

# ABC of Pain

Edited by Lesley A. Colvin and Marie Fallon



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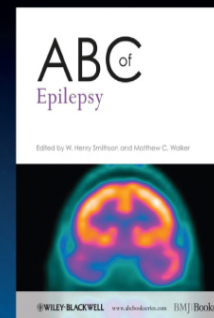
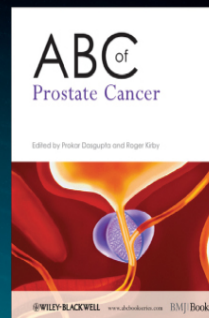
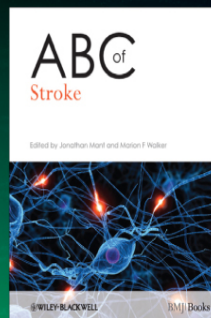
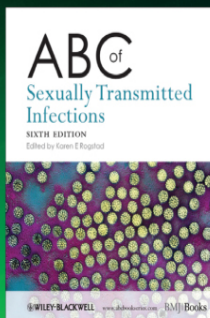
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# Pain

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# Preface

The aim of the wise is not to secure pleasure, but to avoid pain.

Aristotle

Regardless of the area of healthcare we work in, we will meet patients suffering from chronic pain. Pain can cause significant distress and suffering, with a major impact on patients' quality of life and on their families. Careful assessment and management of pain is an integral part of good clinical care, not something that should only be available through specialist teams. The field of pain management is expanding rapidly, with novel approaches to assessment techniques, improved understanding of the pathophysiology and developments in both pharmacological and non-pharmacological management strategies. While there are many excellent textbooks for specialists, there is however a need for a clear and concise evidence-based text, that provides an accessible introduction to this important area. This new title in the ABC series has gathered together a range of internationally recognised experts and practising clinicians to produce a book that we hope will prove of real practical value to primary care staff, trainee doctors, students and allied health professionals.

We have not set out to write a comprehensive text of all aspects of pain management but have attempted to include commonly seen chronic pain conditions, or in areas that may provide particular challenges. The first part of the book explores the epidemiology of pain, where it is clear just how common chronic pain is – something that has not been well-recognised until relatively recently. A clear outline of the

basic science of pain mechanisms helps to provide a framework for understanding how chronic pain develops and how treatment may work. This section should also be helpful for students and junior doctors preparing for exams. As with any medical problem, a comprehensive but focused approach to pain assessment underpins any successful management plan, as outlined in the chapter from Prof Dennis Turk.

Subsequent chapters examine very common pain conditions, including musculoskeletal pain, neuropathic pain and also visceral pain. In these chapters we have suggested various approaches to assessment and management that we hope you will find useful. We then focus on pain in patient populations with particular needs, such as children, the elderly, those with drug dependency issues, cancer pain and also pain in pregnancy.

The final part of the book examines the wide range of therapies that can be used in the management of chronic pain. While this includes pharmacological management, including opioids, we have tried to consider the multidisciplinary strategies that are used successfully in the specialist setting and how these can be used in the non-specialist setting. Thus we have addressed psychological therapies, physiotherapy, and complementary therapies.

Each chapter has used illustrations and text boxes to highlight important points, aiding ease of reading and making it more accessible. For those interested in more details on a particular topic we have provided a further reading list, including useful web-based resources. Each chapter can be read in isolation, although you hope you will find the style persuades you to read chapters that might otherwise not appeal to you.

The specialist nature of complex pain management has been increasingly recognised over recent years, both by professional bodies such as the Royal College of

Anaesthetists (London) with the establishment of a Faculty of Pain Medicine in April 2007, and also by politicians. The fact remains however, that the vast majority of pain problems are dealt with by non-specialists: it is essential that all healthcare professionals have the basic training and education required to enable them to confidently address pain problems and thus reduce suffering in our patients. We would like to thank all our contributors for their expert chapters and also their patience, as this book has taken some considerable time to reach fruition. Despite this, we hope that the end result is enjoyed by our readership, and that their patients reap the benefits of this.

Lesley A Colvin  
Marie T Fallon

# Chapter 1

## Epidemiology of Chronic Pain

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### Overview

Chronic pain persists beyond normal wound healing, with around one in four adults suffering from chronic pain

The majority of patients with chronic pain will be managed in the primary care setting, but complex cases will require specialist input

Chronic pain, especially neuropathic pain, has a major impact on all aspects of general health

Factors predisposing to chronic pain include those not amenable to intervention, such as increasing age and female gender, and also those that can be targeted, such as deprivation, or poor acute pain control

Early identification and management of chronic pain are essential in order to minimise long term suffering and disability

## **Introduction**

Pain is an individual experience, whose subjective nature makes it difficult to define, describe or measure, yet which is common to all human beings. As description and measurement are nonetheless essential, so, therefore, is a

definition that suits both patients and professionals. Pain is helpfully, therefore, defined by the International Association for the Study of Pain (IASP) as *'an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described by the patient in terms of such damage'*.

Chronic pain is defined by the IASP as *'pain that persists beyond normal tissue healing time'*. A range of factors may be involved, including physical and biological factors, and also behavioural and cognitive factors, and these may dominate the experience of chronic pain, which is ultimately primarily subjective (Box 1.1).

### **Box 1.1 Acute and Chronic Pain**

<u>Acute pain</u>	→ → → → → →	<u>Chronic pain</u>
<i>Physiological</i>		<i>Pathological</i>
<i>Health preserving</i>		<i>Maladaptive</i>
<i>Warns of damage</i>		<i>Dysfunctional healing</i>
<i>Allows evasive action</i>		<i>Abnormal response to injury</i>

## **What is Chronic Pain?**

There are many similarities in the symptoms and impact of chronic pain between most individuals who experience chronic pain, irrespective of its cause. Consequently, there are also many similarities in approaches to preventing or managing chronic pain of different aetiological or diagnostic backgrounds. This has led some to propose the existence of a 'chronic pain syndrome', and certainly for many clinical and research purposes, there is considerable merit in regarding chronic pain as a single, global, clinical entity (while also paying suitable attention to individual, treatable causes of chronic pain).

# Why is Epidemiology Important?

Epidemiology is 'the study of the distribution and determinants of health-related states or events in specified populations *and the application of this study to control health problems*'.

(Last RJ. (2001) *A Dictionary of Epidemiology*, 4th edn. Oxford: International Epidemiological Association.)

It is the latter part of this definition that makes it such an important science in clinical medicine. The last twenty or so years have seen the publication of many good quality epidemiological studies of chronic pain that have enhanced our understanding of its causes, impact and approaches to management. Good epidemiological research on chronic pain can, and does, provide important information on its classification and prevalence and factors associated with its onset and persistence. This can inform the design and targeting of treatment and preventive strategies (Box 1.2).

## **Box 1.2 How Does Epidemiology Help Us with Chronic Pain?**

- 1.** Identifies factors associated with chronic pain and those which lead to or favour chronicity
- 2.** Aids development of interventions to prevent chronicity or to minimise its impact
- 3.** Improving understanding of associated factors in development will inform the clinical management of the condition, thereby possibly limiting severity and minimising disability
- 4.** Understanding how chronic pain impacts on quality of life and what associated factors have greatest adverse effect (e.g. physical, psychological or social)
- 5.** Understanding the distribution of chronic pain can help to target appropriate management strategies at the subgroups most likely to benefit, and individuals with less severe chronic pain might be identified with a view to prevention of exacerbation
- 6.** Evaluation of treatment strategies: Until the distribution, determinants, impact and natural history of chronic pain are understood, it is impossible to evaluate properly any intervention aimed at improving chronic pain
- 7.** Allocation of health service resources: Ideally this should be informed by robust epidemiological data. With a condition of the importance of chronic pain, it is crucial that research information is available for health service planning
- 8.** Allocation of educational resources: As with financial and clinical resources, appropriate education of professionals and patients can be greatly assisted by epidemiological study

*Source:* Adapted from Smith, BH, Smith, WC & Chambers, WA. (1996) Chronic pain - time for epidemiology. *Journal of the Royal Society of Medicine*, **89**, 181-183

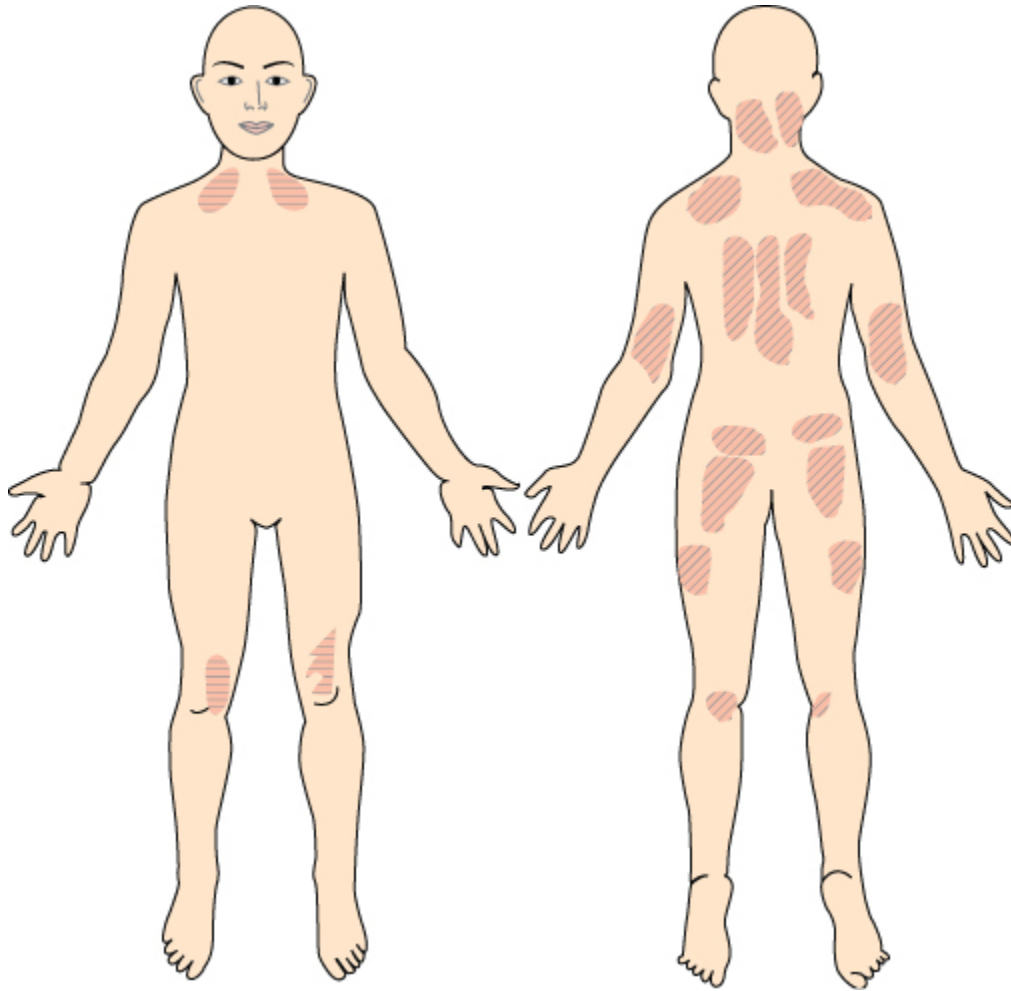
## **How Common is Chronic Pain?**

The prevalence of chronic pain depends on exactly where, when and how it is measured. There is no universally agreed cut-off point between acute and chronic pain, but in the

absence of other information, three months is often taken as the point beyond which 'normal tissue healing' should have taken place, and when pain therefore becomes chronic. Around one in four or five adults is currently experiencing chronic pain. A comprehensive literature review found a weighted mean prevalence of chronic pain of 25.9%. This is broadly similar to a large European study of over 46 000 people using a 6-month cut-off point (19.0%), and other systematic reviews.

Some studies have examined more severe, perhaps more clinically relevant, chronic pain. For example, 'chronic widespread pain' (bilateral pain above and below the waist, including the axial skeleton) has consistently been found to affect at least 5% of adults, and perhaps more than 11% ([Figure 1.1](#)).

**[Figure 1.1](#)** Pain diagram from patient with Chronic Widespread Pain.



A similar prevalence (5%) has been found for 'severe chronic pain' (intense, highly disabling, severely limiting pain). Pain with neuropathic features (which is often more severe and harder to treat than other pain) probably affects at least 6–8% of the population. These figures are similar to the prevalence rates of well-recognised conditions such as ischaemic heart disease and diabetes, for which health service resources are readily found. Chronic pain, however, generally attracts less attention and resource (perhaps because it is often regarded as a heterogeneous group of conditions, or as a symptom, rather than as a global entity requiring a global response) ([Figure 1.2](#)).

**Figure 1.2** Chronic back pain is very common: around three out of four people will suffer from it at some point in their life.



The commonest location of chronic pain is in the back, followed by the large joints (knee and hip). Other common causes of chronic pain include headache, other joint pain, injury, and, importantly, neuropathic pain. The diagnosis of this is essential in order to initiate correct treatment (Chapter 6). In particular, persistent post-surgical pain (up to 30% of surgical patients experience pain beyond three months, and 5% experience severe chronic pain) may be under-recognised and, therefore, under treated. Additionally, most people (approximately 75%) with chronic pain report pain at more than one site, and 18% report it at five or more