

## **Topical Issues in Pain 3**



Physiotherapy Pain Association Yearbook



# Topical Issues in Pain 3

**Sympathetic nervous system and pain  
Pain management  
Clinical effectiveness**

**Editor**

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**Foreword**

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# Foreword

The physiotherapy profession is indeed fortunate to include neuroscientists, therapists with academic and philosophical interests in pain, and clinicians who are neither afraid of using principles and methods developed in other professions to optimise their treatment, nor afraid of working with other professions. This latest volume in the Topical Issues in Pain series reflects a pooling of knowledge from many sources. Within it you will find that members of our profession are also prepared to challenge long-held beliefs, both within and outside the profession. Topical Issues in Pain also allows more extensive reporting of clinical practice, giving insight into the variety of pain management techniques used in more novel and innovative patient-therapist interactions.

The volume opens with Ronald Melzack's historical perspective on his and Pat Wall's work on the gate control theory, and presents his neuromatrix theory: his proposal for the next stage in the evolution of pain concepts. This goes beyond gate control theory in that it addresses how pain is perceived centrally, and makes an important attempt to account for phenomena such as phantom limb pain. It will be fascinating to see when his inclusion of a genetic template within the neuromatrix theory receives backing with scientific data.

Back out in the periphery, the sympathetic nervous system (SNS) has influence over virtually every cell in the body, providing efferent outflow to all the organs and glands, sharing afferent input with the somatic nervous system, having a modulating influence upon the various nerve receptors and muscle spindles, and supporting somatic tissue performance. It is no wonder that the fingerprints of the SNS can be seen all over pain conditions, both acute and chronic, and that certain pain syndromes have features of altered sympathetic activity and pathobiology. Part I enables us to consider the work, knowledge and skills of several of the experts within the profession in relation to the SNS. They encourage us to consider some of the conundrums

as well as difficulties that we face with our patients. They also provide suggestions for how we can take our practice forward, with new ideas on how we can approach our patients, guiding them towards understanding, attenuating, and managing their pain.

While the SNS has significant peripheral targets and effects, it also has major influences within the central nervous system. One of these is its close links to emotional states. This has a major impact not only on patients' pain, but also on patient-therapist communication. Part II explores assessment and management of low back pain patients whose distress and anger are significant features of their whole picture.

Clearly, the physiotherapy profession is concerned with pain management, with symptomatic relief, with rehabilitation and with patient education. There is an explosion of new ideas and approaches. Whether we are considering traditional techniques or novel forms of assessment, treatment or patient interaction, clinical effectiveness will be uppermost in our concerns for our patients. Clinical effectiveness based on valid measurement and evidence is a key focus for the PPA, and Part III contributes to its ongoing promotion.

This latest publication from the PPA continues to reflect the work of those speaking at PPA study days and contributing to the PPA programme at the annual CSP Congress. It is an important source for us in these rapidly developing and exciting times!

*Vicki Harding*  
*PPA Chairperson*  
June 2002

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# Preface

Much of the work of the Physiotherapy Pain Association involves healthy challenges, updates to our knowledge, the improvement of our professional standing in the wider medical community, as well as providing help with the treatment and management of our patients. This third volume of *Topical Issues in Pain* builds on the previous two and hopefully makes a further contribution to the work and progress already made.

In his book *The Unnatural Nature of Science* Lewis Wolpert challenges what he calls 'common sense' thinking and theories. He argues that common sense reasoning, our 'natural' reasoning, works extremely well for everyday life, but that for science it is quite unsatisfactory. What we naturally think and what may seem quite obvious about a given observation, when probed scientifically, is often found to be quite wrong.

For years physiotherapy models of treatment and reasoning with pain have evolved from just such a 'try it and see,' or 'common sense' linear thinking style and process. If a patient comes in with a leg pain and a therapist tries to help by pressing on the sacroiliac joint for one minute and the patient then moves better, clinical reasoning results in the technique being used again for other similar pains as well as ascribing the cause of the problem to a faulty sacroiliac joint. Occasionally an observation like this may generate a 'new' treatment and assessment paradigm. New therapies, and the hypothetical foundations and rules that are usually generated, often become uncritically established as widely-lionised dogma. Unfortunately, they appear scientific when in fact they are not and those bold enough to criticise them are scolded for undermining the sanctity of the profession's foundations or for making potentially hurtful remarks about the founding godfather figures. Those who move our profession on are important, but the peddling of dogma and unjustified rigid thinking is not good enough any more. Dogma holds back change and it creates a culture whereby those who follow tend to avoid or ignore evidence that conflicts with it. Good science welcomes and thrives

on rigorous scrutiny, criticism and collective appraisal. It is time to move on, yet change frustratingly drags its feet.

This book presents the current evidence on what we know about the sympathetic nervous system and the implications it has for patients with complex regional pain syndromes. It also shows us how to understand the evidence based movement and it provides a wealth of clinical material to help us deal with complex pain, complex patients, and complex disability. The material offers understanding, informed opinion and some solutions that may challenge the dogmas we have been taught and which we may still believe. If we are to understand pain and pain related disability better then we need to investigate or side step the old dogma, adjust and accept new scientific rigour, and move on to confront and understand the challenges and changes required.

This comment by Pat Wall, quoted in Chapter 4, nicely sets the scene for the contents of this book: 'It is almost impossible to replace widely accepted medical dogmas, especially where the paradigm being challenged has to be replaced with a more complicated one!' (see page 103.)

Pat Wall died in August 2001. He was a friend of physiotherapy and he particularly respected the Physiotherapy Pain Association for embracing pain science, and its critical yet forward thinking stance. It is especially fitting that this volume opens with an essay by Ronald Melzack, Pat's partner in producing the gate control theory of pain and his close friend.

Thanks to all the authors for their ground-breaking work and for being so patient. Special thanks to my project manager Judy Waters, for organising me and getting the final products so polished, and thanks to my team at home, Philippa and Teresa.

*Louis Gifford*  
July 2002

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