



# **Neurophysiological Evidence for Increased Motor Performance Resulting from Shaving Down**

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# Introduction

- 1956 Australian Olympic team was first to use shaving technique in swimming competitions
- Shaving has been reported to enhance swimming performance enhancement by 3-4%.
- Current explanation for this enhancement is a reduction in drag forces.
- However, the reduction in drag due to shaving is likely to be minimal

# Purpose

Determine if there is evidence that shaving down is a neurophysiological phenomenon caused by eliminating hair from the body surface.

# Measurements

- The hand grip dynamometer test and the maximal voluntary isometric torque test will be utilized to determine if the subjects experience increased force production upon shaving down.
- The H-reflex test with a maximal voluntary contraction will be conducted to examine if the subjects show increased excitability of the  $\alpha$ -motoneuron pool during a maximal contraction with shaved arms and legs.

# Methods

- Twenty-four male subjects will be recruited for the study and randomly assigned to one of two groups.
- All subjects will make two visits to the lab. On the first visit, the subjects in both groups will be unshaved.
- The subjects will complete four tests:
  - hand grip strength
  - maximal voluntary isometric torque (MVIT)
  - H-reflex: (1)while doing a voluntary maximal contraction, (2)to determine recurrent inhibition.

# Methods Continued

- During second visit to lab, all subjects will repeat initial battery of tests
- Group 1 will return to the lab unshaved and perform the same battery of tests.
- Group 2 will shave the body hair off their legs and arms before returning to the lab for their second visit.