

THE MECHANICS AND PHYSIOLOGY OF PAIN

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Living with a chronic wound has a huge impact on a person's quality of life 1-2. One of the consistent findings, particularly in the qualitative work that has been completed, is that pain is one of the symptoms that patients find particularly distressing 3-5. Pain is an individualised experience and differences in personal, familial and cultural backgrounds can lead to variations in persons' experience and expression of pain 6.

Very early pain research emphasised the mechanical nature of acute pain as a protective mechanism that alerts the individual to a condition or experience that is immediately harmful to the body as a result of nerve activation 7. However, the Gate Control Theory 8 finally acknowledged the role of brain processes in the perception of pain. Theorising that pain intensity is not simply determined by the magnitude of the painful stimulus, but by higher cognitive activities which can influence perceived intensity and unpleasantness.

Chronic wound pain can be defined as 'Nociceptive', arising from damaged tissue and often labelled as 'sharp' or 'stabbing' and 'Neuropathic' caused by damage to, or dysfunction of, the nervous system, resulting in 'burning' or 'tingling' sensations. Pain can be treated not only by trying to reduce the sensory input by surgery or anaesthetic block, but also by influencing the motivational-affective and cognitive factors as well.

The integration of the physiological and psychological aspects of pain in a single model mirrors the broader change in clinical practice away from a purely medical approach towards holistic patient care.

REFERENCES

1. Charles H. (1995) The impact of leg ulcers on patients' quality of life. *Professional Nurse* 10: 571-574.
2. Price P, Harding KG. (1996) Measuring health-related quality of life in patients with chronic leg ulcers. *Wounds* 8: 91-94.
3. Vuolo JC (2009) Wound-related pain: key sources and triggers. *British Journal of Nursing* 18: 15: S20-S25
4. Ebbeskog B, Ekman S-L. (2001) Elderly People's Experiences. The meaning of living with Venous Leg Ulcer. *EWMA J* 1: 21-23.
5. Price PE, Fagervik-Morton H, Mudge EJ et al (2008) Dressing related pain in patients with chronic wounds: an international patient perspective *International Wound Journal* 5:2 159-171
6. Brennan F, Carr DB, Cousins M. (2007) Pain management: a fundamental human right.

Anesth Analg 105: 205–221.

7. Horn S, Munafo M. (1998) Pain: theory research and intervention. London: Open University Press.

8. Melzack R, Wall P. (1982) The challenge of pain. Harmondsworth, Penguin.