

In Touch

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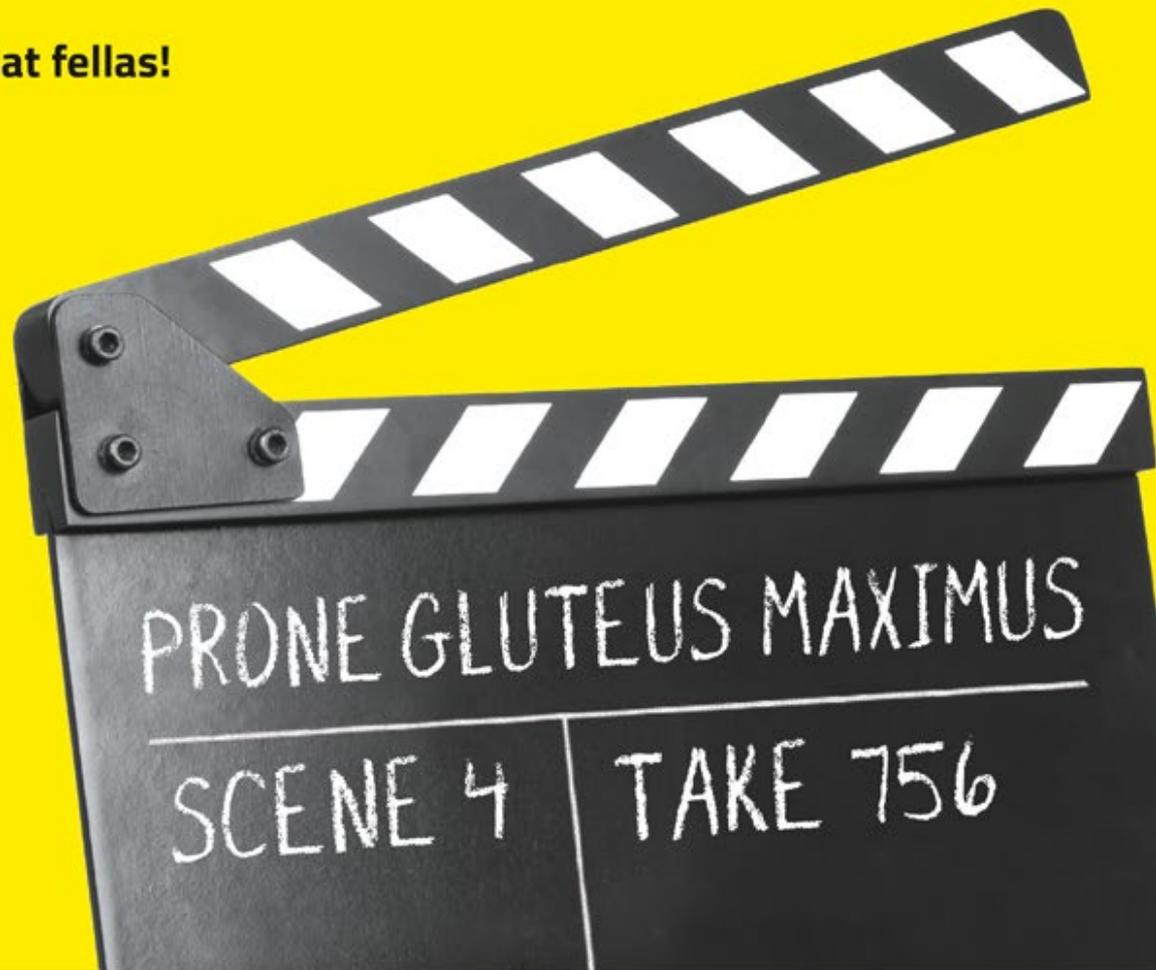


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Editorial



Impetus

This is the second pain edition dedicated to Louis Gifford. He deserved many more. His ideas and thoughts, articles and lectures shaped many of our professional lives; I know he did mine and I hope he will continue to shape those of many others.

Thank you again to the PPEF for supporting and partly sponsoring this edition.

Pain Solution follows on from our autumn *In Touch* 2015 edition that was related to Louis' question: "Whatever happened to the pain revolution?" There is, of course, no one solution to solving patients' problems; there are many, and this was (is) the approach that Louis always took. You only have to read his "Shopping Basket Approach" to get the point of what he was talking about and he was talking about this stuff back in the 1990s! With Philippa Tindle's kind permission, the history of the Shopping Basket Approach is our lead article with a foreword from Philippa herself. In a recent conversation with Philippa she highlighted a comment made to her by an osteopath who said, "They should be teaching this stuff!" to which she replied, "We were... 20 years ago!" It takes time to turn a tanker; when we are used to doing things in a certain way, it takes time to change.

Louis' approach has much sense. If we all took it on board we would all be saying a similar thing, singing in harmony, with far fewer confused patients. A recent email to *Frontline* (*Frontline* 2015) commented that the profession needs a fresh impetus, that we must challenge our perceptions of what defines physiotherapy and enhance our practice by better understanding our patients. If you want a fresh impetus, read everything Louis has written!

I have just spent two days in Northampton with some of the Physio First volunteers and team. I am a thoughtful man, caring I think, and striving to do better, and I am surrounded by others who think and want the same. If we get to our Goal 9 of commercial growth by 2018 it will be phenomenal. None of us are playing at this, this is the real deal – our chance to make a difference for all private physiotherapists and also for the future of the whole profession; our future. I really hope this makes you think about where we are going and what we can achieve together, and we will need to be together on this, as the Goal 9 co-operatives will need us. Consider this: we may think of ourselves as ordinary, but the most ordinary of us will often do the most extraordinary things.

As you know, to succeed you can't stand still... and Physio First sure ain't standing still!

Reference

Woolvine M. The profession needs a fresh impetus. *Frontline* 2015;7 Oct:p4

Paul Johnson

Paul Johnson MSc BSc MMACP MCSP Editor

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The Shopping Basket Approach – history and introduction

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Foreword from Philippa Tindle

In the autumn 2015 edition of *In Touch*, Mick Thacker very ably described how Louis' Mature Organism Model was before its time, of its time and for the future. What a tribute – thank you Mick, and thanks must also go to Richmond and Hubert who acknowledged Louis' influence in their early careers and have written two papers reflecting their thoughts and current knowledge. While Georgie Oldfield, the final contributor to the edition, got the 'ah-ha' experience later and is finding answers in a different way.

For this Pain Solution themed edition, *In Touch* Editor, Paul Johnson suggested re-visiting Louis' 'Shopping Basket Approach' which was first published over three issues of *In Touch* (autumn 2001, spring 2002 and spring 2003) and reproduced (with permission) <http://giffordsachesandpains.com/download-material/the-shopping-basket-approach-articles/>

Louis analysed what he did in the clinic and attempted to make sense of what we, as physiotherapists, do really well – Rehabilitation. The Shopping Basket Approach is "for the clinician" and gives some order to the complex, and often difficult job we have of dealing with the patient in front of us.

The following is from the history and introduction to the chapter on the Shopping Basket Approach, and is taken from Louis Gifford *Aches and Pains: Book 3, Graded Exposure*.

Introduction

The Shopping Basket Approach has evolved from my own analysis of how I think and reason with a patient. In actual fact it was also a reaction to something which drives me mad: the very term 'Approach' – the Maitland, the McKenzie, the Kaltenborn, the muscle imbalance approach and so on. It's a term that drives clinical reasoning into a uni-dimensional place whereby the treatment that's given narrowly dictates the clinical reasoning, the assessment and the overall line of questioning. For example, why would someone with an 'ultrasound' approach want to know about psychosocial factors or how the problem has influenced the sufferer's function and activity levels, - or even want to try to understand the presentation in terms of biomedical features, - if all they're going to do in the end is stick an ultrasound machine on the spot where it hurts? Same for Maitland, McKenzie, muscle imbalance, all they require is the basic information needed to do the technique.

"Hi, Louis here, it's Monday, and you're lucky because Monday is ultrasound day, where's your pain love? Slip your things off, lie down here, show me the spot, bit of jelly, that'll be a bit cold, whoops, yes, right, off we go." 5 minutes later, - "see you on Friday, Friday is Laser day".

"Hi, Louis here, it's Monday..." and so on. (Tuesday is acupuncture day if you were wondering).



I also lectured in Switzerland in 'rehabilitation' centres where patients were booked in for three weeks and received a variety of 'treatments' daily, dictated only by a bell ringing every half an hour - all change!

The Shopping Basket is so named to try to mock this 'approach' thing a bit. Apologies, as that's not a very CBT way to start, by alienating the audience. I'm hoping the ultrasound and laser example set a lightish touch to the scene and we can now get up and running.

A last observation then: *one thing I realised a long time ago, is that how anyone reasons is hugely dictated by what they plan to do, - the more biased and limited in your skills/knowledge, the more blinkered and limited your reasoning is going to be!*

I hear that nowadays all these 'approaches' are integrating the biopsychosocial dimensions. Well, super, but to me they all are still stuck with the dominance of the physical treatment you are steering the whole thing towards. My suggestion is that you maybe think about becoming a Shopping Basket Approach therapist, if you like what I write and reason and, in just one compartment of it you'll find that it is possible to include a little joint wiggling and fiddling if you want to, but overall it is certainly very unusual for any given 'approach' to be a priority. There's one word that should dominate all physical therapist minds and that is **Rehabilitation**. It is such a

special word, and one that is unique to our profession; please, let us all never let it go,- it's got more evidence in its favour than any treatment approach or modality ever has, or ever will have.

I want to start by acknowledging a great friend, a great thinker and a huge contributor to the world of clinical reasoning. We all owe Mark Jones a huge thank you and a place high up there in the history of rational evidence based physiotherapy. Whether you know it or not Mark Jones' work will have influenced your clinical reasoning at some point. The easiest place to start is with his superb book: *Clinical Reasoning for Manual Therapists*– chapter 1 summarises it all and also read chapter 25 on Educational theory by Joy Higgs and chapter 26 by Darren Rivett and Mark– on 'Improving clinical reasoning in manual therapy'.

The book is full of case histories by the manual therapy 'gurus' of the world,– with Mark asking the Guru involved various 'reasoning' questions, and getting their responses as the case unfolds. Mark is beautiful in his diplomacy with them, I'd have lost my rag because a great many are not much better at reasoning than my ultrasound-on-Monday therapist. Read them, but it's thanks to Mark's questioning that there's a great deal to learn and ponder in there. I like it that he ends the book with the 'Improving clinical reasoning in manual therapy' chapter!

Mark started all this way back, just after the 1985 Manipulation course in Adelaide (he was on the course with myself and Dave Butler). He was doing some research based at the University. I remember he came up to Geoff Maitland's practice and videoed him assessing a patient. Afterwards the two of them went back through it and Mark asked him why he was asking the questions and what he was thinking and reasoning in his head with the information that he gleaned. Soon, Mark came up with his now famous 'Hypothesis Categories'.

They were:

- What is the 'source' of the symptoms and/or dysfunction?
- Are there any 'contributing' factors?
- What are the precautions and contraindications to physical examination and treatment?
- What is the prognosis?
- What treatment should be selected and what progression is likely?

For manual therapy, or any therapy geared towards a tissue based approach and a passive treatment approach to a pain problem, this was how it was. The answers to those questions were always described in terms of physical injury, tissue abnormality and movement and biomechanically altered function. Those were the questions we all needed to have in the back of our heads and needed to be able to provide answers to after listening and examining the patient.

Later, as Dave Butler and I started to introduce 'pain' and pain mechanisms, and a more 'top-down', self-management, multidimensional view of things, changes and additions to the hypothesis categories were required. These were committed to the literature in a combined author article:

Gifford LS, Butler DS. The integration of pain sciences into clinical practice. *Hand Therapy* 1997;10(2):86-95

The clinical reasoning hypothesis categories now became:

- Pathobiological mechanisms
- Dysfunction
- Sources
- Contributing factors
- Prognosis
- Precautions
- Management.

Pathobiological mechanisms had the following sub-divisions:

- Tissue mechanisms (i.e. what's going on in the tissues? For example, are they:– healing, healed, scar tissue, inflamed, etc.)
- Pain mechanisms (i.e. what pain mechanisms are operating or dominant:– nociception? peripheral neurogenic? Central? Affective emotional? Sympathetic? Motor (output), even immune?)

The **Dysfunction** category was expanded and defined in terms of the clinical 'expressions' of the pathobiological mechanisms. Hence:

- **General physical dysfunctions:**– what would now be termed 'disabilities' or 'activity capability/restrictions' or 'participation capability/restriction'. For example, the inability to walk for more than 5 minutes, inability to type or write or do house work, lift objects and perform work tasks.
- **Specific physical dysfunctions:**– or what I now call 'physical impairments'– they're the things that physical therapists find during their physical examinations,– like losses of range of movement, pain on certain movements and tests; weaknesses, neurological deficits,– and also all the little physical minutiae that many physical therapists seem to get obsessed about and go on courses, and pay lots of good money to learn about,– like muscle imbalance, neurodynamics, an accessory movement not being quite right, a facial-band restriction, a core stability abnormality and so forth.
- **Psychological/mental dysfunctions:** - this was an awful term but was an early recognition and germination of the importance of psycho-social factors being important.

So, pain mechanisms, or pathobiological mechanisms, and a broadening of the 'dysfunction' category were integrated into clinical reasoning and it was an honour for my work to be acknowledged and to co-author with Mark Jones and Ian Edwards the article:

Conceptual models for implementing biopsychosocial theory in clinical practice, published in the Journal, *Manual Therapy* in 2002

Further thanks to Mark Jones for being so inclusive of my thoughts in his and Darren Rivett's book *Clinical Reasoning for Manual Therapists*. Mark, as far as I know now, sees the hypothesis categories like this:

- *Activity capability/restriction* (abilities and difficulties an individual may have in executing activities) and *Participation capability/restriction* (abilities and problems an individual may have in involvement in life situations)
- *Patients perspectives on their experience*

- *Pathobiological mechanisms* (tissue healing and pain mechanisms)
- *Physical impairments and associated structure/tissue sources*
- *Contributing factors* to the development and maintenance of the problem
- *Precautions and contraindications* to physical examination and treatment
- *Management and treatment*
- *Prognosis.*

My view is that this is still quite heavily biased to a 'manual therapy' perspective. My way of doing things never quite sat comfortably with it, although these categories do offer a perfectly reasonable way to go about clinical thinking and reasoning.

So one day, sometime in about the year 2000, I sat down with a tad of irritable grumpiness about all the various 'approaches' and thought about how I think in the clinic. I came up with a series of simple compartments which I then put into an old fashioned, wicker shopping or gardening type basket. It had great clinical utility.

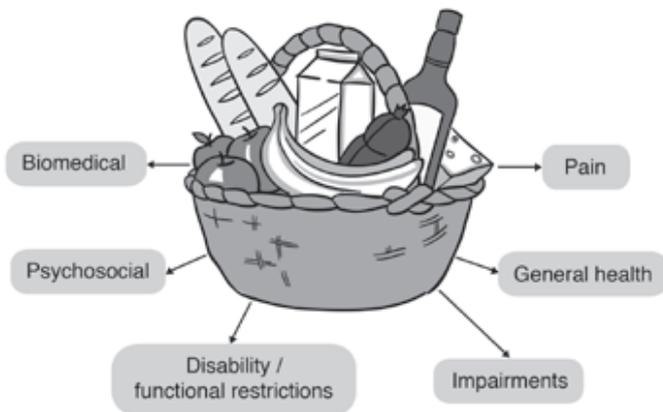


Figure 1: The Shopping Basket approach. All compartments interact

If you take a look at figure 1 you can see the basket and the various compartments. Nice and simple, like me. I like things nice and easy to use, – but all-encompassing too. The compartments are:

- Biomedical– which is all about 'think like a Dr' would, plus quite a bit more
- Psychosocial– think psychosocial predictors of outcome, or 'yellow flags'– that's the now famous ABCDEFW categorisation that every physiotherapist should be taught at undergraduate level
- Disability/functional restrictions– everything that the patient reports that they are having physical difficulties with in their life, it relates to home, work, social and fitness/hobby activities
- Physical impairments – that's the bit that most musculoskeletal physiotherapists are stuck in and feel very comfortable with
- General health and fitness– why this? Because it's so important and the evidence so clearly beneficial. I am not an expert here, but helping someone get fitter using a graded, paced and goal setting approach is fairly straightforward for anyone well trained with rehabilitation skills
- Pain! – the category that most clinicians start with. 'Where's your pain?' – I've stuck it last for the very reason that a Maitland training gets your 'needle stuck'* on asking about pain.

* The term 'needle stuck' refers to old vinyl records having a bit of dried up old jam in the grooves which causes a line of the track to just repeat on and on until you shove the needle on a bit. ... shows how old fashioned I am!

I'll never forget having a manipulation exam patient who didn't come in complaining of any pain! I was stymied, – gibbering, but luckily managed to eventually squeeze some pain out of him to fill in the time and impress the examiners. The following chapters deal with each compartment...

Afterword from Philippa

From there, Louis continued to detail his updated 'Shopping Basket Approach' in chapters that total 162 pages and are divided into:

- **The Biomedical compartment: part 1: part 2 serious pathology: part 3 pain mechanisms**
- **Psychosocial compartment: part 1 introduction and overview: part 2 the 'AB' of the 'ABCDEFW': part 3 the 'CDEFW' of the 'ABCDEFW': part 4 a bit more on 'emotion': part 5 Pink flags!**
- **The Disability and functional limitations/activity and movement restrictions compartment**
- **The Physical Impairment compartment: part 1 and part 2**
- **The General Health compartment**
- **The Pain compartment**

Owing to the space limitations of *In Touch* it isn't possible to reproduce each of these chapters in full, but I felt that it was appropriate, in this edition themed on "Pain Solution", to include the first few pages from the Pain compartment; extracted from Louis Gifford *Aches and Pains*, Chapter Graded Exposure 4.14 pp1144-1147.

The 'Pain' shopping basket compartment

This is a separate compartment because it is so important and usually the primary reason patients come to see us. As I said earlier, I've purposely put it last because it so easily goes first and then takes a stranglehold on therapist-reasoning, whose instinct is to focus on and try and relieve the pain and not see the many other issues that surround the patient and their situation. That usually means applying some form of therapy in the context of something found to be at fault during examination. Therapists usually waffle on about inflammation and stuck joints to suit whatever therapy they're doing. Yes, if you want a pain treatment to work, you have to invoke as much top-down as you reasonably can, if that's 'bullshit', so be it, so long as it doesn't create maladaptive constructs for the patient leading to maladaptive coping strategies– like becoming dependent on the treatment! As I will demonstrate in the patient sections that follow, I try to create a sound and logical context in which a pain treatment is applied.

Clinically, pain and the patients' description of their pain are often one of the first things that we listen to, record and get details of.

For the most part, like well-conditioned laboratory mice, we get our body charts out and dutifully fill them in. In my lectures I always used to note that the 'body-chart' represents only one dimension of the so-called 3 dimensions of pain. Let me remind you:

The three dimensions are:

- Sensory-discriminative
- Cognitive-evaluative
- Emotional-motivational.

Sensory-discriminative refers to the 'location of the pain,' the 'intensity,' the 'quality' and the 'behaviour' of pain over time. So on your body charts the location is obvious, but you also need descriptions of the type of pain and its behaviour– like 'constant deep ache,' or 'sharp only at end of range/often with movement'. Intensity of pain uses descriptors like 'nasty' or 'background' or 'nagging' and the use of simple 0-10 numerical rating scales. Getting aggravating and easing factors further fulfils the 'behaviour' compartment details.

It looks simple, but sadly is often hurried and given inadequate time. Please note, that the words the patient uses to describe their pain are important, and like it or not, express a degree of the emotional dimensions of their problem and situation. Think of words like 'ripping, knife-in, draining, stabbing' and you should be able to see what I mean.

I sometimes find myself saying to the patient after filling in a body chart: 'How would you sum all this pain up'– and I get some very interesting responses,

- "One minute my life was normal and then the lights went out."
- "I've been frightened to really tell anyone because it seems so unbelievable."
- "The god that came up with this was sick in the head."
- "If I could just get one hour's relief I could die happy."
- "I am overwhelmed and I cannot operate as a human being."

All these examples came from patients with pain of less than 6 weeks duration. My point is that pain just cannot be considered as isolated from the thinking, feeling human that is attached to it.

Spending time getting the details of pain from the patient is a giant step in the therapeutic encounter. You have to listen, you have to take your time, and you have to make sure that nothing is missed.

But sometimes there are exceptions, and as I will illustrate in the clinical examples section, this is usually with chronic maladaptive pain problems. In order to reason pain I find myself thinking about what I might be able to do to help, or whether I should be thinking that I should be trying to help with the pain. So, here is a list of all the possible ways I can think of, relevant to my practice, which may be able to help pain.

The pain-off list, a possible 'toolkit':

- Drugs
- Movement, activity, function, exercises, stretches, floppy movements etc.
- Various forms of rest
- Supports, crutches, collars, binders, tapes, compression

bandages and Tubigrip, orthotics and many other bits and pieces

- Avoidance!
- Standard physiotherapy 'modalities', I'm happy with:
 - > Heat and cold
 - > TENS and other currents
 - > Ultrasound plus or minus currents at the same time
- Hands on – manual therapy, massage (in a multitude of contexts)
- Relaxation
- Reassurance, decreased concern, a better understanding– lessening the threat value
- Acceptance and adjustment
- Attention and focus changes
- Distraction
- Desensitising
- Fire-apart-Depart
- Novelty, excitement and fear
- Going away, holidays etc.– relates to novelty
- Socialising
- Hobbies
- Work
- Recreational drugs and alcohol, even some foods
- Anything that can 'trick' the pain off
- Achieving goals
- Working on well-being
- Family relationships, love and sex or no sex
- Resolving personal problems
- Improving confidence
- Feeling free
- Feeling in control
- Knowing about pain and its meaning
- Feeling physically fit
- Feeling mentally fit and well, 'balanced'
- Laughter and fun
- Music and entertainment

It could go on and on, but I think you'll agree that this list is a little different to what you might find in a standard textbook. The point is that I hope you can see, from what has gone before in this book, how all these things may help or influence pain.

This chapter concludes with reference and reproduction of an editorial Louis wrote for the PPA News called 'Tricking Pain' (Gifford LS. Editorial:Tricking Pain. PPA News 2007;23:3-8).

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Aches and Pains

Louis Gifford's *Aches and Pains* is available from CNS Press, Falmouth and can be ordered via www.giffordachesandpains.com/book-sales or by contacting info@achesandpainsonline.com

The hidden influence of metaphor within rehabilitation



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Communication is a fundamental component of rehabilitation. The profoundly complex and idiosyncratic nature of pain experiences often requires the use of metaphoric expressions. In order to make sense of the world, many people in pain turn to metaphor. Healthcare professionals employ metaphor to transfer abstract scientific knowledge into meaningful cognitions. However, while some metaphors are explicit in their execution, many remain characteristically concealed. Through exploring the implicit nature of metaphor, clinicians, researchers and people in pain may develop strategies to bridge the communication divide. This article draws on the existing evidence-base while highlighting potential areas for future research.

Learning outcomes

- 1 Appreciate the influence that metaphors have on rehabilitation.
- 2 Explore the evidence surrounding the use of metaphor within pain reconceptualisation and behaviour change.
- 3 Recognise the importance of self-generated metaphor within healthcare.
- 4 Consider the cultural impact of metaphor within rehabilitation.

Introduction

Metaphors live a concealed existence all around us. On average, we articulate six metaphors a minute (Geary 2011). Metaphorical thinking is essential to how we communicate, learn, discover and create meaning. Metaphors are a fundamental part of human expression. A metaphor is something relatively more concrete or conceivable which stands for something more elusive (Lakoff & Johnson 1980). The word metaphor originates from the Greek words "meta" (to transfer) and "pherin" (to carry beyond). Within physical rehabilitation, people living with pain frequently resort to metaphor to try to express the challenges they face when confronted with a myriad of distressing thoughts and experiences. For clinicians, the process of facilitating a meaningful reframing of persistent pain often involves metaphoric expression. The complex and abstract scientific theories that underpin our current

understanding are frequently transferred into tangible cognitions to help us make sense of our experiences (Biro 2010; Bourke 2014; Casarett *et al* 2010). While, for some, metaphors can help the process of pain reconceptualisation, for others they can hinder the process (Stewart 2014). With this paradox in mind we must consider the impact that our metaphoric expressions have on our practice and how they might influence the rehabilitation process. We must also consider the potent significance of our patient's self-generated metaphors, and examine how best to use these for therapeutic gains (Loftus 2011; Tompkins & Lawley 2002).

This article explores the implicit influence of metaphor within healthcare and physical rehabilitation. Through a greater appreciation of the role of metaphors in healthcare, clinicians can gain a valuable insight into the lived experiences of people in pain. Equally, by enabling people in pain to express their frequently distressing, idiosyncratic perceptions, we can enhance communication and understanding. With a heightened awareness of the concealed influence of metaphor on physical rehabilitation, we may begin to move beyond a language of fear and isolation, and begin to develop a language of hope.

Science and metaphor

Metaphors are generally considered to be the domain of poetic, linguistic expression. However, it is short-sighted to contain metaphoric thinking to artistic expression alone. When considering the place of the metaphor in science, Albert Einstein remarked that combinatory play – playing with one idea as another through metaphor – seems to be the essential feature in productive

thought (Singer 2011). Clinicians and patients use metaphors in order to make sense of pain, for example, by playing with one idea of “being too busy to do exercises” with another metaphoric concept of “too much on my plate”.

Our desire to make sense of the world through metaphor encompasses scientific reasoning. Some of science’s greatest paradigm shifts have stemmed from metaphoric thinking; from Newton’s translation of a simple apple to express planetary gravitation to Max Plank’s inception of Quantum theory through vibrating cello strings acting like electron orbits, metaphor and science are intrinsically linked. Banville (1998) argues that art and science are fundamentally different in their methods and in their ends. Science involves a level of rigor unattainable to art. A scientific hypothesis can be proven or, perhaps more importantly, disproven, but a poem, a picture, or a piece of music cannot. Yet in their origins art and science are remarkably similar. He concludes that art and science are alike in their quest to reveal the world.

In order to promote understanding of abstract scientific models, scientists use metaphors as well as equations and graphs. Table 1 illustrates a range of metaphoric expressions that exist within scientific thinking related to the human body.

The process of metaphoric transfer extends to the science of rehabilitation and pain. Melzack and Wall’s (1965) *Gate Control Theory of Pain* provides an excellent example of how a metaphoric expression can help explain an otherwise impermeable and abstract model for much of the population. Rathmell (2006) describes Melzack and Wall’s 1965 paper as the most influential ever written in the field of pain. With this in mind, we can see how Melzack and Wall’s (1965) pain gate theory has transfused common consciousness regarding pain neurobiology. In a comprehensive, longitudinal analysis of pain gate theory’s adaptations within educational texts, Semino (2011) found that, despite an updated understanding through Melzack’s redefined “neuromatrix” and “neurosignature” metaphors, many texts continue to use pain gate theory (Melzack 1999, 2005). This poses a widely held and well-documented dilemma regarding the application of metaphor within science and healthcare. Although strong advocates of metaphoric expression, Lakoff and Johnson (1980) warn that metaphors may obscure other lines of

inquiry. Taylor (1984) argues that metaphors can be seductively reductionistic, while Paivio and Walsh (1993) see them as a solar eclipse which hides the object of study and, at the same time, reveals some of the most salient and interesting characteristics, when viewed through the right telescope.

Self-generated metaphors

Although they remain frequently implicit, metaphors influence how we facilitate others and how others attempt to reach out to make sense of their experiences. Metaphors are utilised when conveying experiences most resistant to expression (Geary 2011). Pain is one such experience, and we must consider how we can elicit self-generated metaphors from people living with pain. Shinebourne and Smith (2010) suggest that self-generated metaphors offer a “safe bridge” through which people express emotions that are too distressing to communicate literally. With a limited ability to detect when people are attempting to cross this bridge through metaphoric expression, healthcare professionals risk squandering opportunities for a meaningful reconceptualisation of pain and, ultimately, a safe and confident return to physical activities. As clinicians, we must strive to identify our patients’ self-generated metaphors in order to explore meaning and to foster empathetic and therapeutic connections.

As the pain gate metaphor highlights, the perpetual use of our linguistic expressions leads to their literalisation within common language. Gibbs (1994) argues that scientific metaphors are made to be overused. Such frequent and ubiquitous usage conceals the metaphor from view, for example, we don’t literally stand under something to “understand” it. While linguistically interesting, we should not fall into the trap of considering such points as mere trivia. Far from it, the literalisation of metaphor within healthcare can have profound consequences (Bourke 2014; Semino 2011). For some, the pelvic floor metaphor as shown in Table 1 generates images of a shattered building construction that requires structural repair and, as such, this person’s perception will be that physiotherapy cannot repair the damage and that only surgical intervention will help. With considered guidance towards a more realistic and optimistic cognitive reconstruction, however, this metaphor can be helpfully reinterpreted as a muscle that can, like any other, be developed through the process of physical rehabilitation (Price *et al* 2010).

It is essential that, while self-generated metaphors permit access to personal narratives, we remain aware of their intrinsic ability to obstruct and regress the therapeutic process (Haigh & Hardy 2010). Continual, Socratic exploration of the patient’s understanding of pain is an indispensable component of therapeutic pain reconceptualisation through metaphor.

When writing about his own experiences of pain, both as a doctor and a patient, Biro (2010) argues that pain is an all-consuming interior experience that threatens to destroy everything except itself and can only be described through metaphor. In her recent historical exploration of the language of pain, Bourke (2014) suggests that our commonly used vocabulary to express pain has, over time, become increasingly restricted. The emergence of the

Scientific Concept (body part)	Metaphor
Heart	Pump
Cell membrane	Wall
Brain	Computer
Eye	Camera
Immune system	Defence force
DNA	Blueprint code
Blood vessels	Highways
Nerves	Wires
Sound/light	Waves
Pelvic musculature	Floor

Table 1: Commonly used scientific metaphors

biomedical model brought with it a gradual containment of the fundamental role of the metaphor in human expression. Bourke (2014) argues that bodies are not pure soma, but are constituted by social interactions and linguistic processes. If we are to empower people in pain to express their experiences in order for them to move forward, healthcare must embrace and encourage their assorted and idiosyncratic self-generated metaphors.

When visiting healthcare professionals, however, many people in pain are expected to find a simple linguistic solution that both expresses and labels the myriad of distressing experiences that they live with. In order to measure the different qualities of the subjective pain experience, the McGill Pain Questionnaire (MPQ) uses three classes of words that aim to describe the sensory, affective and evaluative aspects of pain (Burckhardt & Jones 2003). Although the MPQ provides both healthcare professionals and people in pain with a valid, linguistic measurement tool, both Bourke (2014) and Biro (2010) argue that no matter which sense we use, all attempts to express our perceptual experiences fall short of the mark through constrained linguistic means, and Scarry (1985) adds that pain is outside of language, absolutely private and untransmittable.

The “unsharability” of pain (Scarry 1985) means that we must seek mediation of its ineffable nature through art, music and metaphor. Bras *et al* (2013) argue that, while striving to attain person-centered pain management, healthcare professionals must recognise the ability of art to communicate the range of distressing emotions that are so characteristic of pain experiences. In our desperate attempts to both understand, and to be understood, art provides a means of expression that words alone cannot accomplish.

Biro (2010) states that pain erects a wall between us and the outside world. At the same time, it prevents us from breaching that wall by communicating the experience to others. Art and imagery can equip clinicians, researchers and people in pain, with the necessary tools to break through pain’s perceptual barricades (Lankston *et al* 2010). Driven by her desire to move beyond the linguistic constraints of the MPQ, the artist Eugenie Lee merges contemporary pain neuroscience with artistic endeavour.

Figures 1 and 2 show Lee’s 2012 installation entitled McGill Pain Questionnaire.



Figure 1: McGill Pain Questionnaire 2012, installation by Eugenie Lee (published with permission)



Figure 2: McGill Pain Questionnaire 2012, installation by Eugenie Lee (published with permission)

In their recent qualitative study exploring patient perceptions about pain, Darlow *et al* (2015) found a variety of negative assumptions existed among those with low back pain (LBP). Feelings of vulnerability, protection and uncertainty were expressed by the participants. The authors concluded that clinicians need to approach consultations with an appreciation of these beliefs as people with LBP display an attentional bias towards threatening nociceptive information that supports their perceptions; as Eccleston and Crombez (2007) so eloquently stated, pain is an ideal habitat for worry to flourish. With a meaningful reconceptualisation of pain as a threat output (Moseley 2003), clinicians can begin to acknowledge the implicit threat contained within their words and metaphoric constructions.

Throughout their study, Darlow *et al* (2015) use direct quotes from people living with LBP. While these comments highlight a range of anxious and worrying beliefs, the words used by the participants to express their experiences of living with pain also unveil the frequent use of self-generated metaphors within healthcare. Table 2 highlights these comments and proposes the variety of linguistic safe-bridges (Shinebourne & Smith 2010) that might be in use.

Through the exploration of self-generated metaphors, and with an increased therapeutic detection of these subtle linguistic nuances, healthcare professionals may begin to make sense of the lived experiences of people in pain. They may also utilise people’s metaphoric safe-bridges by using guided, Socratic discovery to explore collaborative means of reconceptualisation, thus fostering self-determined methods of behavioural change towards self-efficacy. For example, those who express feelings of loss of control as those shown in Table 2 can, with skilled guidance, consider a range of strategies that they might develop to help regain control. This involves further exploration of their chosen metaphor with therapeutic facilitation (Kopp 1995; Southall 2012; Tompkins & Lawley 2002). What strategies might they use to turn the amplification down? Which methods might they consider when they are next frozen in one place?

Kopp (1995) argues that when utilising dialogical metaphors for therapeutic gain, clinicians should frame the discussion within a third person context. By asking the patient to consider what advice they would give to someone else in this situation, we can begin to

Self-generated metaphor	Expressive safe-bridge
"It feels like it's crumbling. Like my back is crumbling and it can't support me."	Body as a broken machine. Life is falling apart. Seeking support beyond biomechanical development.
"I have to think about how I get down, use my legs as opposed to my back as a winch, or else I will do myself an injury."	Body as an adaptable machine.
"The spinal part of my back, it can go as quick as sneezing."	Body as a broken machine. "Gone" and "Went" as an expression of loss beyond biomechanical failure (Stewart, 2014).
"I guess just the worrying about it just kind of amplifies that a little bit."	Desire to regain control through change in the "volume" of experience.
"I've finally come to a place where I can manage it, I feel rather good about that."	Pain experience as a learning journey. Optimistic cognitive reconstruction (Reisfield & Wilson, 2004).
"I couldn't sit, I couldn't stand, I couldn't bend, I was frozen in one place."	Loss of control Stalled journey metaphor. Strategies to "unfreeze" required.
"It's almost like it's whipping me, saying 'no, lie down'"	The language of agency (Biro, 2010). An external, insidious force inflicting harm.
"It was so sensitive that if I misbehave with my back... then, again my back will go rebellious."	Loss of control and resilience. Battlefield metaphor with the spine as an attacking, external entity (Bourke, 2014).

Adapted with permission from Darlow *et al* (2015) *Easy to Harm, Hard to Heal: Patient Views About The Back*. *Spine* 2015; 40 (11) 842-850.

Table 2: Self-generated metaphors and their safe-bridges

help them step outside the confines of their personal experience and facilitate change through a more comfortable and distant advisory scope. Loftus (2011) calls for a dialogical approach to metaphoric expression within pain management. He argues that a monological, didactic approach restricts perspective and narrows our vision.

Instead, conceptual thinking is needed for effective biopsychosocial management (Warmington 2012), although Tompkins and Lawley (2002) feel a more tailored, collaborative approach is needed and suggest training to help clinicians identify patients' own use of metaphors. Autogenic (self-generated) metaphors have been suggested by Hejmadi and Lyall (1991) and Southall (2012). Unfortunately, while these suggestions might facilitate patients towards a worthwhile pain reconceptualisation, they remain as speculative opinions and further research is needed to investigate their use within rehabilitation.

While patient-generated metaphors permit access to personal narratives, it is essential that we remain aware of their intrinsic ability to obstruct and regress the therapeutic process (Haigh & Hardy 2010). Continual, Socratic exploration of the patient's understanding of pain is an indispensable component of therapeutic pain reconceptualisation through metaphor.

Cultural diversity

Culture and language affect perception, thought and cognition. They also affect the experience of pain. If we accept that metaphors, when appropriately co-constructed, can help us make

sense of the world, we must also examine their sociocultural implications for pain reconceptualisation. The complexity of divergent cultural interpretations adds to the already challenging task facing clinicians when attempting to explain pain.

Most of the evidence-base regarding persistent pain management emanates from Western cultures (Waddell 1996) but, as Western societies face an expansion of multiculturalism, we must consider how we can facilitate all patients to make sense of their pain regardless of cultural background, and within their cultural comprehension (Moore Free 2002). Lakoff and Johnson (1980) argue that language is rooted in our cultural beliefs, and that our interpretations of metaphoric expression can easily be lost, so, if we are to fulfil our biopsychosocial aims for all people in pain, it is essential that we improve cultural competence (Narayan 2010). This is particularly true of metaphoric expression and will likely

Cultural Differences: The Metaphoric Language of Headaches (Bourke, 2014).	
WESTERN (Mechanistic and invasive)	JAPANESE (Natural and environmental)
Shooting	Bear headaches – resemble heavy steps of a bear
Stabbing	Deer headaches – like the galloping of a deer
Lancinating	Headaches with a chill
Pounding	Octopus headache – sucking
Burning	Crab headache – prickling
Crushing	
Pinching	

Table 3: Culturally different metaphors to describe headaches

become more prevalent with increasing global migration (Gurung 2013).

Bourke (2014) highlights the linguistic differences between Western and Japanese cultures when using metaphor to describe headaches (Table 3). Historically, germ theory ushered in invasive and mechanistic metaphors to describe pain and disease in Western civilisations and Bourke (2014) suggests that since the word “painkiller” was first used in 1845, pain has been viewed as an enemy which must be relentlessly fought and defeated.

Wiggins (2012) calls for an end to military metaphors that describe disease and prompt us to regard healthcare as a battlefield, by arguing that battle metaphors give the impression that the “war” can be won with biomedical escalation. The language of healthcare and physical rehabilitation speaks of analgesic ladders, bed blockers and failed back surgery syndrome. People in pain frequently experience an escalation of passive healthcare interventions that often leads to false hope, amplified worry and entrenched beliefs (Eccleston & Crombez 2007). People climb the analgesic ladder from paracetamol towards opioids. Unavailing attempts at physical rehabilitation (the ground troops) frequently leads on to steroid injections (the tank division), and epidurals (the fighter jets) before finally, the patient is facing the nuclear warhead option in the form of surgical intervention (Figure 3).



Figure 3: The escalating battlefield of pain management

This broad militarised metaphor lies at the heart of many healthcare models and drives passive dependency and an overreliance on interventional medicalised escalation (Wiggins 2012). Reisfield and Wilson (2004) believe that military metaphors lead us to assume that failure lies with the patient and not the treatment and that, equally, they might lead some clinicians to perceive themselves as incompetent soldiers.

Summary

The sheer prevalence and characteristic concealment that metaphors exhibit within day-to-day communication requires our attention. When viewed within the context of rehabilitation and pain reconceptualisation, metaphoric expressions can

provide helpful, communicative links between patients, clinicians and researchers. Through a greater appreciation of the hidden influence of metaphor in rehabilitation, we can begin to develop the necessary skills to facilitate behaviour change. Further research is required to determine the impact of metaphor training for healthcare professionals and to investigate if such training leads to improved clinical outcomes and reduced disability.

When using metaphors, as we all inevitably must (Lakoff & Johnson 1980), it is prudent to remember Arturo Rosenblueth and Norbert Wiener’s warning that the price of metaphor is eternal vigilance. Metaphors provide a frame through which we paint unique cognitive landscapes (Bolton 2010) and we must remain mindful of our eagerness to impose our brush strokes on the canvases of others. Bakhtin (1981) argues that language which is not spoken by the individual exists in other people’s mouths, in other people’s contexts, serving other people’s intentions; it is from there that one must take the word and make it one’s own. As healthcare professionals, we need to recognise that the answers to people’s problems often lie in their words and metaphors, not ours.

About the author

Mike is a physiotherapist and visiting university lecturer with more than 15 years’ experience of managing complex, persistent pain conditions. In addition, he is a dedicated practice-based educator committed to providing evidence-based education to a wide variety of health professionals. His Know Pain workshops have provided clinicians around the world with practical and innovative pain education skills. He is currently studying an MSc in Physiotherapy and Practice-based Education at The University of Brighton and is planning a PhD focusing on pain and communication.

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Pharmacology and pain



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Since 2012, in the UK, a physiotherapist who has undertaken the appropriate training as an independent prescriber can autonomously assess and write a prescription for a patient without the involvement of a medical doctor. This is a highly significant change for the profession – in fact, it's a world first. Those who have already trained as supplementary prescribers can take a conversion course to advance their role to that of an independent prescriber. Here I have outlined some of the instances where physiotherapists can use these skills in daily practice to simplify patient pathways and optimise the treatment and management of patients.

Learning outcomes

- 1 Outline of some key points relating to physiotherapists prescribing and advising patients about medications.
- 2 Briefly review some of the key factors relating to clinical use of paracetamol and NSAIDs relevant to physiotherapists.
- 3 Outline, by use of three case studies, clinical applications of independent prescribing by a physiotherapist.

Background

In 2005, the law with regard to prescribing medicines was changed to allow physiotherapists to train as non-medical supplementary prescribers (CSP briefing paper PD019 2014 Medicines and Prescribing; DoH 2009). This mechanism of prescribing involves a voluntary agreement between the independent prescriber, e.g. GP or consultant, the patient and the supplementary prescriber, i.e. the physiotherapist, to introduce and change medications in accordance with a clinical management plan (CMP).

In July 2012, following several years of lobbying by the Chartered Society of Physiotherapy (CSP), a further change to this legislation was made which allows physiotherapists to train as independent prescribers.

Introduction

In 2006, during my rotation between hospital Accident and Emergency and a chronic pain clinic, it became increasingly evident that there was not only a difference in how closely a patient's pain levels and their pain medication was being monitored in the acute setting compared to the chronic setting, but also how little I, and many physiotherapists generally, seemed to really understand about pain control medication.

Local waiting times for chronic pain clinics were often a year for English speaking and beyond that for non-English speaking patients. Having identified a need for change, I proposed a possible service improvement that was to have a prescribing physiotherapist who would potentially be able to manage as many as a third of those patients waiting to see a pain consultant, and deal with all their needs including reviewing pain control medication. My proposal resulted in a reconfiguration of the chronic pain service and an immediate, positive impact on waiting times and costs. These changes have been sustained and led to many other positive changes in patient management.

Further changes to improve patient access to medications have continued to take place, most recently from 1 June 2015; a list of seven controlled medications can now be independently prescribed (CSP briefing paper PD026 2013) when clinically appropriate, without GP authorisation.

I remain passionate about physiotherapists leading change by training as non-medical prescribers. This will allow the role and

scope of our professional practice to evolve as never before by combining our traditional skill set with that of the independent prescriber. There is huge potential to bring about service development to improve patient access, patient experience and ultimately patient outcomes. I believe that physiotherapy is a profession which inherently strives towards positive change through perseverance and innovation and thus ideally placed to carry these changes forward.

While not all physiotherapists may need to prescribe as part of their practice, many can significantly improve the quality of care they are able to offer their patients by improving their knowledge about pain medications to help guide and support their patients, the vast majority of whom are likely to be taking, or may benefit from taking, pain medications.

Physiotherapists who have the appropriate skills, knowledge and experience are able to advise patients about safe use of over-the-counter (OTC) medications and advise on safe and effective use of medications already prescribed by their GP.

Here I briefly discuss some of the issues relating to paracetamol and non-steroidal anti-inflammatory drugs (NSAIDs) being two commonly used over-the-counter pain medications.

Paracetamol

Paracetamol is a cheap, well-tolerated and easily accessible analgesic consistently recommended under treatment guidelines as being the first-line analgesic for a wide range of conditions, including many musculoskeletal conditions such as lower back pain (Savigny *et al* 2009) and osteoarthritis of the knee (Conaghan *et al* 2008). It has been shown to be a useful painkiller, particularly when taken regularly; its benefits as an analgesic are often underestimated. Recent articles have called into question the effectiveness of paracetamol for low back pain and osteoarthritis (Machado *et al* 2015), however, in contrast to these, there is much research, over many years, which has consistently shown paracetamol to be of equal effectiveness to NSAIDs (Verkleij *et al* 2015) and low-dose codeine (Coulthard *et al* 2014; Mattia & Coluzzi 2015).

As with all medications, however, there are some potential risk factors and issues relating to paracetamol that patients are not always fully aware of and, therefore, it is useful for physiotherapists, who often treat patients taking paracetamol, to be able to advise and give up-to-date information on safe and effective usage so that the risks, as well as the potential benefits, are fully understood. Patients often believe that, because it is easily accessible, paracetamol is quite weak and safe. However, paracetamol can become toxic at little above the recommended daily dose levels and so needs to be respected as potentially harmful.

Pharmacodynamics: how paracetamol works

Surprisingly, for a drug that has been taken so widely for so many years, the precise way in which paracetamol works remains poorly understood. Paracetamol's mechanism as a painkiller appears to work almost solely within the central nervous system and has

minimal peripheral activity. It does not have any clinically relevant action as an anti-inflammatory but works as an analgesic and, of course, is an anti-pyretic drug. Paracetamol is believed to be involved in five different action pathways (Franceschi *et al* 2013):

- Inhibition of cyclooxygenase (Cox) iso enzymes in the central nervous system without any interaction with the binding sites
- Activation of the serotonergic bulbospinal pathway
- Activation of nitric oxide (NO) pathway
- Activation or modulation of the indigenous opioid pathways
- Increase in cannabinoid tone.

Despite paracetamol being widely prescribed, it appears to have low incidence of adverse effects, apart from those relating to toxicity.

The recent understanding of the role, in paracetamol's analgesic capabilities, of transient receptor potential A1 (TRPA1), an ion channel on the plasma membrane of many human and animal cells that gives rise to somatosensory modalities, including a wide variety of nociceptive sensations such as cold, itching, irritation and muscle stretch discomfort, has revolutionised our understanding of how paracetamol probably achieves its analgesic effect (Watkins & Hay 2012) and will also, no doubt, be very useful for pharmaceutical companies that try to develop forms of paracetamol that have less risk of toxicity and fewer long-term side effects.

Paracetamol: the bad bits

While paracetamol is generally accepted as a relatively safe drug, we are increasingly coming to understand the negative effects that it may have, many of which relate to its toxicity effects. There is evidence of a significant increase in the risk of liver and kidney disease relating to long-term, regular usage (El Nahas & Bello 2005; Fored *et al* 2001). There is also a possible link to the increased risk of attention deficit disorder and an effect on the neurological development in children, correlating with the use of paracetamol during pregnancy (de Fays *et al* 2015).

When paracetamol is taken concomitantly with alcohol, it is known to compete for metabolising CYP450 enzymes in the liver, resulting in the formation of a partially metabolised form of paracetamol (N-acetyl-p-benzoquinone) which is very toxic to the cells of the liver. Therefore, the consumption of alcohol while taking paracetamol should be avoided.

Paracetamol has also been identified as a common potential cause of medication over-use headaches (Kristoffersen *et al* 2014; Diener & Volker 2004), which is an issue worth discussing with patients who may be considering it as a long-term analgesic option.

In addition, paracetamol is identified as the most common drug used in intentional suicide through overdose and accounts for just under half of all medication overdoses each year in the UK (Bateman 2014). An often less realised problem is that of prolonged overdosing, often known as "staggered" overdosing (Craig *et al* 2012), where a slightly over-the-recommended daily dose is taken for a prolonged period of time, potentially causing high levels of irreversible liver damage. There is also a strong correlation between staggered overdosing and the simultaneous consumption of alcohol which further exacerbates the levels of liver damage.

Non-steroidal anti-inflammatory drugs (NSAIDs)

NSAIDs are generally cheap and easily accessible. However, they can cause a number of side effects, particularly if taken at higher doses and for longer periods. Currently, NSAIDs are taken regularly; 2-3 days a week, or daily, by around 15% of the UK population. NSAIDs have been identified as contributing to around 18,000 gastric bleeds each year, contributing to over 2,000 deaths a year (Shah & Mehta 2012; Lanas *et al* 2005, National Centre for Health Statistics 1997; Singh 1999).

High doses taken over a prolonged period also significantly increase the chances of a thrombotic event and so NSAIDs are not recommended to be prescribed to anyone who has already experienced a heart attack owing to the posed elevated risk. Recent studies (Fosbøl *et al* 2010; Kearney *et al* 2006) identified diclofenac as a drug that particularly raised the risk of thrombotic events, and this has led to it being largely replaced in recent years by prescriptions for naproxen. The process of selecting appropriate non-steroidal medication for a patient should include consideration of any gastric trauma and cardiac risk. It is recommended that non-steroidals should be prescribed at the lowest acceptable therapeutic dose level for the minimum possible time in order to minimise risk and side effects.

Ibuprofen, naproxen and diclofenac are part of this group and, predominantly, their mechanism of action is in reducing production of cyclooxygenase (COX) enzyme leading to an inhibition of prostaglandin synthesis involved in pain, inflammation and thus early healing within the tissues. Prostaglandins are active lipids which exert locally acting hormone-like effects involved in many other processes in the body. Importantly, COX1 is involved in the production of prostaglandins, important for producing protective mucosa of the stomach so non-steroidals that depress COX1 are prone to cause gastric trauma. Indeed, a staggering 25% of all reported adverse drug reactions relate to the use of NSAIDs, and their side-effects have been shown to lead to a huge number of gastric bleeds each year, particularly in elderly patients.

In an attempt to reduce the instances of gastric trauma, COX2 selective non-steroidals were developed. Unfortunately, these have been shown to increase the number of thrombotic events and, following trials, the highly COX2 selective medication, such as rofecoxib, were shown to cause unsustainable levels of risk and were predominantly removed from the market (Jüni *et al* 2004). The main consideration in any decision with regard to selection of NSAIDs remains in the patient's risk of gastric trauma versus their risk of cardiac and thrombotic events.

Non-steroidals in sport

Many people participating in sport take anti-inflammatory drugs prophylactically in the belief that doing so will reduce their risk of injury, particularly for endurance events such as marathons, and Iron Man competitions. Many also believe that non-steroidals will reduce the levels of muscle soreness after training. There is, unfortunately, a growing epidemic of non-steroidal use, misuse and abuse within sports teams and academies (Warden 2010; Nieman *et al* 2006; Babwah 2014). However, the research has

repeatedly shown that many of the beliefs with regard to the benefit of non-steroidals in sport are not only unfounded, but often the reverse is true (Warden 2010). Warden eloquently describes the issues relating to prophylactic non-steroidal usage, concluding that "the prophylactic use of non-steroidals has no basis and therefore should be regarded as drug misuse".

Non-steroidals and soft tissue injuries

There are a number of articles debating the effect of non-steroidals on soft tissue injuries with some evidence that, especially in the early stages of healing, they can impair the healing process for ligaments, bones and other types of soft tissue (García-Martínez 2015; Schwarting 2015; Shen 2005; Dahners & Mullis 2004). There is, however, some evidence that COX2, selectively given further into healing process of tendon injury, may actually enhance the remodelling phase of healing (Virchenko *et al* 2004). Ibuprofen has also been cited as having a potential role in tendon recovery if given within a specific tailored programme of medication at the correct phase (Connizzo 2014; Fallon 2008). The research evidence that exists has caused many authors to conclude that non-steroidals are generally overused in acute soft tissue injury management, and that other modes of analgesic such as paracetamol or low-dose codeine should be considered instead (Paoloni & Orchard 2005). It is also advocated that, in order to reduce the negative impact on soft-tissue healing, non-pharmacological methods of pain relief are employed, certainly for the first 24-48 hours post-injury, before a non-steroidal is introduced.

While NSAIDs are effective pain medications with good levels of effectiveness for a wide range of conditions, they have a large number of potential side effects, particularly risks of gastric trauma and cardiac issues and, therefore, are not suitable for elderly patients or those with raised risk of gastric or cardiac complications. NSAIDs can also exacerbate asthma in around 15% of asthmatic patients, and have the potential to cause many adverse drug interactions (Risser *et al* 2009). In order to minimise risk, NSAIDs should only be recommended when safe and indicated, and for the lowest dose and shortest treatment duration.

In the following case studies, we consider how a physiotherapist with independent prescribing skills can offer additional benefit and convenience to the management of their patients. These examples include medications other than those described above. It is, however, beyond the scope of this article to focus on each named medication individually.

Case study 1

Mr I works as a builder and hod-carrier. About three weeks ago, he awoke with severe neck pain, radiating down his right arm. He was advised to rest and had been off work since, mostly on bedrest because of the levels of pain. On assessment in clinic, we were able to identify a likely cervical disc prolapse, probably in the lower cervical region, causing radiculopathy down the right arm. The patient experienced tingling and some transient numbness in the hand, but no myotomal weakness, and severe levels of pain that significantly limited our ability to assess him fully. He returned

to his GP on several occasions and had, so far, been prescribed only non-steroidals, paracetamol and diazepam. Our exercise programme was mainly concerned with pain relief and posture.

Based upon clinical assessment and the patient's levels of pain, the GP was contacted in order to confirm any issues with past medical history and current medications neither of which, apart from the analgesics previously mentioned, were relevant. It was agreed to start the patient on pregabalin at 50mg nocte and titrated up to therapeutic dose levels. At this stage he could only obtain this through our recommendation, rather than through NHS prescription. At a five-day review the patient already described significant reductions in his neck and arm pain and he was able to start on a programme of physiotherapy.

The patient attended the clinic weekly for the next five weeks, by which time his pain was very much under control. He now had an NHS prescription of pregabalin and so could continue with this drug remedy without any further direct cost to himself.

He has returned to work and is engaged in an exercise and rehabilitation programme.

Case study 2

Mrs J is 51. She attended with severe pain in her left shoulder and could not sleep. In the past she had been diagnosed with frozen shoulder in her right arm and had steroid injections, although it took her around two months to get this treatment. She had been to her GP who had made a referral to her local MSK service, but had been advised that the current waiting list just for triage assessment was around eight weeks.

Mrs J attended private clinic and, based on assessment and ultrasound findings which demonstrated no significant rotator cuff abnormality, a clinical diagnosis of adhesive capsulitis was made.

Having discussed treatment options, the patient agreed to a steroid injection which we were able to prescribe and, once she had obtained the medication from the local pharmacist, we administered. On review at the clinic a week later, the patient had very significant improvements in her shoulder range of movement and was given a home exercise programme to follow as pain allowed.

Case study 3

A male patient in chronic pain reported that he was currently, but sporadically, taking medications including codeine, amitriptyline, and tramadol, among others, which he obtained from a friend.

On assessment the patient presented with chronic musculoskeletal pain which he stated had been present for a number of years. He had been aware that the pain was unlikely to go spontaneously and was happy to engage in a programme of physiotherapy that would give him self-management strategies. We discussed that we would like to rationalise his medication usage and a session was spent discussing which medications he could take and how to optimise their effects.

This case is a classic example of how improving our knowledge of medications enables us to advise patients about what they are already taking in order to assist with our own clinical practice. This helps reduce risk, reduce side effects and optimise the maximum benefit. This approach is highlighted in the recent Optimising Patients' Medication NICE guidelines (March 2015). There are a number of issues involved in this area, but physiotherapists can play a very important role in this part of their patient's treatment.

Prescribing

This service will, no doubt, evolve over time and the role of prescriber is likely to expand. This will allow physiotherapists to develop innovative ways to combine their current skill set with their new access to the independent prescriber role, to offer a more flexible service, improve the access to medication for their patients and, therefore, simplify and enhance their patients' experience. In addition, there is increasingly a role for physiotherapists to advise their patients on how to get the best out of medications that may have already been prescribed through their GP.

Advice on a safe and effective way to do this is outlined in the CSP briefing paper PD019 Medicines Prescribing. Section 3 specifically alludes to the scope of practice with regard to this role. By improving our knowledge and skills in this area of patient care we can contribute towards safe, holistic and vigilant patient care.

About the author

David Baker qualified as a physiotherapist from the University of East London in 1999 and, over the past 15 years, has specialised in MSK, both in the NHS and in private practice.

David is an independent prescriber and his interest in medicines and prescribing began in earnest when he was working in a split role rotation between the Accident & Emergency department at the Homerton University Hospital, and part time in a chronic pain clinic. He initially attended a course in Pharmacology and Clinical Practice at the City University London, from where he subsequently qualified as a supplementary prescriber in 2008.

In 2010, David received a Service Innovation award from City and Hackney PCT and was invited to speak at the CSP Congress in that same year. Since then, David has taught non-medical prescribing programmes, medicine management, and on short-course pharmacology days at universities around the country. He is also a freelance lecturer, teaching his PhysioUK-run course, Optimising Patients' use of Medication, in hospitals and private practices throughout the UK.

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The Pain Toolkit

Pete Moore

Author of *The Pain Toolkit*
Trainer and Educator

My story is typical of that of any pain patient. I was looking for the magic bullet that would take away my pain. I became a serial doctor and therapy shopper. The pursuit of managing pain was like playing a game of snakes and ladders; a game of luck. In 1995, I attended a pain management programme that changed how I viewed and dealt with my pain and prompted me to try to help others in a similar situation. So, when I was approached to write an article for this Pain Solution edition of *In Touch*, and was asked if I would explain how I manage patients with the help of *The Pain Toolkit*, I thought, "What a great question". The funny thing is that I don't really do anything because the patients, with the help of their healthcare teams, do the work themselves. Although, that's not to say that *The Pain Toolkit* doesn't give them that initial push.

Learning outcomes

- 1 Appreciate the need for patients with pain to self-manage.
- 2 Understand the options for explaining pain.

Introduction

I think most people living with pain, as I did, just get a little stuck; they get stuck in the medical model of care and hand over responsibility for the problem to their GP or healthcare professional with the expectation that they will come up with all the answers.

The Pain Toolkit was, therefore, developed in response to my own search for answers on how to deal with, or alleviate, persistent pain. It is an easy-to-read, 24-page booklet that people can really relate to because it was written by someone who has the experience of persistent pain and has learned how to self-manage it.

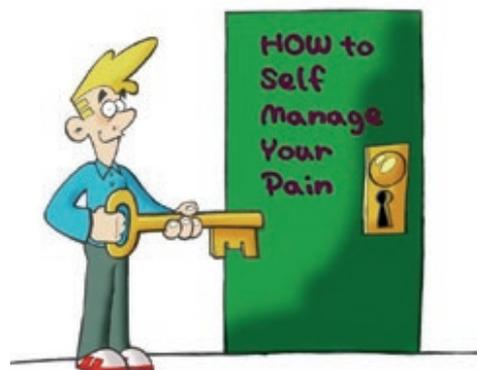
The 12 tools are aimed at giving the reader a starting point in taking responsibility for their own pain management, rather than as a panacea for their pain, and the main message in *The Pain Toolkit* is for the individual to work with their healthcare professional; to be part of their own healthcare team.

Acceptance

The first and most important tool in pain self-management is acceptance; the individual is asked to accept that they have persistent pain and then begin to move on (www.pain toolkit.org/tools/tool-one).

However, acceptance is not about giving up, but rather about recognising that there is a need for the individual to take more control with regard to how pain can be better self-managed.

It is a bit like opening a door on to lots of self-managing opportunities. The key for this door is not as large as the patient may have first thought. All they need is a willingness to use it and to try to do things differently.



Coping or self-managing?

Do physiotherapists, or other healthcare professionals, help people to “cope” with their pain or to self-manage it? Since reading a paper, 10 or so years ago, by Debbie Kralik *et al* (2004) I’ve been a fan of self-managing. In their paper, the authors suggest that “...the term ‘coping’ is used interchangeably with self-management. Coping is a complex construct with many definitions. However, a distinction is drawn here by adopting the definition of coping as being a state of tolerating, minimizing, accepting or ignoring things that cannot be mastered. The term ‘self-management’, however, makes reference to the activities people undertake to create order, discipline and control in their lives.” (Kralik *et al* 2004)

This made so much sense to me, as I recognised that coping was just getting by, while self-management was taking action. I had to get off my butt and do something.



Explaining pain

Most people experiencing persistent pain are visual learners. They often have short attention spans because their pain is always grabbing their attention. It is, therefore, always worth asking the patient, before giving them reams of information on their pain and how to manage it, how they prefer to learn. Do they learn best by:

- reading
- watching
- practice
- a combination of the above?

I often find that explaining to patients how their pain works is best done through the use of a visual tool.

Understanding pain in less than five minutes, and what to do about it! is an excellent video (https://www.youtube.com/watch?v=C_3phB93rvI) to show patients, as it provides a simple explanation how pain works and, more importantly, what to do about it.

It should be noted, however, that the future of pain self-management information is increasingly turning to social media. People with pain and other long-term health conditions are getting more and more of their information through the Internet, so it is up to us to signpost them to trusted sites where they can access research and learn useful information.



Twitter, Facebook and social media

Personally, I’m a Twitter guy (@paintoolkit2), mainly because it’s quick and to the point. At the time of writing, my followers numbered just under 4,000, most of them physios from the UK, Canada, United States, Australia, New Zealand and Europe. It continues to amaze me how many people freely promote pain management and their professional knowledge via social media.

The Pain Toolkit booklets and website

When I first started to write *The Pain Toolkit* in 2004 I had no idea that, by 2015, it would be:

- printed in 11 different languages
- adapted for Australia, New Zealand, Ireland and Canada
- have 550,000 copies currently in circulation in the UK
- downloaded from the website over 200,000 times a year
- adapted for young people / teenagers in a version called My Pain Toolkit
- adapted for offenders in secure units.

Thankfully, The Pain Toolkit website (www.paintoolkit.org) is popular with the many visitors who access it, with the main feedback being that it is easy to use with lots of simple, no-nonsense information.

There is now a Pain Toolkit interactive app that patients can use on their own or with their healthcare professionals as part of their treatment. It is available on the Apple Store or Google Play.

How to use *The Pain Toolkit*

If you are interested in how *The Pain Toolkit* might work for your own patients, I can assure you that it is really easy to use. Here is a three-step guide on how to go about it:

- 1) Give *The Pain Toolkit* to the patient and ask them to take it home and read it. Encourage them to show it to their partner, family, friends or work colleagues.
- 2) Ask the patient to tick off or circle the three tools they have the most problem with and bring the completed form with them to their next appointment.
- 3) Work with the patient on those three tools during their following sessions until they feel confident with them. Once they are, ask them to choose another three and repeat the process.

Welcome to the Pain Toolkit

This is a shortened version of the Pain Toolkit and there is a larger 24 page version NHS and other organisations purchase from us, and includes extra useful information about:

- Pain & Sleep
- Pain & Work
- Using the Internet
- Extra resources
- Stretching/exercising
- Pacing daily activities
- Dealing setbacks



Pete says...
"Living with pain can be tricky, and you may need some help as I did."



Where do you get the help?

Well, you can get help and support from your family, friends, health care professionals and work colleagues."

Your 3 step guide how to how best use the Pain Toolkit

1. Read the Pain Toolkit and show it to your partner, GP/health care professional, friends, family or work colleagues.
2. Tick off or circle the three tools you have the most problems with and show them to your GP/health care professional, friends, family work colleague and ask them for help and support.
3. Once you feel confident with those three tools, then choose another three and repeat the process.

Important tip - using the Red links
 Throughout the Pain Toolkit you will see highlighted words in red. For example here is a good one [Understanding Pain in less than five minutes](#). These are links to websites, so all you need to do is just click on them.

So, lets get started... and see if you can recognise yourself in the Pain Cycle and answer any of the three questions on the next page?

As an example, if the patient circles Tool 3 – Pacing as a problem, the following describes how to explain pacing to the patient and walk them through the dealing with it.

Example of Pacing

Most patients with pain are all-or-nothing people and will use their pain as a guide to when they can start, or when they need to stop.



It's like they drive a car until it's completely out of fuel, without thinking or planning where the next filling station is.

Pacing can be explained to the patient as the practice of learning to take a break before they think they need to or, to use the car analogy, to stop at a garage before the fuel gauge is on the red. This self-management tool can reduce the chances of the patient's pain intensifying and can, in fact, help them to do more without any increase in their pain.

... and finally, thank you

I would like to say a big thank you to all physios who support people with persistent pain. I know very well that we can be tricky customers and our timetable of pain relief may be different to yours. So thank you for being patient with us and please continue to do so.

About the author

In July 1996, Pete attended the INPUT Pain Management Programme (PMP) in London which set him on the road to self-managing his pain. Between 2002-2011, he worked for the Expert Patient Programme as a Senior Trainer for Pain and as a Business Development Manager.

Over the years he has written and co-authored a number of patient / healthcare profession-led programmes and booklets, and he regularly gives talks about pain self-management to healthcare professionals and patient groups in the UK and Europe. Pete is also part of Patient Advisory Teams at University College London, Imperial College, and Leicester University.

In 2014, Pete was presented with the Pain UK Champion Award by Pain UK, The British Pain Society and the Chronic Pain Policy Coalition, in recognition of his 14 years of charitable work in supporting people with chronic pain through the promotion of patient self-management.

Pete is a member of the British Pain Society, a member of the International Association for the Study of Pain (IASP), a presenter at the EFIC Pain School and a member of the EFIC Patient Liaison Group.

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Reference

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Back pain: if all I have is a hammer, all I see is nails



Kieran O'Sullivan PhD MSc

Lecturer, Department of Clinical Therapies, University of Limerick, Ireland

"I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail."

Abraham Maslow, Psychology of Science.

A hammer is a useful tool, as are techniques such as manual therapy and exercise, but often other tools are needed. In this article, I will reflect on the range of tools physiotherapists have in their skillset, how these skills match the needs of people with low back pain (LBP), and how the range of tools can be expanded, while respecting professional boundaries and competencies.

Learning outcomes

- 1 Be familiar with how laboratory-based research on pain mechanisms translates into recognising different chronic low back pain presentations in everyday clinical practice.
- 2 Be able to identify some key barriers to recovery from chronic low back pain using a flexible, clinically reasoned approach.
- 3 Demonstrate how to target some key modifiable barriers to recovery from chronic low back pain using a flexible, clinically reasoned approach.

Introduction

Karen, a 51-year-old female, attended for treatment of severe persistent LBP, stating:

"...when I was lifting one of the last boxes, I felt a sudden sharp pain in my lower back. And then I had ... to start my new job – which involved lots of lifting and bending – within a week and the pain was still there. And my back has never been right since."

It is possible to see someone like Karen and think we have identified the key issues in her pain easily; specifically, that her LBP was caused, and continues to be aggravated, by lifting and bending. As a physiotherapist, and based on my presumed expertise in physical assessment and rehabilitation, I might feel well-equipped to deal with such factors. However, we know that the effectiveness of approaches such as manual handling training

are underwhelming (Driessen *et al* 2010). This might be because patients' lives, and indeed their pain, can be complex. In fact, a more accurate, detailed version of Karen's story might be more like:

*"I moved house that year and started a new job – my marriage had just ended. I could go into the marriage breakdown, but it's not really relevant to my back pain. Anyway, I was left to pack all the boxes for me and the kids, and when I was lifting one of the last boxes, I felt a sudden sharp pain in my lower back. And then I had **no choice but** to start my new job – which involved lots of lifting and bending – within a week and the pain was still there. And my back has never been right since."*

If a physiotherapist sees themselves as someone with expertise only in the assessment and management of anatomical and biomechanical factors, this may be all they will "see" in their patients. If, however, one sees LBP as a biopsychosocial experience, possibly influenced by a range of factors, one can develop a more diverse skill set and better match that skill set to patient needs.

Is there a need for change in the management of low back pain?

In short, the answer is yes. In contrast to other common and costly health conditions, e.g. cardiovascular and respiratory conditions, disability relating to LBP is actually increasing (Deyo *et al* 2009). This is not to say that there are more people with LBP, just that there are more people who are disabled by the problem. Some

might argue that this reflects modern lifestyles, with increasing rates of obesity and inactivity. However, these factors are also relevant to the correlation between cardiovascular disease and disability, but rates have not increased to the same extent at all (Deyo *et al* 2009). In other words, it is very hard to avoid the conclusion that there is something very wrong with how LBP has been managed. While management of other health conditions also requires serious consideration (Hadler 2012), it would seem sensible to consider:

- how LBP management has been so unsuccessful, and
- how we might learn from how other health conditions are managed.

What has been wrong with traditional management of low back pain?

Firstly, as a society we have embraced the idea that LBP is a dangerous condition which, if at all possible, should be avoided or prevented. However, the fact that almost everyone will experience LBP at some point in their life, and most go on to live a full and healthy life, challenges the notion that LBP is always dangerous and in need of "prevention".

The desire to prevent health conditions with significant mortality, e.g. aggressive malignant diseases, should arguably not be conflated with preventing anyone ever experiencing LBP, as LBP is essentially one of the "predicaments" almost everyone will face in life (Hadler 2009). In that regard, it may be better to view LBP as being similar to symptoms such as sadness, tiredness, constipation or diarrhoea; not in any way pleasant, but probably experienced by everyone for a short time at some point in their life.

In each case, after ruling out serious illness, we can aim to help people deal with symptoms when they arise so that they only impact on them for a few days or weeks, and do not become costly and disabling. This raises a tricky question for physiotherapists as a profession; are we comfortable with the idea that prevention is **not** always best, that experiencing LBP for a short period at some point in life is actually normal and that well-intentioned attempts to remove perceived "risks", e.g. heavy school bags, lumbar flexion at work etc. might actually be problematic?

This is closely related to a second key error in how LBP has been managed; how it has been viewed as an accurate indicator of spinal tissue damage. Overwhelmingly, LBP has been considered as a disorder related to either:

- patho-anatomical findings, e.g. disc bulges, or
- physical factors such as excessive activity, too much lifting, or lifting the "wrong" way.

In recent decades, it has become increasingly clear that much of what is reported on MRI scans is not closely related to LBP (Jarvik *et al* 2015; Brinjikji *et al* 2015a), and can in fact be explained by factors such as genetics and ageing (Battié *et al* 1995). For example, findings on MRI scans are increasingly prevalent in pain-

free but aging populations, yet they are not strongly predictive of future LBP and correlate poorly with levels of pain and disability (Brinjikji *et al* 2015a). In fact, an MRI for LBP can have significant adverse effects, especially if carried out too quickly (Jarvik *et al* 2015; Webster & Cifuentes 2010), or if the results are not communicated carefully (McCullough *et al* 2012; Sloan & Walsh DA 2010). This is not to say that patho-anatomical findings are irrelevant, as there is clearly a need to consider them as a source of nociceptive input in a biopsychosocial framework (Brinjikji *et al* 2015b), but that patho-anatomical findings should be considered as just one part of a biopsychosocial examination and clinical reasoning process.

Can we learn from other health conditions?

Many other chronic health conditions, such as obesity and mental health issues, are acknowledged to be influenced by a wide range of factors which can impact on health; these can include cognitive, psychological, social and lifestyle issues. For example, low mood, low self-esteem, low income, social isolation, poor education and inactivity are all acknowledged, along with dietary changes, as factors contributing to obesity (Wang & Beydoun 2007; Parsons *et al* 1999).

Similarly, it is widely acknowledged that a person can develop a cold sore or mouth ulcer when they are "run down" owing to sleep deprivation, stress, malnourishment etc. We also know, however, that cold sores are caused by a virus but that the virus only becomes symptomatic when the immune system is compromised. In this way, cold sores are an obvious example of how the interaction of "pathology", i.e. the virus, and "systemic health" can lead to the development of symptoms.

This raises two issues; firstly, a cold sore that develops in someone experiencing high levels of stress would never be described, or dismissed, as being psychosomatic. It is visible and clearly not "all in your head". Unfortunately, this does not appear to be the case with LBP that arises during a period of intense stress. Secondly, when a cold sore settles, the virus remains within the body without causing other symptoms or disability, something that has parallels with imaging findings of rotator cuff tears and disc degeneration which are present but not always associated with pain. These "pathologies" (a debatable description for such findings) are not necessarily problematic for an individual if their overall systemic health is good.

This interaction between systemic vulnerability and the development of symptoms is also seen in other conditions such as the common cold (Cohen *et al* 1998) and cardiovascular disease (Chida & Steptoe 2010). Interestingly, both healthcare professionals and the public seem to be much more accepting of the role of such systemic health factors in other pain states such as headache than they are in LBP, even though the evidence is strong for almost all painful musculoskeletal conditions (Houle *et al* 2012; Hayes & Hodson 2011). Is one reason for this that it is harder to blame discs (and other spinal tissues) for headaches?

Are physical factors and the physical examination irrelevant?

Definitely not! However, it should be remembered that physical tasks are not good predictors of future LBP (Kwon *et al* 2011). In addition, changing physical / ergonomic factors such as chair design, providing hoists etc. have only marginal benefits in terms of pain, disability and absenteeism (Driessen *et al* 2010; Curran *et al* 2015; Hogan *et al* 2014), and a reasonable argument can be made that at least some of the tools and strategies, such as those used to minimise lifting or bending for example, reinforce the belief that the back is vulnerable and that undertaking such tasks is dangerous. A recent study shows that manual handling training significantly increases the perceived danger of lifting and bending, rather than reassuring people about the capacity of the spine to be loaded (Horgan & O’Sullivan 2015).

Helping people to move with confidence and freedom again is vital in LBP rehabilitation, but much of the current advice relating to spinal movement carries the message that the back is vulnerable and / or movement is dangerous.

While almost every patient with LBP will present with “positive findings” such as tenderness and tightness on physical examination, a large body of data supports the proposal that these reflect not just local “issues in the tissues”, but also changes in central pain processing, neuro-immune function and motor control (Butler & Moseley 2013). Therefore, to address these very visible features, it might be useful to have a diverse set of tools in our clinical toolbox that can be used to target whatever factors are involved in the persistence of LBP. This might indeed include traditional aspects of rehabilitation such as manual therapy and exercise, but also incorporate other supports and resources according to the needs of the individual.

The physiotherapy toolbox

Exercise is, and should remain, a cornerstone of physiotherapy management for not just LBP, but probably all of the most common conditions encountered in clinical practice. It is worth reflecting on how people with LBP might be better able to engage with exercise and other forms of physical activity, and how other aspects related to disability can be blended with exercise to enhance outcomes. Key to increasing activity levels among people with LBP is helping them better contextualise what is happening

to their body, i.e. tissue damage is rarely the biggest issue, and to reassure them that everyday activities are not dangerous, even if they are difficult initially. If a person with LBP thinks that the pain experienced during bending is dangerous, we cannot blame them for avoiding it. The onus is on us to provide an alternative, evidence-based explanation of why bending hurts and provide strategies to make it hurt less over time.

Exercise alone, however, while beneficial, does not have a huge effect on LBP (Van Middelkoop *et al* 2010). Bearing in mind the range of aforementioned factors linked to LBP, it is clear that consideration of some non-physical influences is required in LBP management. It is at this stage that some physiotherapists become concerned about professional scope of practice and competence, especially when it comes to dealing with significant psychological issues (Synnott *et al* 2015a). It is important that physiotherapists, as with all healthcare professionals, are aware of when to refer on to other professionals and services. I would suggest that similar scope of practice concerns arise for the physiotherapist treating someone with LBP whose depression, loneliness and social isolation are contributing to their condition, as they do for the physiotherapist in a cardiac rehabilitation setting who is treating someone whose diabetes and obesity must be addressed. This is illustrated in Table 1.

It is very likely that the training of physiotherapists at undergraduate and postgraduate level requires greater emphasis on dealing with “non-physical” factors, to facilitate the ability of physiotherapists to have the right blend of tools at their disposal when dealing with the variety of patients who present with LBP (Synnott *et al* 2015b). However, it is important to highlight that some key skills, such as listening, empathy, compassion and the ability to challenge beliefs constructively that are required in dealing with cognitive, psychological and social issues, are not alien to physiotherapists. As a physiotherapist stated in a recent study (Synnott *et al* 2015b), “*even if you’re not a psychologist, you are a human being*”.

In Karen’s case, her management involved physical rehabilitation to increase her strength and range of movement, and she was helped to appreciate how:

- her physical movement behaviours were closely connected to feelings of fear, anger and distress
- her overall health was significantly compromised owing to this traumatic period in her life

	Weight management	Pain management
1	Identify with the patient how addressing the factors of weight loss and diet would help their situation.	Identify with the patient how addressing the factors of depression, loneliness and social isolation would help their situation.
2	Provide some simple resources and tips on promoting physical activity and a healthy diet, as well as helping the patient reflect on what factors may be contributing to their diet and weight gain.	Provide some simple resources and tips on promoting physical activity (shown to help mild-moderate depression) and other options, as well as helping the patient reflect on what factors may be contributing to their depression, loneliness and social isolation.
3	Refer a subset of patients on to another healthcare professional, e.g. dietician or psychologist if such is available and deemed necessary.	Refer a subset of patients on to another healthcare professional, e.g. psychologist if such is available and deemed necessary.

Table 1: Parallels in scope of practice considerations between weight management and pain management

- regaining control of her LBP would require her to focus on key healthy lifestyle behaviours such as sleep, exercise and stress-management.

A strong therapeutic alliance is vital in most therapist-patient encounters (Hall *et al* 2010), but especially so when dealing with more sensitive issues such as marital breakdown in Karen's case. If patients like Karen are to be helped to recover from disabling LBP, it is critical that the treating physiotherapist is able to identify the key factors related to each individual's LBP, and communicate these in a manner that does not cause the patient to feel stigmatised. Then, and only then, can a diverse range of therapeutic tools, including physiotherapy-style hammers, if required, be used successfully.

Acknowledgements

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What is the PPEF?

The PPEF is a charitable trust dedicated to making a difference in physiotherapy. We offer grants to fund postgraduate education and research for the benefit of the public and to support, through education, those giving care to anyone in need of physiotherapy. Grants are awarded three times a year to individuals and organisations.

The PPEF was established 15 years ago following an endowment from Kenneth Balfour whose wife had been a physiotherapist working in private practice.

Kenneth Balfour was an adventurous young man who was decorated for bravery during the war. He was also a mountain climber and an avid traveller. In his later life, however, he suffered from Parkinson's disease, an illness that slowly reduced his physical independence, but certainly not his spirit.

Kenneth endowed the Trust because he had experienced for himself the difference that physiotherapy support provided in his life. He saw that one way of helping Chartered Physiotherapists to continue to provide the best care for their patients was to help them to expand their knowledge and skills through educational programmes and research.

The aims of the PPEF are:

The advancement of education in the field of physiotherapy for the benefit of the public, in particular by:

- 1 The provision of education and training in physiotherapy to the public at large and in particular:
 - a) to physiotherapy patients to enable such patients to relieve or assist in relieving their own suffering
 - b) to persons (professionally qualified or not) providing paid or voluntary care to any person in need of physiotherapy.

- 2 The promotion of research and the dissemination to the public at large of the results of research in the field of physiotherapy.

The PPEF supports:

- 1 Postgraduate physiotherapy education and research that benefits the public and / or the patient.
- 2 Physiotherapy-led research, including:
 - a) novice researchers
 - b) cutting-edge / innovative research with sound methodology
 - c) those working individually or as part of a small organisation
 - d) applicants who have adequate backup and support.
- 3 Applicants undertaking MSc or PhD programmes.
- 4 Applicants who share their work at conferences in the UK or internationally.

Who can apply for funding?

Applicants must be physiotherapists registered with the HCPC (UK) and can apply as an individual or as part of any of the following:

- a) a charitable organisation
- b) an educational organisation
- c) a professional organisation
- d) a university department.

What are the PPEF's funding priorities?

Applications must:

- a) be relevant to physiotherapy and the public
- b) be physiotherapy led
- c) have sound methodology and criteria
- d) benefit the individual applicant.

They could also be:

- e) collaborative projects which are likely to show an impact on a large population

- f) comparative studies between different types of physiotherapy intervention.

What are applications measured / judged against?

- a) Applications must meet the aims of the PPEF
- b) How well applicants meet the criteria laid out in the application form
- c) Demonstration of patient / public benefit.

How often are grants awarded?

Three times a year in January, June and September.

What are the PPEF's main achievements to date?

In association with Physio First:

- a) The Data Collection Project (Data for Impact)
- b) Annual Conference overseas lecturers
- c) Education Day.

Other grant awards include:

- a) research projects with the Stroke Association
- b) numerous individual awards for MScs, PhDs and postgraduate research
- c) funding poster and platform presentations at international conferences.

How we operate

There are eight Trustees of the PPEF who meet six times a year. Three meetings to discuss applications, one joint meeting with Physio First and a planning meeting. Our AGM is held annually in March or April.

As well as the regular training undertaken by the Trustees as part of their commitment to the role, they are required to possess a broad range of skills including clinical, business, financial, educational and research, all of which are tools necessary in the evaluation of applications. One of

our appointed Trustees is an accountant and we are supported by an administrative assistant.

Further information on the PPEF can be obtained by email to ppefadmin@physiofirst.org.uk or by post to **The PPEF**,

Minerva House, Tithe Barn Way, Swan Valley, Northampton, NN4 9BA

Or, to speak to a Trustee, telephone **01423 871419**.

Retiring PPEF Trustee, Erica Nix

I have been a member of Physio First for many years.

Ten years ago, with great trepidation, I moved out of my sole practitioner comfort zone and into a world of assessing applications for sponsoring research: I became a Trustee of PPEF.

Over that time I have watched PPEF expand into an organisation funding a wide variety of schemes, covering large research projects, individuals making presentations or giving lectures at home and abroad, and those preparing for their MSc or Doctorate studies. Many of these requests have been

from Physio First, including applications to fund world-class lecturers at their annual conference.

It has been a great pleasure to work with the other Trustees, to learn so much more about our expanding profession and to have contact with those testing the boundaries for us all.

Now, as I retire, I realise that I would not have missed the experience for anything and therefore urge others to take the plunge and expand their horizons and become a Trustee of PPEF.

Erica Nix



PPEF seeking physiotherapist to join Board of Trustees from April 2016



The Private Physiotherapy Educational Foundation is looking to **recruit additional members** to our Board of Trustees. We are a charitable foundation, (Charity no 1005738) that provides funding for educational activities and research opportunities for individuals and large organisations.

We currently have eight Trustees and we meet five times a year, mainly in London.

The ideal candidate will be willing to fulfil the duty of care as a Trustee, ensure compliance with Charity Law, Company Law, and the requirements of the Charity Commission, as well as uphold the rules, charitable purpose and aims of the PPEF. They must act with integrity and avoid any conflicts of interest. There is also a duty of prudence to ensure that the PPEF is, and remains, solvent and uses funds and assets wisely. The position is voluntary but rewarding and travel and expenses are paid.

To apply to become a Trustee, please send your CV, with an accompanying letter setting out why you would like to be considered and what qualities you believe you can bring to the role, to:

PPEF, Minerva House, Tithe Barn Way, Swan Valley, Northampton NN4 9BA or PPEF@physiofirst.org.uk

Education programme courses

Region	Date and cost All prices may be subject to the addition of VAT at the prevailing rate	Title / Tutor	Venue	Event reference
London	11 March 2016 £149 (member) £156 (non-member)*	Introduction to Starting in Private Practice Karen Winrow & Karen Willcock	CSP, London	SIPP0316
Midlands	12 March 2016 £145 (member) £175 (non-member)	The Myofascial Spine Howard Turner	BH Parkside, Bromsgrove	MYS0316
Mercia	05 March 2016 £145 (member) £175 (non-member)	The Shoulder Len Funk	Manchester Institute of Health and Performance	SSI0115
Oxford	05 March 2016 £145 (member) £175 (non-member)	Musculoskeletal Occupational Health Acupuncture – Jon Hobbs	Oxford Brookes University, Oxford	MSKAC0116
Wessex	08 March 2016 £145 (member) £175 (non-member)	The 5 Phases of Knee Rehabilitation Mike Antoniadis	Hart Leisure Centre, Fleet	KNE1416

A £10 discount is available on courses booked online with the exception of those showing *. For details of all courses, please visit our website www.physiofirst.org.uk

Physio First 2016 courses have arrived!

The Shoulder: Evidence to support all the latest surgical interventions and post op rehabilitation

Tutor: Lennard Funk, Puneet Monga and Tanya Mackenzie

Date: Saturday 05 March 2016

Venue: Manchester Institute of Health and Performance, Manchester

A one-day course on the latest evidence and current opinion in the management of common and difficult shoulder problems. The course will cover the latest evidence on complex and massive rotator cuff tears, cuff arthropathy, atraumatic and multi-directional instability and complex bony issues in shoulder instability.

Musculoskeletal Occupational Health Acupuncture

Tutor: Jon Hobbs

Date: Saturday 05 March 2016

Venue: Oxford Brookes University, Oxford

This course is for those who wish to expand their practical acupuncture skills in the management of musculoskeletal pain and dysfunction of the neck, shoulder, upper limb and lower back in an occupational health setting.

Starting in Private Practice

Tutors: Karen Willcock and Karen Winrow

Date: Friday 11 March 2016

Venue: CSP, London

To provide a fresh, stimulating approach to the major requirements instrumental in shaping a successful private practice. This course aims to deliver sound business advice, references and a wealth of experience and understanding of all user services required, applicable to the variety of business models available to those starting in private practice.

The Five Phases of Knee Rehabilitation

Tutor: Mike Antoniadis

Date: Tuesday 08 March 2016

Venue: The Hart Leisure Centre, Fleet

This one-day course offers you the theory and application of the protocols for knee rehabilitation as applied to surgical and non-surgical knee problems. You will learn the latest techniques for ACL and knee rehabilitation and how to progress patients through the Five Phases of Rehabilitation; from pain management, early motion and basic movement retraining, to strength and neuro-motor development.

The Myofascial Spine: Understanding and Integrating Myofascial Spinal Treatment

Tutor: Howard Turner

Date: Saturday 12 March 2016

Venue: BH Parkside, Bromsgrove

Focusing on neuromuscular myofascial disorders, this clinical workshop will provide an integrated approach to the incorporation of myofascial treatment into the correction of spinal segmental dysfunction. It will cover the clinical relevance, assessment and treatment of myofascial restrictions to segmental movement in the cervical, thoracic and lumbar spines and the ribs.

Prices start from £135. Please visit our website to apply, www.physiofirst.org.uk, where you will receive a £10 booking discount for doing so!

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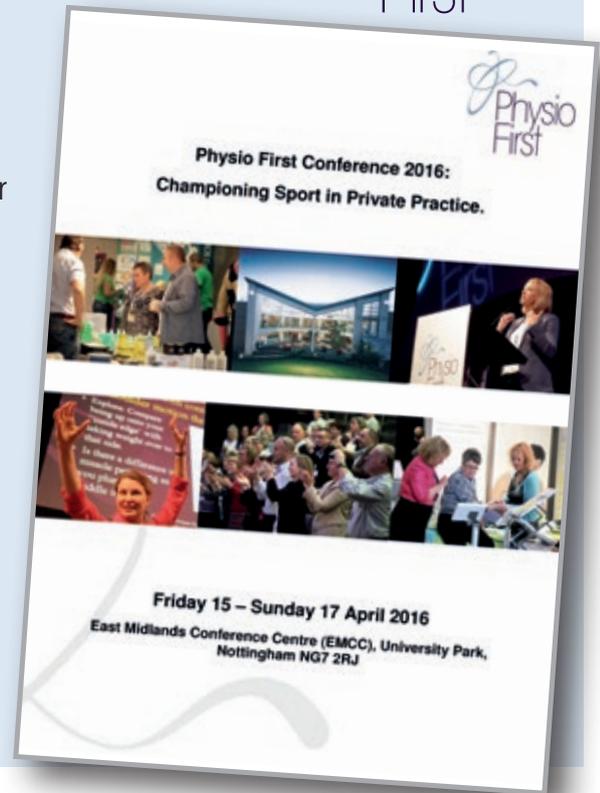
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Working for us

Reviewing our member benefits

Recently, we have undergone a strategic review of all Physio First activities to ensure that everything we do aligns with our intent of **“Championing evidence based cost effective private physiotherapy in the changing healthcare marketplace”** and helps to achieve our nine goals over a five-year period.

This review has included our member benefits and relationships with strategic partners and resulted in the decision that the following past benefits no longer aligned with our intent.

Thomson Directory

Our member benefit with Thomson has provided members with an opportunity to pay to appear in a Physio First corporate box. However, as no members chose to take advantage of this benefit last year, we feel that this reflects the inability of Thomson to keep up with our changing marketplace.

As paper directories have been overtaken by online directories and search engines, such as Google, it seems that Thomson is no longer a useful promotional tool for our members and, as a result, our relationship with Thomson has reached a natural end.

Blackwell's Exhibitions

Our strategic relationship agreement between Physio First and Blackwell's Exhibitions included our membership benefit of a 15% discount on all purchases with their book club.

However, our Conference Sub Committee has recently reviewed our annual Conference exhibition and trade stands to ensure that the pricing is fully aligned within our intent of **“Championing evidence based cost effective private physiotherapy in the changing healthcare marketplace”** and is transparent to all involved, as a result of which it became

apparent that increasing the stand price for Blackwell's Exhibitions for the 2016 Conference was unavoidable.

Due to this increase, however, Blackwell's Exhibitions has notified Physio First that they are unable to attend our annual Conference and so our strategic relationship with Blackwell's Exhibitions has now ended, which also means that the benefit of the discount has been withdrawn.

Tips from the team

2016–2017 Subscription and Direct Debits

Your new Membership year for Physio First begins on 1 April 2016 and your Direct Debit will be taken on or after that date.

Fill out a Direct Debit Instruction form and receive a £10 discount!

Great news for Full and Affiliate Members: by completing and submitting a Direct Debit Instruction you will save £10.

If you already pay by Direct Debit but have had changes in your bank details since April 2015, you will need to complete a new Direct Debit Instruction. You can download one from our Physio First website www.physiofirst.org.uk

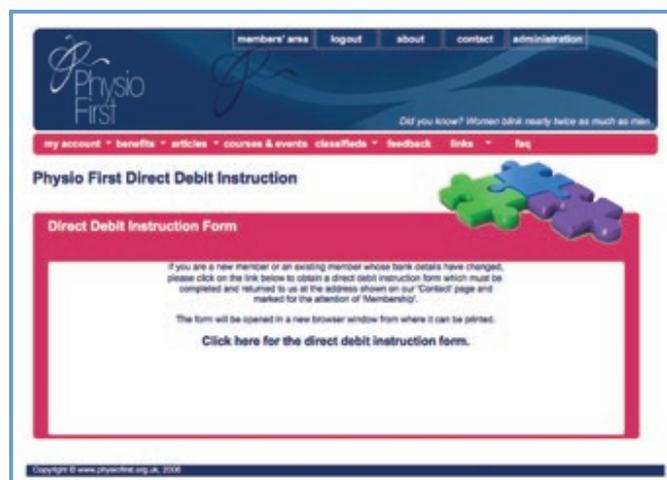
- Log in with your Membership number and password
- Click on My Account
- Scroll down to “Direct Debit Instruction” where you can print off a form to complete and return to the Physio First Head Office.

Tip: If you have forgotten your password, follow the “forgotten password” link and we will immediately send your password to your preferred email address.

Or call our Membership Team on **01604 684960** who will be able to send you a copy of the Direct Debit Instruction electronically.

All Direct Debit Instruction forms must be signed and sent by post before **Monday 22 February 2016**, to **Minerva House, Tithe Barn Way, Swan Valley, Northampton, NN4 9BA.**

After this date, renewals will be taken manually and therefore will not benefit from the £10 discount.

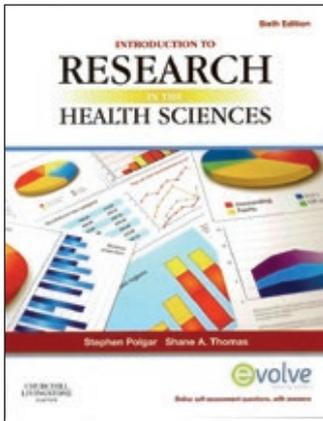


Book review

The books appraised here are done so by members with Physio First's five-year goals in mind. This means that each review needs to be considered with regard to the question "why is this book important for a Physio First member?" I hope that through this new approach the relevance of each book becomes apparent.
info@physioclinicbrighton.co.uk



Tobias Bremer
Book Editor



Introduction to Research in the Health Sciences (6th Edition)

Stephen Polgar and Shane A Thomas

Publisher: Elsevier

ISBN: 9780702041945

RRP: £32.99, paperback,

256 pages

Available for kindle

Some of my patients love spreadsheets; really, they love them and they know all the functions available, they design their life through them and get excited at the prospect of getting one started.

I, on the other hand, do not love spreadsheets. To me, they are a necessary evil that I sometimes have to do in order to get to the bigger prize, but there is no joy for me in the prospect of working with them and I feel exactly the same about research methods.

Some people, I know, get excited at the prospect of discussing research methods, while others like me see them as a way to get something done. That doesn't mean

they aren't important – far from it – but the material to be read and understood can at times be a little prosaic. However, whichever side you fall on, if you are starting on the road of research, this book, as the title suggests, is an excellent introduction to research methods. As it is an introduction, the content is not hugely comprehensive, but it covers aspects such as methodology, research planning, and dissemination very well and the reader would be hard-pushed not to find the information presented here useful and relevant.

I was definitely sold on this

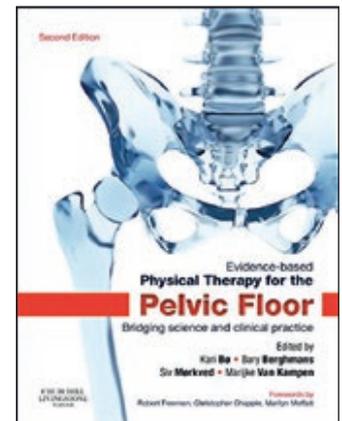
book when I read the following paragraph in the evaluating chapter: *"The proper attitude to take with published material, including systematic reviews, is one of hard-nosed scepticism, whatever the status of the publication."*

Having waded through the informative earlier chapters, I was very pleased to see that this book would sow the seeds of being critical of the evidence base as part of their introductory realm.

So, who would this book suit? It is definitely not one for the experienced or ambitious

hobby researcher as I would expect these to be well versed in all aspects of research which lie beyond the scope of this book. It would, however, be a useful addition for someone brushing up on their research method skills, terminology and definitions in order to understand the published journals better.

Reviewer:
Tobias Bremer



Evidence-based Physical Therapy for the Pelvic Floor. Bridging science and clinical practice (2nd Edition)

Edited by Kari Bo, Bary Berghmans, Siv Morkved and Marijke Van Kampen

Publisher: Elsevier

ISBN: 978-0-7020-4443-4

RRP: £44.99, hardcover,

446 pages

Available for kindle

Bridging the gap between science and clinical practice for pelvic floor dysfunctions is quite a statement of intent and I was keen to see how the authors would approach this task.

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1 McClure D and Farris B, Intervertebral Differential Dynamics Therapy – A New Direction for the Initial Treatment of Low Back Pain. European Musculoskeletal Review 2006, 45-48

The first chapter explains the importance of physiotherapy in managing pelvic floor dysfunctions and the authors make the point here that physiotherapists are the only healthcare professionals to focus on the pelvic floor, claiming that it is an area ignored by colorectal surgeons, gynaecologists and urologists.

The second chapter addresses the complexities of RCTs and systematic reviews, and their importance in underpinning our work. Thankfully, this is quite a short chapter, as I am sure that we are all aware of the importance of evidence-base and of its shortcomings.

The chapters on functional anatomy, neuroanatomy and neurophysiology are well written and illustrated and are a pleasure to read and, while the chapter on tests for various pelvic floor dysfunctions is interesting, it is obviously aimed at physiotherapists specialising in this field; without the specialist equipment and knowledge it is hard to see how to implement the information gained here.

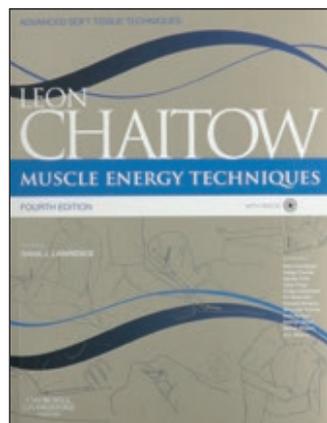
As a clinician who is not a fully signed-up member of the RCT fraternity, I have to say that I was less than enthused by the chapters that concentrated on weighing up the evidence and treatment options for various male, female and children's pathologies.

As for the chapter that is what this title is all about – pelvic floor and exercise science – while it includes some very useful exercises and starting points which are easily

incorporated into daily clinical practice, and an explanation from the authors on the need for the usual progressive loading and what training effects to expect, I thought this section could be a bit longer and more in-depth. This meant that, for me, the book did not fully succeed in its claim of bridging the gap between science and clinical practice.

As a starting point for anyone who has no literature on this subject matter, this book is quite a good buy. However, for those who have books that cover this area, I would suggest investing in a different title as, in my view, there is too much science and not enough bridging of the gap between evidence and clinical application.

Reviewer:
Tobias Bremer



Muscle Energy Techniques (4th Edition)
Leon Chaitow
Publisher: Elsevier
ISBN: 9780702046537
RRP £49.35, paperback, 334 pages
Available for kindle

Muscle Energy Techniques (MET) are a useful tool in the treatment of musculoskeletal

dysfunction. The aim of the book is to provide a comprehensive evidence-based support for MET and introduce the practitioner to the application of MET.

While Leon Chaitow takes responsibility for the first few chapters, he has included contributors from several disciplines such as osteopathy, sports therapy, massage therapy and physiotherapy, as well as some whose speciality is unclear, and herein the problems begin. Jargon: osteopaths talk very differently to physiotherapists and the first few chapters are a real struggle to understand. Additionally, the use of the illustrative text boxes in Chapter One cause another issue with regard to readability. I was uncertain why this content was not part of the main body of text. Some of it does occasionally relate to the main text and this boxed information can sometimes take up two pages, following which the original text then re-joins.

The practical application of MET starts from Chapter 5 and includes website addresses for links to videos accessed with a simple log in. Here you have access to a collection of MET greatest hits with videos that are clear, simple and short, but not inclusive of all the techniques in the book.

The figures from Chapter 5 onwards are clear. However, some of the bullet-point descriptions run into double figures, primarily because there is repetition of the core MET principles. Indeed, the authors must be given credit for the

number of times isometric contraction can be described in one chapter.

I would suggest that there is too much information, academic and practical, in this book. The content is confusing with either swathes of text or the formatting jumping from standard to experimental, and one chapter is written in the first person. Chapters cross reference other chapters, and the amount of repeated information is staggering.

While I appreciate that, in this world of proving our profession's worth, evidence is a prerequisite and so, where possible, each chapter should include evidence, I would request, as a reader, that the evidence be presented in the same format each time.

I would also ask that some of the "MET in ..." chapters be rethought, for example in the "MET in the treatment of athletic injuries" there are 13 pages of sport physiology and assessment, but only six pages of MET, and those six pages don't contain a lot of MET, certainly nothing new.

This could be a great reference book, but I would consider waiting for the Fifth Edition, which hopefully will address some of the issues raised here. In the interim, spend the money on attending a MET course.

Reviewer:
Colette Owen MSc BSc MCSP



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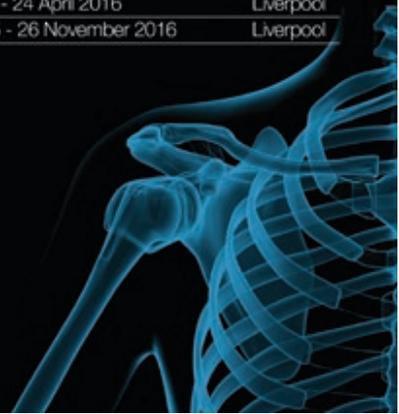
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Physio First and the Big 5

In our November edition of Update, our Chairman, Pam, talked about the Big 5 core benefits of Physio First and how we might explain them in the time it takes a lift to travel from the ground to the sixth floor or, in business terms, as an elevator pitch.



So, here is a reminder of the Physio First Big 5 members' benefits:

1 Unique member marketplace information

Generally this is what usually appears in Update, and is reported in our E-Alerts. Up-to-date information gleaned from discussions with marketplace stakeholders who we seek out, or who seek us out. If our Executive knows about it, and it is not a commercial confidence, our members know about it. Not just the facts but the context too.

2 Member-only practice benchmarking reports

Following our first full member data collection on how we members trade, regular collections will be undertaken followed by regular reports to participants. This will give details of our average member practice as well as average niche practices that mirror our own. The process is anonymous, safe and produces unique crowd-sourced evidence for us to learn "best private business practice" together.

3 Member-only private trusted LinkedIn forum

For those signed up, nothing further needs to be said. For those who are not, this is a unique colleague-to-colleague, safe and trusted forum where we can ask and answer more specific and searching questions than it is possible for any organisation to answer centrally.

4 Member-only Data for Impact reports

Our (until now) overlooked asset shines at precisely the right moment. This member benefit is how we will demonstrate our quality, our "evidenced based cost effectiveness". It delivers marketplace evidence for us to use as individuals, and as clinics to prove our quality based on our outcomes. It is also the engine to drive benefit number 5.

5 Member-only Quality Assured Practitioner scheme

Our benefit that we are racing to define. All components are in place, and our market research is complete. Lines of communication with marketplace stakeholders are open. We are wildly excited about the power this benefit will provide.

Are you **LinkedIn** to Physio First

The Physio First LinkedIn community is growing. We now have more than 558 members registered and helping to build a communication tool through which all our members can benefit from pooled knowledge and experience.

As a closed forum, this collegiate sharing resource is exclusive to members of Physio First and, as such, offers a safe and friendly environment where discussions can range from clinical issues, to business advice, experiences with insurance intermediaries, and mentoring information.

So, are you involved or are you missing out on information that might be crucial to your practice in the modern marketplace?

You can join by accessing the link from the Members and Benefits "how do I join the Physio First LinkedIn on-line community" page in the members area of our website www.physiofirst.org.uk, or telephone our Office Team on 01604 684960.



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