



POTENTIAL BARRIERS FOR THE USE OF HYDROTHERAPY IN THE REHABILITATION OF LOWER-LIMB AMPUTEES

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INTRODUCTION

A large part of the field of orthotics and prosthetics focuses on a patient's healing and his or her adaptation to a new way of life with a prosthesis or an orthosis (Munin, 2001). In many instances the ultimate goal is assisting patients with the transition from poor ambulation to normal function (Munin, 2001). One adjunctive therapy used to facilitate this transition is hydrotherapy (Moovenhan & Nivethitha, 2014). Hydrotherapy is an effective rehabilitation modality that could provide significant assistance in the rehabilitation of those with amputation, but its use is not documented well in the literature. Why is it not used more often? The goals of this project were to identify potential barriers to adoption by examining the literature to ascertain possible reasons for low use (cost, effectiveness, availability) and offer recommendations for exploring increased use where appropriate.

METHOD

We obtained information regarding the attributes of hydrotherapy through numerous peer-reviewed journals and databases. We then evaluated current water-resistant prosthesis designs to determine whether they would be appropriate for use in hydrotherapy. To address cost, availability, and effectiveness, we will contact practicing physical therapists and hydrotherapy clinics to gain more specific information about hydrotherapy and integrative therapies, and typical rehabilitation time frames. This information will be gathered through interview-style surveys. In order to achieve an adequate sample size, we intend to survey as many hydrotherapy practitioners in the Great Lakes region as possible.

RESULTS

At this time we are still in the process of gathering data. Once we have completed our surveys and compiled enough literature we will report on the following: the mean cost of hydrotherapy, the availability of hydrotherapy facilities, the rehabilitation timeline for patients of hydrotherapy, and the availability of prosthetic devices appropriate for use in hydrotherapy. We may have additional data to report should the study yield other potential barriers to the adoption of hydrotherapy as a rehabilitation technique for amputees.

DISCUSSION

Currently, we do not have results to discuss. Once we have gathered and analyzed our data, we will discuss the implications of our results. We will also discuss any complications we experience during our study, and ways in which we can improve.



Photograph of hydrotherapy

CONCLUSION

Our conclusion will be drawn from a comparison of our results to similar data about current rehabilitation and therapy practices. Through this study, we hope to reveal whether hydrotherapy could be a worthwhile rehabilitation practice for the field of orthotics and prosthetics. By extension, we also hope to point out the potential barriers that could be preventing the expansion of hydrotherapy into a viable therapy practice for amputees so they may be addressed.

CLINICAL APPLICATIONS

The results of our study will identify potential areas for improvement in order to push hydrotherapy to become a viable therapy choice for people with a lower-limb amputation. This would then allow different demographics to reap the benefits associated with hydrotherapy and other related practices.

REFERENCES

- Moovenhan, A., & Nivethitha, L., *N Am J Med Sci*. 6(5), 199, 2014.
- Munin, M.C. *JRRD*. 38, 379-84, 2001.
- Recotherm Ltd, n.d. [*Photograph of hydrotherapy*]. Retrieved from <http://www.recotherm.co.uk/hydrotherapy/>

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