

# Low Back Pain

WITH JOEL PRESS

CHAPTER

21

Low back pain is an extremely common symptom in the general population and among athletes. In this chapter we outline some salient epidemiological data and detail a clinical perspective of managing low back pain before discussing the evaluation and treatment of back pain.

## Epidemiology

Back pain affects up to 85% of the population at some time in their lives. The vast majority (90%) improve over a three-month period, but nearly 50% will have at least one recurrent episode. The estimated annual cost of low back pain in the United States is over US\$40 billion. Low back pain is the most common disability in those under the age of 45, and the most expensive health care problem in those between the ages of 20 and 50. Back problems account for a significant percentage (25% in United States) of workers compensation claims, although the incidence of work-related low back pain varies considerably among countries (e.g. much less in Scandinavia than the United States).

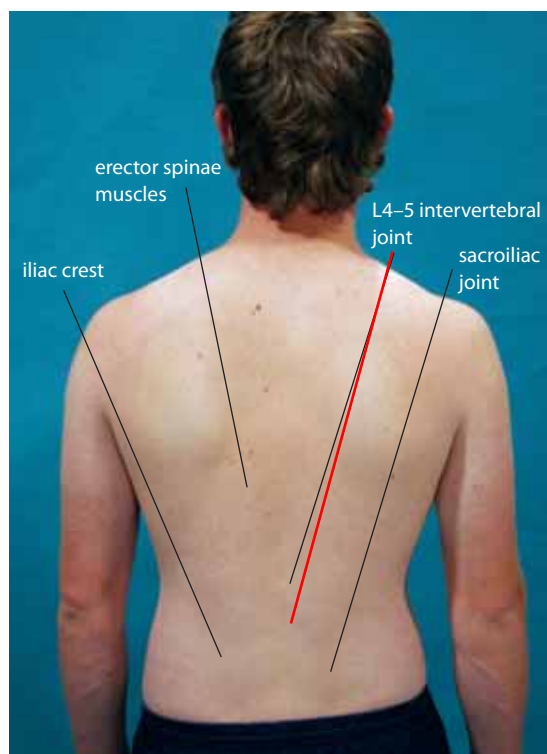
Considerable research has been undertaken investigating the risk factors for low back pain, which are summarized in Table 21.1.

## Clinical perspective

As with neck pain, it is often not possible to make a precise anatomical and pathological diagnosis. However, this does not prevent management and treatment. In the majority of cases of low back pain, the principles of management depend on careful assessment to detect any abnormality and then appropriate treatment to correct that abnormality. The anatomy

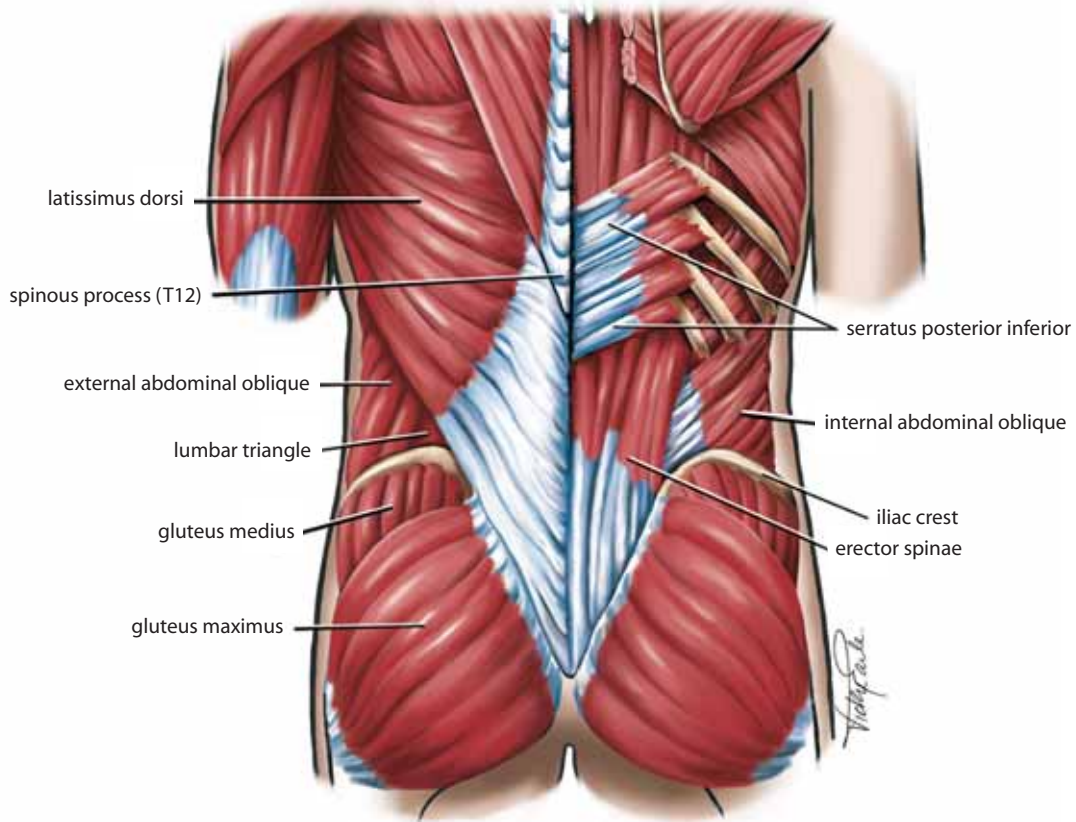
of the low back is shown in Figure 21.1. The lumbar spine pain generators are listed in Table 21.2.

There are a small number of conditions causing low back pain in which a definitive diagnosis can be made. Fractures related to direct trauma, such as a transverse process fracture or compression fracture of

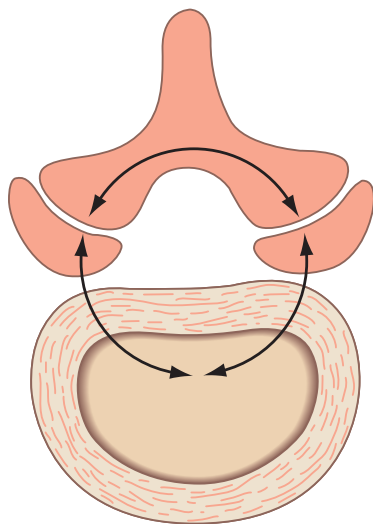


**Figure 21.1** Anatomy of the low back

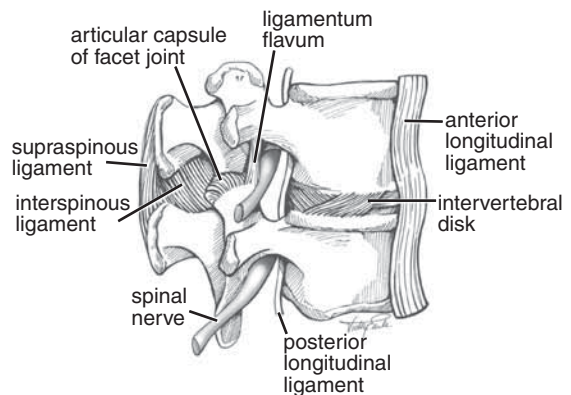
(a) Surface anatomy



(b) Muscles of the lower back from behind



(c) The three joint complex consisting of the intervertebral disk and the two zygapophyseal (facet) joints



(d) The intervertebral segment

the vertebra, occur infrequently in the lumbar spine. Significant soft tissue injury is usually associated with these fractures. It is usually also possible to make a definitive diagnosis in those patients presenting with nerve root compression who have typical lancinating