Manual Handling Workbook

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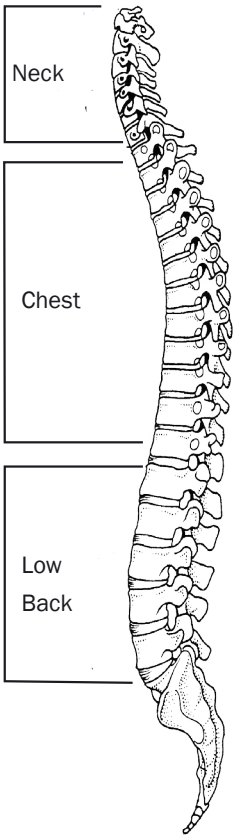
The Spine

The spine is one of the main components of the skeletal system. It provides central support and attachment for muscles and ligaments, allows movement to occur and provides protection for the spinal cord. It consists of 33 vertebrae (individual bones).



What can go wrong?

Natural Curves

When the spine is in its natural position it is curved - an elongated 'S' shape.
This gives the spine stability and strength. The curves help to absorb the weight of the upper body as well as any shock or impact. Curves absorb strain better than straight lines (look at the arch supports of bridges).
When we lose the natural curves of our spine - when we stoop forward - we become more vulnerable to injury.

Discs

These lie between the bones of the spine (the vertebra) and are made of cartilage on the outside and a jelly-like fluid on the inside. The discs help us to move more freely and effectively.
When the spine is 'loaded' the discs are compressed and squashed causing some fluid to be squeezed out (creep effect). This makes them more vulnerable to injury.
When the spine is at rest, the fluid creeps back but it takes 5 - 7 times longer. This 'hydration process' occurs naturally when we are asleep.

Normal Movement

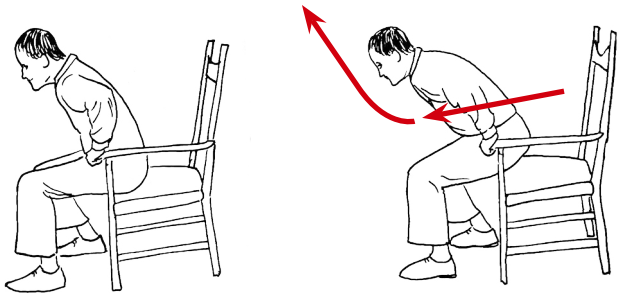
Definition: *Normal movement is the pattern of movement the body naturally adopts when changing from one position to another. It is the most efficient and effective way of moving.*

Clients should always be encouraged to do as much as they can for themselves.

1. Sitting to standing

Clients need to:

- shuffle forwards to the front edge of the chair/bed
- place their feet under their knees (a wide base will give extra stability)
- lean forward (to move their centre of gravity forwards)
- push using their arms with elbows out



- move forward, then forward and up

2. Shuffling to the front of the chair

Starting at the front of the chair reduces the effort required to stand.

- The client should lean forward and to one side whilst raising one buttock and then the other, rocking themselves to the front of the chair