

# The effect of exercise on lower back pain during pregnancy

<b>Submission date</b> 20/08/2022	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 15/09/2022	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 08/11/2022	<b>Condition category</b> Pregnancy and Childbirth	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aim

Lower back pain during pregnancy is a common problem that can affect women's day-to-day activities and may worsen as the pregnancy progresses. Some women ask for advice from their healthcare provider. Pregnant women may wish to avoid medication and seek other ways to manage their symptoms. This study looks at the effect of appropriate, personalized exercises on these women.

### Who can participate?

Women aged 18 years or over who were between 14 and 30 weeks pregnant when they joined the study. They had to be experiencing lower back pain.

### What does the study involve?

Women were assessed by a physiotherapist who asked them about their symptoms and physically examined them. The women answered questions used in previous scientific research into back pain during pregnancy. The women were then allocated to one of two groups. One group continued with routine antenatal care. The other group undertook 12 weeks of exercises. The women had a weekly one-to-one clinic appointment with the physiotherapist for the first four weeks. The exercise program was personalized to suit the needs of each individual and included appropriate stabilizing and stretching exercises. At the end of the first four weeks, the woman decided on a personal plan of exercises to carry out once a day at home for the following eight weeks.

### What are the possible benefits and risks of participating?

Past research has shown that specific exercises can reduce symptoms for women experiencing lower back pain during pregnancy. The exercises in this study have been used safely (for both mother and baby) in previous research and clinical practice. In addition, women were advised against continuing any exercise that increased their symptoms as the aim of all the exercises was to reduce pain.

### Where is the study run from?

This study is part of the principal investigator's PhD studies and is the property of the Nursing College, the University of Raparin in the Kurdistan region/north Iraq.

When is the study starting, and how long is it expected to run?  
September 2020 to February 2022

Who is funding the study?  
Investigator initiated and funded

Who is the primary contact?  
Begard Othman Muhammad, [begard.othman@uor.edu.krd](mailto:begard.othman@uor.edu.krd)

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**Additional identifiers****Clinical Trials Information System (CTIS)**

Nil known

**Protocol serial number**

7/29/3634 - University of Raparin/ Vice-President for scientific Affairs and Higher Education  
Directorate of Higher Education and Continuing Education.

**Study information****Scientific Title**

Effect of therapeutic exercise on lumbopelvic pain among pregnant women.

**Study objectives**

Does therapeutic exercise reduce pregnancy-related lumbopelvic pain and improve functional capability in performing daily activities?

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

Approved 08/11/2020, University of Raparin Scientific and Ethical Committee (Humanities Building, 3rd Floor, Main Street, Rania City, 46012, Iraq; +964 772208398; dr.sanaa@uor.edu.krd), ref: 7/29/3634

**Study design**

Interventional non-randomized study

**Primary study design**

Interventional

**Study type(s)**

Treatment

**Health condition(s) or problem(s) studied**

Lumbopelvic pain during pregnancy

## **Interventions**

A quasi-experimental study involving 110 pregnant women with lumbopelvic pain, recruited from six primary healthcare clinics in Slemani city, Kurdistan region of Iraq.

Stability exercises to strengthen muscles around the lumbar and pelvic region and focused stretching exercises to increase flexibility at the lumbar spine, hip, knee, and ankle joints. The course of the study comprised:

- Clinic-based exercise program (CBEP), once a week for 4 weeks.
- Home-based exercise program (HBEP), one session of personalized exercises per day for 8 weeks.

At recruitment, women are allocated a number in sequential order (1,2,3 etc.) All who obtain odd numbers are assigned to the intervention group, and all with even numbers are assigned to the control group

## **Intervention Type**

Behavioural

## **Primary outcome(s)**

Pain intensity measured using the Numeric Rating Scale (NRS) at baseline and follow up (12 weeks)

## **Key secondary outcome(s)**

Functional ability measured using modified pregnancy mobility index, incorporating the Oswestry disability index (ODI), pregnancy mobility index (PMI) and pelvic girdle questionnaire (PGQ) at at baseline and follow up (12 weeks)

## **Completion date**

28/02/2022

## **Eligibility**

### **Key inclusion criteria**

1. Pregnant women complaining of lower back pain (LBP) between the costal margin and inferior gluteal folds, with or without leg pain
2. Singleton pregnancy
3. Gestational stage 14 - 30 weeks
4. No previous treatment for current symptoms

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Sex**

Female

**Total final enrolment**

110

**Key exclusion criteria**

1. With reference to the American College of Obstetricians and Gynecologists (ACOG) guidelines on exercise during pregnancy, any woman for whom exercise is contraindicated.
2. Indications for high-risk pregnancy, e.g., placenta previa, pre-eclampsia.
3. History of disc prolapse, spine or pelvic trauma, or spinal surgery.
4. Body Mass Index greater than 40 kg/m<sup>2</sup>
5. Unexplained weight loss

**Date of first enrolment**

16/01/2021

**Date of final enrolment**

31/10/2021

**Locations****Countries of recruitment**

Iraq

**Study participating centre****Private Physical Therapy Clinic**

2nd floor, Poly-Clinic Asuda / ToyMalic Street

Slemani

Iraq

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**Sponsor information****Organisation**

University of Raparin

**ROR**

<https://ror.org/00fs9wb06>

**Funder(s)****Funder type**

Other

## Funder Name

Investigator initiated and funded

## Results and Publications

### Individual participant data (IPD) sharing plan

The data-sharing plans for the current study are unknown and will be made available at a later date

### IPD sharing plan summary

Data sharing statement to be made available at a later date

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Basic results</a>	version 22	08/11/2022	08/11/2022	No	No
<a href="#">Protocol file</a>			07/09/2022	No	No