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In this chapter, 14 papers and closely related references are discussed. The papers have been selected for the frequency with which they have been cited in the orthopaedic literature. All have been subject to peer review before being published and all have achieved the accolade of multiple citations. All are 'classics' and the value of a detailed critique by a single author at this point is thus somewhat moot. This chapter recognizes many of the classic papers of spine surgery, ones that have made a long lasting and practice-changing contribution to the field. It is important to recognize that this list is composed of articles that address various topics and span across multiple disciplines.

Summaries are presented to allow the rapid assimilation of information contained within the paper and a subsequent discussion enabling the paper to be seen in its appropriate context.

As the papers have been selected by the frequency with which they have been cited in the orthopaedic literature, different papers may have been selected if the spinal or neurosurgical literature had been appraised. Selecting papers on the basis of citation count leads to a historical bias, with older papers acquiring more citations over time. However, it also ensures that the papers have stood the test of time. Where appropriate, more recent updates and developments have been included in the 'related references' section.

Some of the papers selected stand-alone and require nothing more than the admiration they deserve. These papers, such as the first description of the anterior approach to the cervical spine by Smith and Robinson (still in widespread use), invite little more discussion than an acknowledgement of their influential place in orthopaedic history and recognition of the contribution to medical science that they have made. Others, such as Waddell's non-organic physical signs

(arguably just as influential) are still controversial and spark intense discussion.

Back pain remains a burden for both patients and society. It is the most frequent musculoskeletal complaint in primary care. The direct costs involved in treating back pain and the indirect costs of lost productivity are extremely high. The majority of the papers selected attempt to address this problem directly or relate to the treatment of conditions that present with back pain. Waddell and Bigos point out that there are many factors other than physical or anatomical problems that contribute to disability, claims for compensation and/or lost work-place productivity.

Many different treatments and alleged panaceas for back pain are available. Roland and Morris, Deyo et al. and Fairbanks have sought to evaluate different treatment methods by developing validated outcome scores to measure disability and therefore the effects of treatment. Such scores can be used to differentiate efficacious treatments from those of little or no benefit enabling healthcare resources to be directed more appropriately. In the absence of a proven panacea, the authors Sorensen and Frymoyer have adopted a different tactic attempting to identify risk factors (both patient specific and environmental) that might lead to the avoidance of provocative stimuli.

In 1990 Boden's first report of the alarmingly high incidence of abnormal lumbar MRI findings in asymptomatic patients led to a more critical evaluation of the correlation of degenerative changes and pain.

Outside the arena of back pain research, Harrington's seminal paper on the treatment of scoliosis and the development of a spinal instrumentation system is discussed, as is Denis' work on the treatment of thoracolumbar fractures.

In summary this chapter recognises the historic advances made in spinal surgery and allows insight into the types of articles that have made these advances possible. It serves to highlight the contributions from various authors and provides direction for future research.

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