

Muscle injuries, such as soft tissue tears or tendon and ligament tears, can be one of the most common injuries amongst professional athletes and can often be career-ending injuries that come with a lifetime of complications. Currently, the most common form of treatment for such injuries is surgical interventions followed up with physical therapy (PT). However, surgery is often followed by long recovery periods. To improve surgical outcomes, PT is often recommended, which presents its own set of limitations. PT results vary for every patient, factors such as age and patient determination play a large role in recovery time periods and results. Given the limitations of existing treatment methods, it's important to develop alternative options with shorter recovery times. This review looked at peptide therapy as a form of alternative treatment. Peptides are chains of amino acids and have many applications, including hormone treatments. This review focuses on select peptides that have been used for their therapeutical potentials with muscle regeneration and rehabilitation in primary scientific studies. It was found that peptide therapy through the likes of BPC-157, Peptide Nanofibers, MIF1 and MIF2 myostatin, and Melittin has clinical support in their potential to aid in muscle regeneration and rehabilitation in animal studies. Future research directions should focus on conducting rigorous human clinical trials to evaluate the safety, efficacy, and long-term outcomes of peptide based therapies.