

Abstract

Title: The Comparison of Upper Limb Socket Designs

Objectives: The goal of this bachelor thesis is to focus on prosthetic socket as the most important part of a upper limb prosthetic, to collect available information about different types of sockets and appropriateness of indication and to create indicative manual for the best choice prosthetic socket for different types of amputations level.

Secondly I would be glad this thesis to be useful source of information for everybody willing to understand deeply this topic.

Methods: The main source of information is firstly the available specialized literature and partly mine professional experience. I did collaborate and got more information from my colleagues and expert in this field. I had participate on special seminars and workshops.

Results: This thesis includes information about the history and development of upper limb prosthetic. It interpret evolutionary process and functional anatomy and biomechanics of upper limbs. The main part of the thesis is focused on reason of amputations and ways of treatment by prosthetic care. The most important part is describing different techniques of fixation prosthesis on the stump. One of the main results is the table constructed based on upper mentioned facts. The table should be useful for specialized and laic community when choosing the appropriate type of prosthetic socket and its mechanism of fixation on amputate stump for concrete patient.

Keywords: Amputation, Transradial Amputation, Supracondylar Socket, Suction Socket, Silicone Liner