

## CLINICAL PAPER

# Pain: what, where, how and why?

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### **Abstract**

This brief contribution discusses the mechanisms of pain in light of current concepts. The author also highlights an emerging liaison between the Association of Chartered Physiotherapists in Women's Health and the Physiotherapy Pain Association.

*Keywords:* emotion, pain, tissue damage.

### **Introduction**

The present brief contribution is intended to raise the awareness of members of the Association of Chartered Physiotherapists in Women's Health (ACPWH) – and the rest of the readership of their *Journal* – to the whats, wheres, hows and whys of pain in light of current concepts of pain. It is also meant to highlight an emerging liaison between the ACPWH and the Physiotherapy Pain Association (PPA).

### **What?**

According to the International Association for the Study of Pain (IASP), pain can be defined as 'an unpleasant sensory and emotional experience associated with potential or actual tissue damage, or described in terms of such damage' (IASP Task Force on Taxonomy 1994). To summarize, pain is a subjective experience that is to do with a person feeling vulnerable to a threatening stimulus, and it may be present in the absence of tissue damage.

### **Where?**

Pain is produced by the brain. It is commonly a response to nociception (noxious stimulation) relating to tissue damage, and the brain allocates the pain to the source of the nociception. It does not always get this right (e.g. in cases of phantom and referred pain).

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### **How?**

The brain is always active, responding to many inputs and states of activity. The inputs come from a range of sources, including sensory nerves, spinal neurons and different regions of the brain itself. The heightened or inhibited activity relates to all of the nervous system. For example, peripheral sensory nerves have a heightened activity after tissue damage because of the influences of the inflammatory response, which lowers their firing threshold. The areas of the brain that are related to emotion may be heightened as a result of some current or past emotional experience. Evidence suggests that victims of domestic violence feel pain at lower thresholds, and this may be because of heightened activity in the central nervous system related to the negative pain experiences. It is also believed that, when nociception persists for a period of time, central processing can become more sensitive. Where a part of the nervous system is more sensitive, be it peripherally or centrally, the brain may be more likely to produce pain.

### **Why?**

It would appear that the brain produces pain as part of the body's protection system. Its function is increasingly considered to be closely connected to the endocrine and immune systems. When someone reports pain, we should consider that they are in some way feeling vulnerable and that they perceive some threat to their tissues. We will often find that this is linked to pathological tissue, but in many cases, it may be that, through heightened emotion or fear, the brain is

responding to heightened central activity. The difficulty is that the brain will still often allocate this centrally mediated pain to a remote body part – perhaps one that is perceived as vulnerable or one that has previously been injured.

### Conclusion

Obviously, the above is a condensed version of the whole story, and open to discussion and debate. However, it is hoped that some of the complexities and mysteries of pain in obstetrics and gynaecological conditions can be unravelled through closer links between the ACPWH and the PPA. Fact sheets are available under ‘Real Women, Real Pain’ on the IASP website ([www.iasp-pain.org](http://www.iasp-pain.org)). The PPA is committed to developing collaborative relationships with other clinical interest groups, and hopes that ACPWH members will welcome and embrace this initiative.

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