



## **'Explain Pain' – A review by Jim Hefford,**

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I remember the first time I sent a patient to the Pain Clinic. She went there depressed and in pain and came back angry and depressed and in pain. 'They told me it was all in my mind.'

One hopes that pain clinics are a bit more sophisticated nowadays, but if one wants to avoid my patient's angry reaction, then supplying this book would be the best preventive measure.

David Butler has written two other books on pain, the first in 1990 entitled 'Mobilisation of the Nervous System', and in 2000 this was followed by 'The Sensitive Nervous System' also published by Noi Group. These two are highly technical tomes for the physiotherapist or neurologist. 'Explain Pain' is for the layman.

Pain is not all in the mind, but we need the brain to understand pain and to see why emotions, thoughts, beliefs and behaviours are important in pain. When you experience pain it means 'the brain has somehow concluded, for some reason or another, often completely unconsciously, that you are threatened and in danger – the trick is to find out why the brain has come to this conclusion.'

David Butler traces the pain pathways (though he prefers not to use that word) and the influences leading to the brain's decision as to whether something hurts or not.

There are obvious influences. It has been shown that the same minor finger injury will cause more pain in a professional violinist than in a professional dancer. The brain contains groups of neurones devoted to body parts (the homunculus) in a thin strip of brain just above the ear. He calls this the 'virtual body' Here is where the phantom limb, felt sometimes after amputation, resides, and phantom breasts, penises and tongues have been reported. Chronic pain alters the body image and 'smudges' the body image in the brain so that there is no longer a clearly outlined virtual (limb, for example) image in the brain.

Tissues contain millions of sensors, all specialised for such things as mechanical, temperature or chemical stimuli. And when enough sensors are stimulated an electrical impulse travels up the neurone. 'The life of a sensor is short – they only live for a few days and then they are replaced by fresh sensors. This means that your sensitivity is continually changing.. Remember this point. If you are a pain sufferer, it may give you fresh hope. Your current level of sensitivity is not fixed.'

Many neurones from the tissues converge on to one going up towards the brain in the first synapse. Each activated neurone secretes its particular chemical into the gap and at the other side of the synapse are neurones going to and from the direction of the brain. Those coming from the brain may produce chemicals which raise the excitement level of the ascending neurone, or other chemicals which tend to block it. This first synapse is compared to a post office, which can, under certain circumstances, work overtime, or, alternatively, close down temporarily. The inhibitory chemicals Butler calls 'happy hormones', but in a patient with chronic pain the sensitivity of the spinal cord becomes increased so that it is as if the spinal cord 'has a magnifying glass in it.' There are potent endocrine and autonomic influences working on the messages coming into the brain and emotions and memory circuits in the brain all shape the brain's interpretation of what is going on.

After describing the sources of pain in various tissues – muscles, joints, bones, nerves, the dorsal root ganglion, discs etc, and the normal time sequence of repairs to damaged tissues, Butler describes the techniques which the patient can use to break the cycle of pain and how different health professionals can help.

Butler is well known as a lively lecturer. In this book he and his co-author have managed the extraordinarily difficult job of describing complicated natural processes in ways that any ordinarily intelligent person can understand, and they have done it in an intellectually honest way. Their task has been helped immensely by vivid witty cartoons by the illustrator, Sunyata.

*Reviewed by Jim Hefford*