

Official Title of Study: -

**EFFECT OF AQUATIC THERAPY ON
PULMONARY FUNCTIONS IN PATIENTS
WITH MUSCULAR DYSTROPHY**

Document Date: - 26/09/2020.

**Human Subjects protection review board
approval date: -1/12/2019**

EFFECT OF AQUATIC THERAPY ON PULMONARY FUNCTIONS IN PATIENTS WITH MUSCULAR DYSTROPHY

PURPOSE:

This study will aimed to assess the efficacy of aquatic therapy on pulmonary functions in patients with muscular dystrophy

BACKGROUND:

Muscular dystrophy (MD) is a group of muscle diseases that results in increasing weakening and breakdown of skeletal muscles over time. The disorders differ in which muscles are primarily affected, the degree of weakness, how fast they worsen, and when symptoms begin. Many people will eventually become unable to walk. Some types are also associated with problems in other organs. The muscular dystrophy group contains thirty different genetic disorders that are usually classified into nine main categories or types.

The signs and symptoms consistent with muscular dystrophy are: progressive muscular wasting, poor balance, scoliosis (curvature of the spine and the back), progressive inability to walk, waddling gait, Calf deformation, Limited range of movement, respiratory difficulty, cardiomyopathy and muscle spasms

HYPOTHESES:

H0 there is no significance difference of aquatic therapy on pulmonary functions in patients with muscular dystrophy

H1 there is a significance difference of aquatic therapy on pulmonary functions in patients with muscular dystrophy

RESEARCH QUESTION:

Is there is significance difference of aquatic therapy on pulmonary functions in patients with muscular dystrophy?

Aim of the study:

To determine the effect of to assess the efficacy of aquatic therapy on pulmonary functions in patients with muscular dystrophy.

Inclusion criteria:

1. Their age will ranging from nine to fourteen years.
2. Patients participated in this study boys.
3. All patients will able to walk supported or unsupported by the therapist.
4. All patients will able to follow the instructions during testing and training.
5. All patients had no fixed contractures or deformities at the lower limb.

Exclusion criteria:

1. Patients with visual or auditory problems.
2. Patients with structural joints deformities of the lower limbs.
3. Patients with convulsions and fixed contractures.
4. Uncooperative Patients.

Methods for assessment:

- Pulmonary function tests by a spirometer.
 - Tidal volume (VT).
 - Minute volume (MV).
 - Vital capacity (VC).
 - Functional residual capacity (FRC).
 - Residual volume.
 - Total lung capacity.

Methods for treatment:

Thirty patient with muscular dystrophy were enrolled in this study and were assessed for eligibility. Their aged ranged from nine and fourteen years. They were assigned randomly into two equal groups. Group (A) study group received the traditional physical therapy program under water. And group (B) control group received traditional physical therapy program on land based. All patients will received sessions two times / weak for three successful months. Pulmonary function test were used to assess pulmonary functions pre and post intervention. All patients were assisted before and after three months of intervention.

RECRUITMENT

Please state clearly how the participants will be identified, approached and recruited.

Note: Attach a copy of any poster(s), advertisement(s) or letter(s) to be used for recruitment.

The patients will be recruited from Outpatient Clinic of faculty of medicine, South Valley University

CONSENT

Describe the process that the investigator(s) will be using to obtain valid consent. If consent is not to be obtained explain why. If the participants are minors or for other reasons are not competent to consent, describe the proposed alternate source of consent, including any permission / information letter to be provided to the person(s) providing the consent.

I am _____ freely and voluntarily consent to participate in a research program under the direction of M.Sc.

A thorough description of the procedure has been explained and I understand that I may withdraw my consent and discontinue participation in this research at any time without prejudice to me.

Date _____ Participant _____