

Key differences between acute and chronic pain



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Pain is knowingly a fundamental part of life. Nair and Peate (2009) tell us that pain is the most common reason for an individual to seek medical advice. It is unavoidable and everyone throughout the world will experience some level of pain at various occasions throughout their lifetime. Pain is a complex process, with a variety of meanings, and numerous definitions. One common definition from McCaffery (1979) is that pain is whatever the experiencing person says it is, existing when they say it does. Pain can also be used in relation to feelings of grief, loss and unrequited love, as well as the more commonly used term to describe an unpleasant or uncomfortable sensation that occurs as a result of injury, strain or disease, (Nair and Peate 2009). Pain is individual to the person who is experiencing it and factors such as culture, life experiences and personality will all determine how each individual will express and cope with their pain. Pain can detrimentally affect an individual's life if it is left unresolved. It can have an adverse effect on the body as well as affecting our everyday activities, preventing sleep and promoting emotions such as anxiety and frustration. Pain management is often associated with analgesia but there are also a wide range of non-pharmacological treatments for pain control available. As nurses' it is vitally important we provide our patients with an individualised holistic pain assessment and plan of care, helping to manage their pain taking into consideration both pharmacological and non-pharmacological methods of treatment.

The pain experience is not just a sensory signal; pain triggers complex physiological, emotional and social responses. These are influenced by many factors that include pain type, age, past experiences, emotional state,

environment and cognitive and mental state of the patient. The pain experience can be functionally divided into acute and chronic types, although clear distinctions between pain types may not be possible, (McCaffery & Pasero 1999). Acute and chronic pain is due to different physiological mechanisms and therefore both require different clinical treatments. To provide the best possible care for patients experiencing pain, nurses must understand the physiology of pain, the different types of pain and their varied manifestations, the diversity of patient responses, and the rationale for choices of pain control methods (Helmes & Barone, 2008). Effective pain assessment is also a crucially important skill and allows the health professional to select the most appropriate intervention.

The physiology of pain is a complex process but the generation of pain follows a basic three step process. Firstly an irritation or injury such as a cut or burn is detected in the peripheral nervous system by special nerve cells called nociceptors. A nerve impulse is then generated, sending a pain impulse towards the central nervous system. Finally, this message is received by the brain where the extent and significance of the irritation or injury is interpreted and pain is then sensed. Physiology of pain includes a few different pain types; acute, chronic, cancer, somatic, visceral, and neuropathic pain. Pain is classified according to its duration into two different types; acute and chronic. Acute being described as short term pain and chronic as long term, it is important to note that there are many differences between the two types and that chronic pain isn't just long term acute pain.

Acute pain is the normal predicted physiological response to an adverse chemical, thermal or mechanical stimulus, which may be associated with

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trauma, acute illness or surgery (Wood, 2008). Acute pain is associated with a severe sudden onset; it is a physiological response that warns of danger. It is usually of a brief duration and is most commonly nociceptive, associated with tissue injury such as surgery. Farquhar-Smith (2007) explains that the process of nociception describes the normal processing of pain and the responses to stimuli that are damaging or potentially damaging to normal tissue. There are four basic processes involved in nociception; transduction, transmission, perception and modulation. Acute pain is frequently associated with anxiety and hyperactivity of the sympathetic nervous system; tachycardia, increased respiratory rate, diaphoresis and dilated pupils. Acute pain which occurs in response to tissue injury results from activation of peripheral pain receptors and their specific A delta and C sensory nerve fibres; nociceptors. Acute pain is usually prolonged and will continue until the healing process begins. Acute pain is extremely common and can range in intensity from transitory pain to very severe pain. Acute nociceptive pain can also be referred; this is when pain arises in the internal organs but is experienced some distance from the source of the pain (Brooker & Waugh, 2007: 654). Mild acute pain can often be successfully managed with the appropriate interventions at home although severe or unrecognised pain may force the individual to seek medical attention.

The term chronic pain refers to pain that does not resolve and continues even though healing is complete; it is used to describe pain that persists for three months or more. It can be subdivided into malignant and non-malignant pain dividing non-life threatening pain from terminal conditions such as cancer. People suffering from chronic pain will find it a major

problem that will in some way affect their quality of life (Godfrey, 2005).

Chronic pain however does not involve sympathetic hyperactivity but may be associated with vegetative signs; fatigue, loss of appetite, depressed mood along with a diversity of other signs. Chronic pain related to on-going tissue injury is presumably caused by persistent activation of these same A delta and C sensory nerve fibres as in acute pain, it may also result from on-going damage to or dysfunction of the peripheral or central nervous system, which in turn can cause neuropathic pain (Portenoy, 2007). Chronic non-malignant pain is not life threatening and may be due to continuing tissue injury whereas malignant pain is associated with terminal conditions where the progression and spread of disease can lead to pain. Common types of chronic pain include arthritis, back pain, headaches, cancer pain, neuropathic pain; as result of nerve damage and psychogenic pain.

Acute and chronic pains are both debilitating. Recovery is slow, interference with daily activities occurs, and pain has a detrimental change in the patient's quality of life. Therefore a thorough pain assessment and effective pain management can be crucial in maintaining a wholesome quality of life for every patient. The choice of pain assessment method or tool used must be suitable for the patient and appropriate to the type of pain their experiencing. Acute pain often has an obvious cause either following trauma, post-operative or as a warning of the onset of an acute disease process; pancreatitis or myocardial ischemia. Acute pain can be of either a nociceptive or neuropathic source. In acute pain the objective of pain assessment will most likely be to evaluate the requirement for and the effectiveness of analgesia. Therefore simply communicating with the patient

asking them about the intensity of their pain and asking them to best describe their pain level on a scale of one to ten for example, is the most effective way of assessing acute pain. Continuous reassessment of the patients' pain after analgesia has been administered is also important, this may emphasises the need for stronger regular analgesia in severe pain, but may indicate a need for a step-down in analgesia as the acute pain resolves (Conn, 2005)

Acute pain produces an autonomic response and often patients will present with hypertension, tachycardia as well as changes in respiratory rate. Pain assessment should therefore include measurement of blood pressure, pulse, temperature and respiration rate. Chronic pain may not have an adverse effect on these vital signs; therefore the patients' description of the pain should remain the principal indicator of pain intensity in both acute and chronic pain (Lynch, 2001). Although in chronic pain the assessment focus would also be on how their pain is affecting their ability to function normally and how it is interfering with their everyday lives. Any nursing assessment must pay attention to the physiological, psychological, emotional and social aspects of pain if effective holistic care is to occur (Manias, 2002). Chronic pain is usually of unknown origin and it can be a long and complex process until the patient reaches a point where their pain is managed and controlled effectively. In some cases, accurate information may have been overlooked and the patient and their family anxious of the cause, treatments and the effect on work, family life and earning capability. Therefore, psychological factors can play a large part in the presentation of chronic pain and for these

reasons; multidimensional assessment tools are more commonly used in the chronic than in the acute setting (Chumbley, 2009)

Pain has four dimensions; physiological, psychological, emotional and social. (MacLellan, 2006). These four factors all have an effect on the responses of both acute and chronic pain. Psychological factors that influence the experience of pain include cognitive, behavioural and environmental responses. Occasionally the psychological changes associated with acute pain may be overlooked a lot more than those associated with chronic pain. Sustained acute nociceptive input that occurs after surgery, trauma and burns can also have a major influence on a patient's psychological function, which can in turn alter their pain perception. Failure to relieve acute pain may result in increasing anxiety, inability to sleep, demoralisation, a feeling of helplessness, loss of control and the inability to think and interact with others. In the most extreme of situations, where patients have essentially lost their ability to communicate, they have effectively lost their autonomy (Cousins, 2004).

Psychological factors such as mood, beliefs about pain and coping style have all been found to play an important role in an individual's adjustment to chronic pain (Jingui, 2009). Effects of chronic pain are debilitating to the sufferers everyday activities, relationships and their overall quality of life. Over time they may have become interpersonally isolated and have developed unsatisfactory family roles and responsibilities. They often complain of fatigue and difficulty sleeping. When pain persists over time, a person may avoid doing regular activities for fear of further injury or increased pain. This can include work, social activities, or hobbies. As the <https://assignbuster.com/key-differences-between-acute-and-chronic-pain/>

individual withdraws and becomes less active, their muscles may become weaker, they may begin to gain or lose weight, and their overall physical condition may decline. When a person has experienced persistent pain over an extensive period of time they are inevitably going to develop negative thoughts and beliefs about their condition and of themselves. A long period of time experiencing thoughts of no self-worth and personal negativity will undoubtedly lead to feelings of depression and anxiety. All these factors incorporated together; depression, anxiety, fear and isolation are going to have a destructive effect on the patients overall psychological and emotional mental state. Chronic persistent pain, fear and depression inevitably have adverse effects on other aspects of cognition; patients commonly complain of poor concentration, poor memory and increased failure to complete cognitive tasks due to their chronic pain (Grechnik & Ferrante, 1991).

Pain can be managed by either or both pharmacological and non-pharmacological interventions. Pharmacological pain management involves the administration of medication where non-pharmacological involves other alternatives. Effective pain management is complex and requires a holistic approach, starting with a thorough pain assessment (Adams, 2001). The goals of pain management in both pain types include decreasing pain, increasing function and restoring the patients' quality of life. There are many factors to consider when considering pain management strategies; the type of pain and the patients overall response and history should all be considered. Nurses need to develop knowledge of analgesic action, potential side effects and any other contraindications the different types of pain relief could have. Pain management should be initiated with the lowest dose

analgesic, if this does not relieve pain effectively a further drug may be added to the treatment therapy or a stronger analgesic initiated (Gibson, 2010).

Mild acute pain following a minor injury may be able to be controlled with simple analgesics or may even resolve with no treatment. Acute pain following major trauma will require a more complex solution. There is an extensive variety of methods used to manage and control acute postoperative pain and other forms of acute pain. Dependant on the type of acute pain being experienced can also determine the form of pain management used; acute pain is most commonly managed with the use of analgesics. Effective relief for acute pain can be achieved with oral non-opioids and non-steroidal anti-inflammatory's (NSAIDs). In cases of severe acute pain an opioid is recommended as first line treatment with other methods added appropriately (McQuay and Moore, 2003). Acute pain can be managed effectively with the appropriate drug doses, routes and methods and the symptoms of acute pain usually resolve when the underlying cause of the pain has been treated.

Patients suffering from chronic pain can have a much more complex and prolonged journey in trying to manage and control the pain effectively. There a variety of pain management strategies both pharmacological and non-pharmacological, and sometime a combination of both can help ease the effects of chronic pain. Chronic pain can be managed in the same way as acute pain by using non-opioids, NSAIDs and opioids. In the management of long term chronic pain these analgesics can sometimes be ineffective or can have a variety or intolerable side effects and in these cases other forms of

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pain management would have to be considered. Unconventional analgesics, nerve blocks as well as a range of psychological and behavioural treatment can all be functional in the management of chronic pain. Non pharmacological can be a vital component in not only reducing the intensity of chronic pain but by also reducing the emotional elements; reducing anxiety, promoting sleep, reducing fatigue and improving quality of life (McCaffery and Pasero, 1999). Wood (2002) also states that there can also be positive physiological effects from non-pharmacological treatments; reducing blood pressure, reducing pulse and respiratory rate and muscle relaxation.

Pain is a complex and challenging process for anyone suffering. The consequences of both acute and chronic pain are distressing and demoralizing on all aspects of physical, emotional and mental health. They both fundamentally weaken and distress the individuals who are suffering and disturb their everyday activities and relationships. While the physical components of acute and chronic pain may be similar the psychological components often make chronic pain much more intense and troubling experience. In many ways acute pain is easier to manage than chronic. Acute pain has a definite source while chronic pain may not and can be hard to diagnose. While they can both be managed with the use of analgesics, non-pharmacological interventions are becoming crucial in the management of the psychological effects of chronic pain. All healthcare professionals have a moral and ethical responsibility to holistically assess, manage and relieve their patients' pain effectively. Unrelieved pain causes unnecessary suffering and increases healthcare expenditure. It is vitally important that nurses gain

the essential knowledge and understanding about the physiology of pain, the different types and their different physiological and psychological effects.

They must also have a wide familiarity and insight into the different types of analgesics, their effect on pain and the physiological effect on the body. An effective program for improving pain management requires a multidisciplinary team committed to the task, all performing a continuous cycle of assessment, intervention, and reassessment of pain management.