SESSION II

Paper (c)

THE LOGGER'S BACK - A PHYSIOTHERAPISTS IMPRESSION

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Although some of you may have been to a physiotherapist before, many will not have and so a brief description of what we do is appropriate.

Physiotherapists specialise in human movement and are primarily concerned with the treatment and prevention of movement disorders. They treat these problems of the body by physical means, e.g. mobilisation, manipulation and exercise. Most importantly, they are also involved with prevention of further injury by education of patients and the public alike.

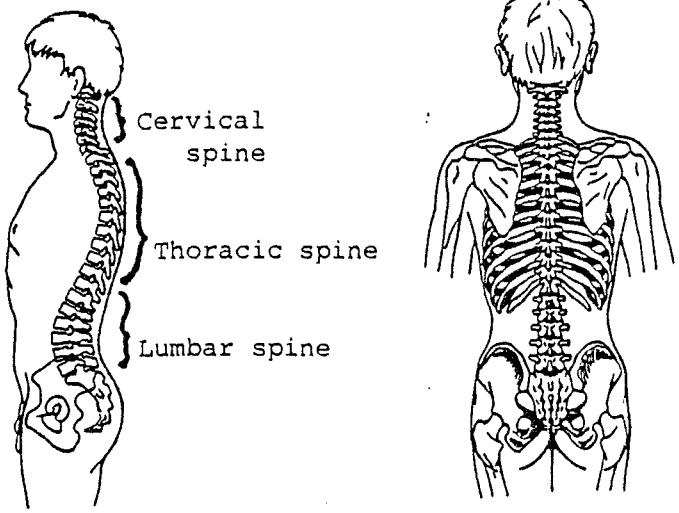
Where possible, a patient is encouraged to adopt a "self help" attitude throughout treatment, therefore learning not only how to relieve the symptoms but also how to prevent further injury.

How do you come in contact with a physiotherapist?

- by referral from a doctor; either through ACC or by a "doctors note"; with ACC the State pays, whereas the patient pays with a "note".

- or by self referral - the patient again pays for his treatment.

(Approximately 70% of our patients are referred through ACC).



The disorders that physiotherapists deal with can be in any part of the body, but the persons activities will dictate which are the most likely complaints. Thus, the All Blacks physiotherapist is most likely to treat various strains and sprains of muscles and joints, deep bruising and the occasional neck and back problem. Employees from Taupo's garment factories, by comparison, typically present with neck and back problems arising from their working posture.

The loggers we've seen show various strains and sprains but, principally, they have back problems. These are predominantly in the low back

(lumbar spine), followed by the mid back (thoracic spine) and then the neck.

Since most injuries occur in the lumbar spine we'll consider it in more detail. The lumbar spine consists of five bones (or "vertebrae") connected to each other by intervertebral discs and supported by various ligaments and muscles. It is the discs that allow us to move as freely as we do.

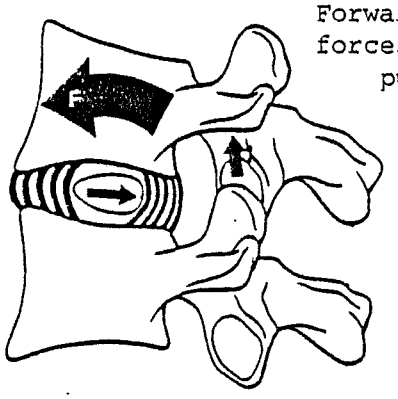
Discs are formed in two parts :

- The annulus - a thick laminated ligament within which is:
- the nucleus pulposus - a thick gel with a high water content. It behaves as a highly viscous fluid.

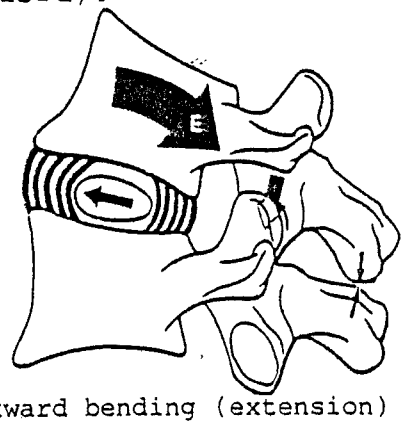
The discs are continually being compressed in our daily lives. Provided the forces are constantly being changed and the pressure on the annulus increased and decreased there are no problems.

The weakest part of the spine is posteriorly (behind), where the vertebral joints interfere with the ligament structure. Weaknesses occur more easily in the posterior annular wall than anteriorly (or in front), where the anterior longitudinal ligament gives the annulus a doubly thick wall.

As you bend forwards and backwards the gel moves to the position of less pressure. As you move forwards it bulges posteriorly and if you move backwards it bulges anteriorly.



Forward bending(flexion) forces the nucleus pulposus backwards

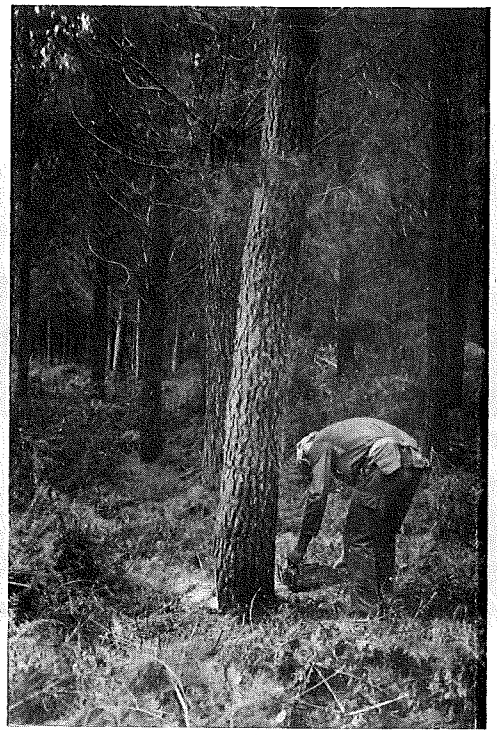


Backward bending (extension) forces thenucleus pulposus backwards.

If one position is kept for a prolonged period of time without change (such as sitting here at this conference) then extra stress is added to the annular wall and overstretching occurs. The gel moves towards this weakened area, bulges beyond its normal confines and the problems begin.

The pain begins as a dull backache which, if ignored and continually abused, can develop into buttock and/or leg pain, which may radiate as far as the foot. The pain is caused by a compression of a nerve by the bulge in the annulus. In severe cases you may find you cannot straighten easily as the bulge interferes with the vertebral joint mechanism.

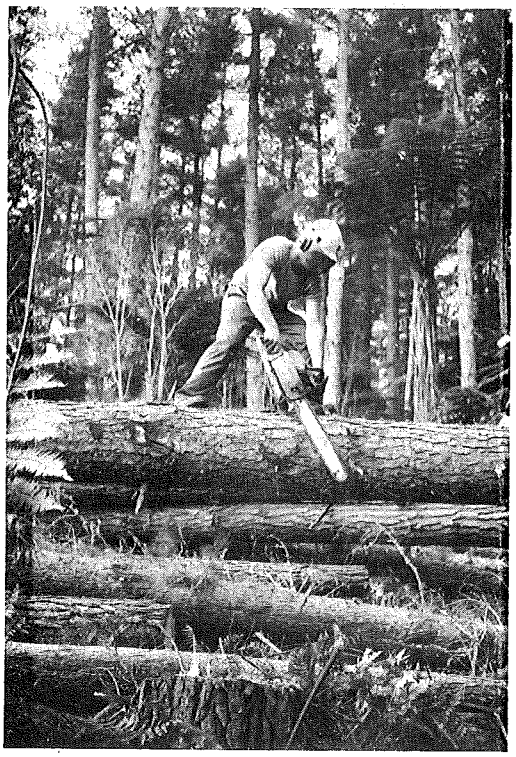
It is obvious that a number of logging activities leave the worker open to such stresses.



Felling

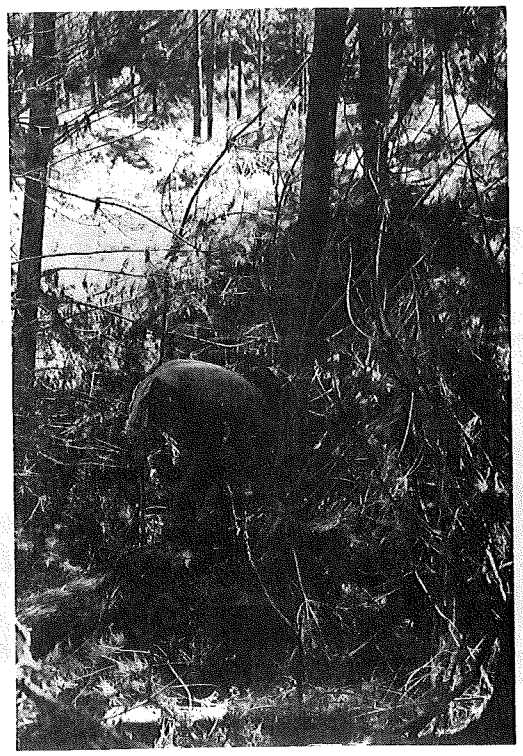
Loading chutes

Skidwork



Delimbing

Breaking out, unstropping and machine operation.



Delimbing

All these activities include a degree of forward bending (flexion), either repetitive or prolonged posturing. The added weight of a chainsaw, log or equipment, increases the amount of compression on the intervertebral discs.

How do loggers avoid back injuries?

Once the principles of the cause of back pain are understood it is easy to avoid such injuries. If posterior pressure is relieved at regular intervals throughout the working day and correct postures kept while working and resting, the number of patients we see should be minimised. I must point out here that the "danger" period for everyone is first thing on climbing out of bed. Overnight the discs take in more water and are very vulnerable to any increase in pressure. Putting on your work boots, cramming into the gang transport, driving to work, and immediately starting heavy physical work all increase the chances of damage.

If you have been sitting around all weekend or bent over the engine of your car, you have already begun to stretch the annular wall. Continued abuse on Monday morning may be the final straw.

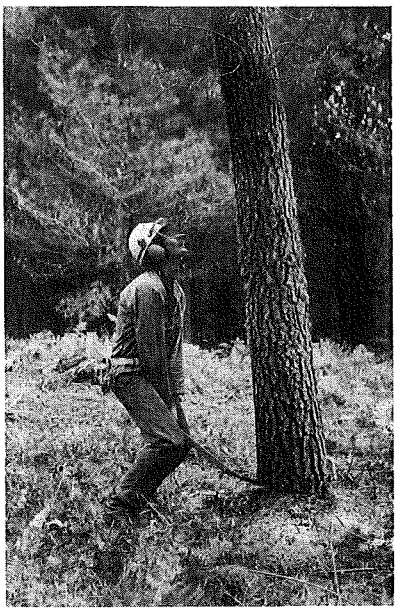
The advice and exercises that follow are not only to be utilised at work but must be observed throughout all daily living, be it work or play.

1. Correct working postures must be used, e.g. :

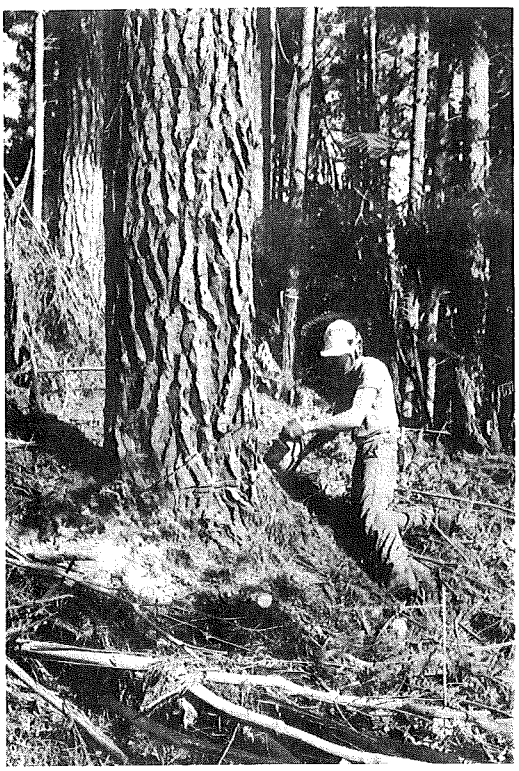
   - bend your knees <u>not</u> your back
   - lift correctly
   - where possible let the tree take the weight of chainsaw.

2. Change working techniques where necessary :

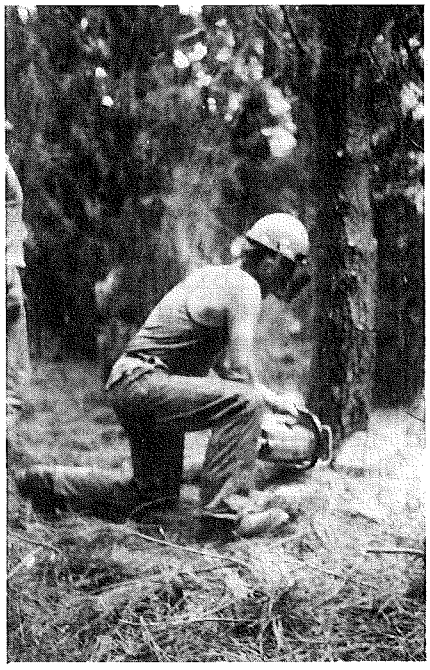
   - avoid crowded vans
   - improved felling and delimbing posture.



Straight back, bend at the knees

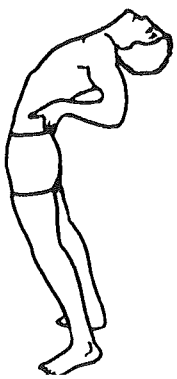


Lowered on to one knee rather than bending over



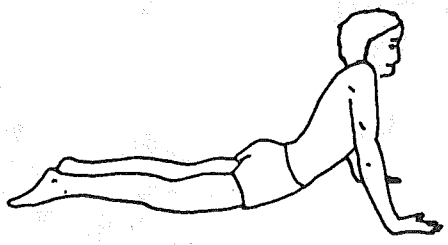
Another example of bending the knee to avoid back strain

Kneeling on the log when delimbing



3. Simple corrective exercises which can be used as a prevention and a cure are recommended.

   (a) Stand erect; then placing your hands in the small of your back, bend backwards; hollowing your lumbar spine and then back to the erect position. Repeat ten times.



or (b) Lying face down with your hands and arms positioned for a press up, perform a half press up keeping your hips and legs slack and arching your lumbar spine. Repeat ten times.

Each exercise should be done before and after any heavy lifting or prolonged forward bending and, especially, if low back pain has developed. Each exercise done correctly takes one minute to perform ten times. If done three times a day as mainteanance or two hourly if back pain is evident; they should help avoid further disability or lost time.

CONCLUSION

Are loggers a high risk group?

The numbers of visits to our clinic are inconclusive. They do not appear to be any more frequent than for other industries but perhaps the economic consequences are more significant. The healing process in average cases of low back injury can take 6-8 weeks and, in some instances, many months. The logger may not be able to return to his previous employment due to the arduous nature of his work.

We have also been asked to comment on the possibility of bludgers. I assure you that all loggers we have seen have had a genuine problem. Less than 1% of these have shown some subsequent signs of faking, through reluctance to return to work. Whether this is because of laziness I cannot comment but until you have endured back problems yourselves you will find it hard to understand the continual apprehension that follows. There is an understandable fear that further injury may occur and be even worse the next time.

It is therefore important that people are educated in back care and that they learn to avoid and, if necessary, cope with any problems adequately.

REFERENCES

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