WHY NECK PAIN

Mechanical pain occurs when the joint between two bones has been placed in a position that overstretches the surrounding soft tissues. This is true for mechanical pain in any joint of the body, but in the spine there are additional factors. Here the tissues that surround the joints between the vertebrae, in particular the ligaments, are also responsible for supporting the soft discs that separate the vertebrae. They hold the discs in an enclosed compartment and help to form a shock absorbing mechanism.

Pain of mechanical origin may arise in the neck for the following reasons. The ligaments and other soft tissues which hold the vertebrae together can simply be overstretched without further damage. Overstretching may be caused by an outside force placing a sudden severe strain on the neck, for example due to an accident or during contact sport. This type of stress cannot easily be avoided as it occurs unexpectedly and takes a person unawares. More often overstretching is caused by postural stresses which place less severe strains on the neck over a longer time period. This type of stress is exerted *by ourselves on our own neck* and can easily be influenced. Here lies our main responsibility in the self-treatment and prevention of neck pain.

Complications arise when overstretching of soft tissues leads to actual tissue damage. It is often thought that neck pain is caused by strained muscles. Muscles, which are the source of power and cause movement, can indeed be overstretched and injured. This requires a considerable amount of external force and does not happen all that often. Moreover, muscles usually heal rapidly and seldom cause pain lasting for more than a week or two. On the other hand, whenever the impact of the injuring force is severe enough to affect muscles, the underlying soft tissues such as capsule and ligaments will be damaged as well. In fact, usually these are damaged long before the muscles. When these tissues heal they may form scar tissues, become less elastic and shorten. At this stage even normal movements may stretch the scars in these shortened structures and produce pain. Unless appropriate exercises are performed to gradually stretch and lengthen these structures and restore their normal flexibility, they may become a continuous source of neck pain or headaches.

Complications of another nature arise when the ligaments surrounding the disc are injured to such an extent that the disc loses its ability to absorb shock and its outer wall becomes weakened. This allows the soft inside of the disc to bulge outwards and, in extreme cases, to burst through the outer ligament, which may cause serious problems. When the disc bulge protrudes far enough backwards it may press painfully on a spinal nerve. This may cause some of the pains felt well away from the source of the trouble, for example in the arm or hand.

Due to this bulging the disc may become severely distorted and prevent the vertebrae from lining up properly during movement. In this case some movements may be blocked partially or completely and forcing of these movements causes severe pain. This is the reason that in some people the head can only be held in an off-centre position. Those of you, who experience a sudden onset of pain and following this are unable to move the head normally, may have some bulging of the soft disc material. This need not be a cause for alarm. The movements, described in this book, are carefully designed to reduce any disturbance of this nature.

POSTURAL STRESSES

The most common form of neck pain is caused by overstretching of ligaments due to postural stresses. This may occur when sitting with poor posture for a long time (*Fig. 2:6*); when lying or sleeping overnight with the head in an awkward position (*Fig. 2:7 and 2:7a*) and when working in strained positions (*Fig. 2:8*).

Of all these postural stresses the poor sitting posture — that is, sitting with the head protruded — is by far the one most often at fault. Poor posture in itself may produce neck pain. But, once neck problems have developed, poor posture will frequently make them worse and always perpetuate them.

The main theme of this chapter is that pain of postural origin will not occur, if you avoid prolonged overstretching. Should pain develop, then there are certain movements you can perform in order to stop that pain. You should not have to seek assistance whenever postural pain arises.