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# Investigating how genetic differences relate to the risk of maternal fever due to epidural pain relief in mothers during labour

**Submission date**
26/04/2021

**Recruitment status**
No longer recruiting

**Registration date**
29/04/2021

**Overall study status**
Completed

**Last Edited**
09/06/2025

**Condition category**
Pregnancy and Childbirth

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

## Plain English summary of protocol

Background and study aims
The project aims to identify women who may be genetically programmed to be more likely to have a fever if they choose epidural (an injection into the back) during labour. By identifying this group of women, we may be able to make their labours more comfortable and less stressful by knowing that they have a higher chance of developing a fever.

Who can participate?
Pregnant women aged over 18 years who request an epidural for labour pain relief

What does the study involve?
Participants will consent to providing a small, single blood sample (as part of the routine blood draw required at the time of the epidural) for genetic analysis. The relationship between one gene that may increase the risk of fever after epidurals and the development of fever and/or prescription of antibiotics plus the outcome of the baby will be recorded.

What are the possible benefits and risks of participating?
There are no direct benefits or risks to participating in this study.

Where is the study run from?
Queen Mary University of London (UK)

When is the study starting and how long is it expected to run for?
From March 2020 to December 2023

Who is funding the study?
The National Institute for Academic Anaesthesia (UK) and the Obstetric Anaesthetists' Association (UK)

Who is the main contact?
Prof Gareth Ackland
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# Contact information

### Type(s)
Scientific

### Contact name
Prof Gareth Ackland

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# Additional identifiers

### Clinical Trials Information System (CTIS)
Nil known

### Integrated Research Application System (IRAS)
270480

### ClinicalTrials.gov (NCT)
Nil known

### Protocol serial number
IRAS 270480, version 1.0

# Study information

### Scientific Title
EPIFEVER-2: Mendelian randomisation study of polymorphisms in interleukin-1 receptor antagonist and epidural-related maternal fever.

### Acronym
EPIFEVER-2

### Study objectives
Polymorphisms in the interleukin-1 receptor antagonist gene promote fever in labouring women receiving epidural analgesia.

### Ethics approval required
Old ethics approval format

### Ethics approval(s)
Approved 25/01/2021, London – Bloomsbury Research Ethics Committee (MSE Meeting Rooms, Tottenham Court Road, London, W1T 1BB; +44 (0)207 104 8063; bloomsbury.rec@hra.nhs.uk), ref: 20/LO/1213

### Study design
Mendelian randomization study

### Primary study design
Observational

### Study type(s)
Screening

### Health condition(s) or problem(s) studied
Epidural-related maternal fever in active labour

### Interventions
Women are enrolled either in antenatal clinic or on admission to labour ward. A single blood sample is obtained around the time of epidural insertion. Clinical outcomes are collected for the duration of their hospital stay.

### Intervention Type
Other

### Primary outcome(s)
The incidence of one or both of the following:
1. Maternal temperature >38°C (triggered by RCOG guidelines for two temperatures >37.5°C) recorded as part of their standard care from patient notes at least 4h after epidural analgesia is commenced
2. Prescription of antibiotics during labour before delivery measured from patient notes before delivery

### Key secondary outcome(s))
Clinical outcomes for mother and baby measured from patient notes during their hospital stay

### Completion date
31/12/2023

## Eligibility

### Key inclusion criteria
1. Aged ≥18 years old
2. Singleton or twin pregnancy
3. Any gestational age
4. Requesting an epidural for labour analgesia

### Participant type(s)
Patient

### Healthy volunteers allowed
No

### Age group
Adult

### Lower age limit
18 years

### Sex
Female

### Total final enrolment
632

### Key exclusion criteria
1. Unwilling or unable to give consent
2. Refusal of consent for competent participants
3. Inability to understand written and/ or verbal English
4. Immune/genetic syndromes/mutations
5. Microbiologically proven infection prior to epidural insertion
6. Established pyrexia
7. Intrauterine death

### Date of first enrolment
28/04/2021

### Date of final enrolment
31/12/2023

## Locations

### Countries of recruitment
United Kingdom

England

### Study participating centre

**Royal London Hospital**
Whitechapel Rd
London
United Kingdom
E1 1FR

**Study participating centre**
**Homerton Hospital**
Homerton Row
London
United Kingdom
E9 6SR

**Study participating centre**
**University College Hospital NHS Trust**
235 Euston Rd
London
United Kingdom
NW1 2BU

**Study participating centre**
**Northern General Hospital**
Herries Road
Sheffield
United Kingdom
S5 7AU

# Sponsor information

**Organisation**
Queen Mary University of London

**ROR**
https://ror.org/026zzn846

# Funder(s)

**Funder type**
Research organisation

### Funder Name
National Institute for Academic Anaesthesia

### Alternative Name(s)
NIAA

### Funding Body Type
Private sector organisation

### Funding Body Subtype
Universities (academic only)

### Location
United Kingdom

### Funder Name
Obstetric Anaesthetists' Association

### Alternative Name(s)
The Obstetric Anaesthetists’ Association (OAA), The OAA, The Obstetric Anaesthetists’ Association, OAA

### Funding Body Type
Private sector organisation

### Funding Body Subtype
Trusts, charities, foundations (both public and private)

### Location
United Kingdom

# 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? |
|---|---|---|---|---|---|
| Results article | | 14/05/2025 | 09/06/2025 | Yes | No |
| Protocol article | | 01/05/2022 | 12/08/2024 | Yes | No |
| HRA research summary | | | 28/06/2023 | No | No |

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|---|---|---|---|---|---|
| Participant information sheet | Participant information sheet | 11/11/2025 | 11/11/2025 | No | Yes |
| Study website | Study website | 11/11/2025 | 11/11/2025 | No | Yes |