

therapy practice. *Pharmacology for Physical Therapists* is successful in achieving this goal.

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## Red Flags: A Guide to Identifying Serious Pathology of the Spine

*Sue Greenhalgh and James Selfe*

Edinburgh: Churchill Livingstone Elsevier; 2006  
Canadian distributor: www.elsevier.ca  
ISBN 0-4431-0140-X  
214 p.; tables and charts  
CAN \$53.95

This handbook, written by two UK physiotherapists, is intended for musculoskeletal physiotherapists, students, lecturers, and other practitioners working with patients with spinal pain. The authors' purpose is to enable the practitioner to identify patients who have a high index of suspicion for serious spinal pathology. The book is of particular importance for those therapists working in countries where there is direct access for patients, given that 1% of patients with back pain will have serious pathology. To put that in perspective, for most full-time orthopaedic physiotherapists, this could amount to one to two patients each year.

Greenhalgh and Selfe provide a unique weighted "red flag" hierarchy list of findings that should raise suspicion of serious pathology in patients with back pain. For example, age >51 is assigned three red flags, putting it high on the suspicion list, whereas a history of smoking is assigned one red flag. This is an innovative and clinically relevant method of determining the importance of clinical findings in recognizing serious pathology. The authors discuss some diseases in more detail (e.g., cancer, infections, brucellosis, TB, HIV/AIDS). Some of these conditions, such as brucellosis, are specific to the United Kingdom and Europe.

The book, in general, is based on evidence. The authors review the red flags identified in published clinical guidelines.<sup>1-3</sup> They point out the limitations of the current research—for example, the fact that many of the clinical tests used to identify red flags are not highly specific or sensitive.

The authors also identify "red herrings and masqueraders" as "any misleading biomedical or psychosocial factors that may alter the course of clinical reasoning." They suggest that psychosocial factors may cause clients to demonstrate overt pain behaviour similar to that of red flags, and categorize these as "yellow flags" (emotional and behavioural factors), "blue flags" (social and economic factors), "black flags" (occupational factors), and "orange flags" (psychiatric factors). They also caution that some red-flag pain may initially respond to treatment, even though it is non-mechanical pain.

The chapter on clinical reasoning did not prove overly helpful, although the authors do emphasize two important points: (1) that clinicians should begin their clinical reasoning process from the moment they observe the client (behaviour, biomechanics, affect), and (2) that the subjective portion of the assessment provides the majority of information pointing toward red flags.

The chapters on subjective history, however, are very thorough and informative. A subjective case study describing a discussion between a therapist and a client serves to highlight the main points. The chapter on objective history thoroughly reviews orthopaedic assessment findings, from physical appearance to a positive extensor response, and assigns a red-flag weighting.

In summary, this is a helpful handbook. It innovatively focuses on factors in an orthopaedic back pain population that might cause a clinician to suspect a more serious cause of pain. The unique red-flag hierarchy assists with clinical reasoning. Small flag symbols printed in red ink are used throughout the book and are easy to recognize. The book also cleverly uses the symbol of a small fish for a "red herring" and includes a number of easy-to-read tables. For example, the weighted red-flag list is summarized in such a table on page 81. This book is a handy, on-the-spot resource, given its compact size and ribbon bookmark. An ideal quick reference, *Red Flags* will help physiotherapists treating back pain to recognize serious pathology.

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