The aim of this paper was to summarize the current knowledge of function and regulation of autonomic nervous system (ANS). We wanted to assess possible involvement of ANS in changes of muscle tension. Sympathetic nervous system affects the sensitivity of somatosenzory afferention, thus effecting the function of whole nervous system. Exists evidence about ANS effect on cutaneous afferents activity as well as muscle spindle afferent activity. Sympathetic modulation of proprioceptive information from muscle spindles may influence α motoneuron excitability. ANS may affect muscle tonus regulation. The selective activation of trigger point (TRP) during heightened muscle sympathetic efferent activity (MSNA) was proved. This supports the idea that the sympathetic nervous system can directly contribute on maintaining of the TRP and myofascial pain syndrome.