

Pain is defined as a physiological process associated with negative emotional experience which warns our body about impending damage. Apart from neuropathic pain, which by definition has no purpose, pain in effect provides a defensive function. However, this role is already being fulfilled by a different mechanism – the defensive reflex, which is evolutionarily older. Therefore we can ask, whether pain is only an emotional experience attached to this reflex, or if it has its own functions.

To determine the physiological purpose of pain a rare syndrome of congenital analgesia, characterized by complete absence of pain, will be used. Based on a comparison of clinical cases of the syndrome with a population without pain disorders individual functions of pain will be described and connected to the individual components of pain - sensory-discriminatory and affective-motivational.

The sensory-discriminatory component provides a defensive, diagnostic and an informative function. The defensive function is analogous to the defensive reflex. The informative function transmits information about a physiological process, where pain plays a key role – labour. Diagnostic function applies in medicine and is based on verbal description of the defensive function. Functions of the SD component are involved at the time of stimulus application and for their successful course the defensive reflex will be satisfactory.

Another pain-specific component is the affective-motivational component. Comparison of controls and patients suffering from congenital analgesia reveals that the AM component mediates the role of pain in the process of learning. By negative psychological processes it teaches us to avoid dangerous stimuli in the future. In case of such knowledge becoming undesirable, for instance labour pain, it is being regulated by postpartum amnesia.

Therefore we can conclude that the main purpose of pain is involvement in the process of learning. In other cases it has either no role at all (neuropathic pain) or it overlaps with the defensive reflex.