

**Official Title of Study: -**

EFFECT OF PREOPERATIVE GRADUATED  
ABDOMINAL EXERCISES AND RUSSIAN CURRENT  
STIMULATION ON MUSCLE STRENGTH POST  
VENTRAL HERNIOPLASTY

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# EFFECT OF PREOPERATIVE GRADUATED ABDOMINAL EXERCISES AND RUSSIAN CURRENT STIMULATION ON MUSCLE STRENGTH POST VENTRAL HERNIOPLASTY

## **PURPOSE:**

This study will be aimed to assess the efficacy of preoperative abdominal exercises and Russian current on abdominal muscles strength in patients undergoing ventral hernioplasty postoperatively.

## **BACKGROUND:**

Herniation refers to protrusion of an organ or tissue through an opening that may be natural or caused by a tear in the abdominal wall. Ventral abdominal hernia is a commonly acquired condition caused by the migration of viscera through a tear in the abdominal wall. The tear may be dorsal or ventral in the flank, along the costal arch or between the last few ribs. Ventral hernias commonly result from traumas caused by horn thrust, kick or violent contact with blunt objects or by an abdominal distension due to pregnancy or violent straining during parturition.

Use of exercise prior to an acute stress or surgery has emerged as a viable perioperative risk reduction strategy. This concept, known as prehabilitation, was first used in sports medicine to reduce the impact of an injury prior to its occurrence. It has been explored as a method of preoperative optimization in patients undergoing elective intra-abdominal surgery

## **HYPOTHESES:**

H0 there is no significance difference of the combination of preoperative graduated abdominal strengthening exercises with Russian current able to improve abdominal muscle strength after ventral hernioplasty

H1 there is a significance difference of the combination of preoperative graduated abdominal strengthening exercises with Russian current able to improve abdominal muscle strength after ventral hernioplasty

**RESEARCH QUESTION:**

Was the combination of preoperative graduated abdominal strengthening exercises with Russian current able to improve abdominal muscle strength after ventral hernioplasty?

**Aim of the study:****Inclusion criteria:**

1. Their age will be ranging from twenty to forty-five years.
2. All patients desired an elective surgical repair.
3. All patients were diagnosed with ventral hernia (Grade II & III) based on surgeon assessment.
4. All patients were able to act in abdominal training program.
5. All patients were able to follow orders during testing and training times.

**Exclusion criteria:**

1. A strangulated hernia.
2. History of surgical interference (abdominal surgery) less than one year.
3. Liver cirrhosis with or without ascites.
4. Hip or spine deformities or contractures.
5. Bowel obstruction, peritonitis, or perforation.
6. Local or systemic infection.

**Methods for assessment:**

1. Biodex 3, isokinetic Dynamometer System (with back/abdominal unit).
2. Ultrasound imaging (USI).

**Methods for treatment:**

1. Graduated Abdominal Exercises.
2. Russian Stimulation.

## 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 South Valley University Hospitals

## 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 \_\_\_\_\_