



COMMUNITY

ORTHOPAEDIC

AWARENESS PROGRAM

THOMAS J. HAVERBUSH, M.D., P.C.

315 E. Warwick Dr. Alma Michigan (989)463-6092

"It is our privilege to take care of you."

Pool-Bound Exercise Improves Strength

Conventional exercises can increase muscle strength, but also can cause muscle soreness and damage.

Performing such exercises in a pool reduces soreness significantly according to researchers.

Patients who did exercises in water had the same gains in muscle strength as a group who did the work out in a gym.

Until now no one had looked at the possibility of doing plyometric exercise in water.

During plyometric exercise muscles lengthen, contract, and produce force. This type of exercise program can increase muscle strength in less time than traditional resistance training.

But it can cause severe muscle soreness and damage.

Exercise in a swimming pool significantly decreased the level of muscle soreness felt two to three days after a work out.

Researchers had thirty-two college age women participate in an eight week study. The women had agreed to forego other forms of lower body resistance training. Half of the women in the study worked out in a gym while the other half exercised in about four feet of water in a swimming pool. There were very specific exercises done by each group.



Gains in muscle strength and speed were assessed at the beginning, middle and end of the study.

**"Dedicated to
Excellence."**

Exercise sets and repetitions were increased three times during the study and muscle soreness and pain sensitivity were tested.

A scale to indicate soreness was used immediately after working out and two and three days after when muscle soreness usually reaches its peak.

A pressure gauge was also used to assess pain sensitivity for a more objective measure.

Outcome of study

Both groups reported similar levels of muscle soreness immediately after work out, but the gym based group reported significantly more soreness compared with the pool group two to three days after exercising. The gym based group of women were also more sensitive to pain.



Muscle strength and mass increased in both groups and both groups showed improvement in three performance measures.

An appropriately designed aquatic training program is effective in enhancing power, force, and velocity in women.

Impact is not a factor when exercising in water. The strain placed on working muscles, bone and connective tissue in water doesn't typically lead to injury.

Good health.

Good life.

All the best to you.

Dr. Haverbush

Online Orthopaedics

THOMAS J. HAVERBUSH, M.D, P.C.

**Web Site Address is:
WWW.ORTHOPODSURGEON.COM**

Teaching Web Site with over 100 Orthopaedic articles.