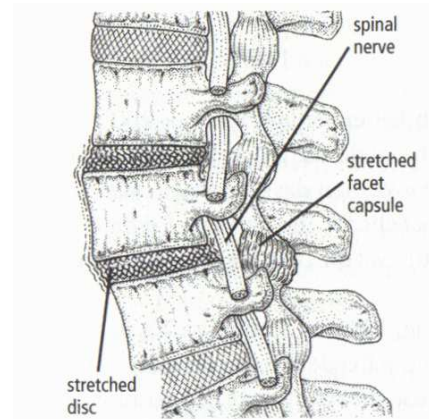
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Stage V: Segmental Instability

What is Segmental Instability?

Segmental instability is caused when one link in the spine is too loose instead of too stiff. It happens when the disc and the facet joints become stretched and weakened by a degenerative process. When the fibrous union of both disc and facets becomes stretched, the segment must rely on the primitive bony notching of the facets to keep itself in place.

The micro-trauma from the repetitive slippage and the giving-way incidents all add up to inflame the structures trying to hold everything in place.



Causes of Segmental Instability

- *Primary breakdown of the disc:*

The flattened disc can no longer prime itself and spring-load its vertebra to keep the segment taut as the spine bends forward causing excessive shearing.

- *Primary breakdown of the facets:*

As the friction between two joint surfaces increase, the cartilage buffer within the joint starts to wear down causing the joint capsule to become slack and allow excessive joint play during bending activities. With time, this excessive wear and tear will lead to bony outgrowth creating an enveloping lip to contain the upper joint surface.

- *Incompetence of the 'bony catch' mechanism of the facet joints:*

The bone to bone backup of the facet joints becomes incompetent placing a great deal of strain on the disc.

- *Weakness and poor coordination of the trunk muscles:*

As the disc flattens out due to the degenerative process, the intrinsic muscles have a harder time to control the unstable segment and the vertebra becomes vulnerable to slip.

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Sign and Symptoms

Acute phase

- The back becomes extra rigid
- Sharp pain in the spine coupled with a disturbed sensation down the leg
- Spasm of the long back muscles
- Uncomfortable in most positions
- Usual position of comfort is lying in the fetal position with a pillow between your knees

Sub- acute phase

- No pain down the leg
- Back slips/clicks when flexing as your spine tries to avoid skidding on the flaccid disc.
- Stiffness around the spine becomes dispersed in around the upper back and shoulders which may cause occasional headaches.
- Difficulty rising from your seat after prolonged sitting often associated with a short sudden painful catch

Chronic phase

- Muscle stiffness all over the back and local soreness at the problem level
- While the condition remains silent, your back rarely gives way when you go to bend forward and you hardly ever feel it clicking and grinding.
- Keep in mind that your back is very susceptible to revert back to the acute phase when it is caught off-guard thus strengthening of the weak link is imperative as a long term preventative measure.

Exercise

Your physiotherapist will prescribe the appropriate exercise regime in accordance with the phase of your condition, It is essential that you follow this regimen very closely.

*Acknowledgement to Sarah Keys (pictures & content)

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