

SEQUENCE OF EVENTS IN DOMS

Armstrong's proposed model of Delayed Onset Muscle Soreness

1. High tension in muscle during *eccentric* muscle contraction results in structural damage to the muscle and its cell membrane.
2. Cell membrane damage disturbs calcium homeostasis in the injured fiber, resulting in necrosis that peaks ~48 h post exercise.
3. Products of macrophage activity and intracellular contents (i.e., histamines, kinins and K⁺) accumulate outside the cell and stimulate free nerve endings in the muscle.

For additional information on eccentric muscle contraction and DOMS see:

Lindstedt et al., When active muscles lengthen: properties and consequences of eccentric contraction. *News Physiol. Sci.* 16: 256-261, 2001.