Subjective Information

HEALTH HISTORY QUESTIONS

- Standardized forms, such as the Vernon-Mior Neck Pain and Disability Index or the Revised Oswestry Low Back Pain Questionnaire *(Chapman-Smith, 1996)* can be used to measure the client's initial symptoms.
- What are the type, onset and location of pain and other symptoms? What are the client's activity levels?
- How long has the current episode lasted?
- Have there been any previous injuries to the affected area with cervical involvement, such as whiplash?
- With the low back, is there a history of episodes of back pain, perhaps a sensation of the back locking? Has there been a history of injuries to the lower limbs that would alter gait or posture, creating biomechanical imbalances? Has the client experienced surgery, such as abdominal surgery, that would create scar tissue, again affecting biomechanics?
- What factors aggravate and relieve the symptoms? Does coughing or sneezing aggravate the symptoms? Does walking or lying down relieve symptoms?
- Has the condition been medically diagnosed? Has the client had surgery for this condition? Is the client taking any medication or parallel therapies?

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- With acute disc herniation, tenderness, heat, spasm and active trigger points are likely present in muscles that cross the affected areas.

Testing

Degenerative Disc Disease

- **AF** and **PR ROM** of either the cervical or lumbar spine may reveal reduced ranges in AF and PR ROM, with PR ROM having more available range. In both, cervical and lumbar spine extension is most restricted. Stiffness is likely. Pain may or may not be present, depending on numerous factors including stage of degeneration. The end feel is likely capsular in the affected areas.
- **AR isometric testing** may reveal weakness in affected muscles, depending on the stage of degeneration.

Acute Herniation

- **AF** and **PR ROM** in either the cervical or lumbar spine reveal ranges limited by pain and muscle spasm, passive range less so than active.
- In the lumbar spine, **active free flexion** may have a deviation to one side. If the movement is away from the painful side, vertebral joint derangement may be present; if the movement is towards the painful side, an entrapped or adhered nerve root may be present *(McKenzie, 1989)*. Another source states that if sidebending away from the painful side increases the symptoms, the problem may be a disc herniation medial to the nerve root, or it may be muscular or articular in origin. If sidebending towards the painful side increases the symptoms, disc herniation is lateral to the nerve root, or the lesion is inside the vertebral joints *(Magee, 1992)*.
- **With posterior or posterolateral herniations that are contained by the annular fibres:** movements can reduce the symptoms; flexion is limited and symptoms peripheralize with movement; extension is also limited and symptoms centralize with movement.
- **With a complete annular rupture and sequestered nucleus:** movement cannot relieve the symptoms as the hydrostatic disc mechanism is no longer intact.

Special Tests

- Key findings for **nerve root impingement** are motor weakness and dermatomal sensory changes such as paresthesia or sensation loss in the distribution for the specific affected vertebral level. Decreased ability to perform straight leg raising, dermatomal radiating pain and depressed deep tendon reflexes may be associated with referred pain from facet joints, interspinous ligaments and spinal muscles as well as the disc; therefore, they are not considered true signs of lumbar nerve root compression *(Kisner, Colby, 1996)*.
- A cervical disc herniation may give positive results with **upper limb tension tests, Spurling's, Valsalva's** and **deep tendon reflex tests.** Specific **active resisted** and

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