

DORSAL ROOT GANGLION NEURONS INNERVATING MUSCLE RESPONSE TO MULTIPLE STIMULI AND RECEPTORS

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There are two types of fatigue as Dr. Light stated in his research. The first deals with the perception of tiredness and lasting muscle contractions. However, the body has this reaction before feeling a physical burn or ache. The second type is one that deals with the perception of a lack of focus combined with the feeling of utter exhaustion to perform medial tasks. This has a more mental strain and therefore is considered a more mental fatigue. This experiment focused on the sensory experience that deals with the perception of muscle fatigue. The goal is to find the stimuli for these muscle receptors and what is stimulating them. What metabolites are at work? Through careful examination of the dorsal root ganglions being tested with varied combinations of metabolites it was found that combinations of protons, ATP, and Lactate were much more effective in activating the rapid calcium intake of the muscle intervening DRGs to stimulate the right amount of muscle fatigue in the body than if they worked individually. It was also concluded that the receptors that did the detecting for metabolites and were the best at it were a combination of ASIC, P2X4 and/or P2X5, and TRPV1. This indicates that combinations work better than the individual receptors and metabolites.

