The neuromechanical and behavioural adaptations to dynamic arm supports in neuromuscular disorders

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Propositions

belonging to the dissertation

**The neuromechanical and behavioural adaptations
to dynamic arm supports in neuromuscular disorders.**

1. It is crucial to involve users, designers, and clinicians to address the knowledge gaps that impede the development of functional dynamic arm support devices (chapter 2).
2. The heterogeneous muscle activity reflects the ability to perform movement with weakened muscles in people with Facioscapulohumeral Dystrophy (chapter 3).
3. A dynamic arm support device does not impose a specific motor control strategy in people with Facioscapulohumeral Dystrophy (chapter 4).
4. The perceived benefits outweigh the functional benefits in the evaluation of dynamic arm supports (chapter 5).
5. The value of muscle synergy analysis for the upper extremity stands or falls on the methodological choices.
6. "Although modern technology allows us to collect an unprecedented amount of data on the activity of neurons, muscles, and limbs during a wide variety of behaviors, we still lack an understanding of how individual elements of the body interact to produce the many movements we perform, let alone characteristics such as grace or clumsiness." (Ting and Chvatal, Oxford University Press, NY, 2010)
7. "A hypothesis may be simply defined as a guess. A scientific hypothesis is an intelligent guess." (Isaac Asimov, Isaac Asimov's Book of Science and Nature Quotations, 1988)
8. Scientific evidence is asymptotic to reality; even though the gap gets smaller over time, they will never be the same.
9. In progressive disorders, augmenting upper extremity functionality to regain functional independence is increasingly difficult. However, there is no victory without a battle, and no better quality of life without effort (Valorization).
10. Geit 't neet? Dan bok 't mehr! (It does not? Then buck it!)

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