

## Participant Information Sheet

**Study Title: The effects of COVID-19 on physical activity and sedentary behaviour in pregnant women with gestational diabetes.**

### Participant Information Sheet

We invite you to take part in a research study which is being carried out by a PhD researcher and staff from Ulster University.

Please read the following information carefully before you decide whether or not to take part. Thank you.

### What is the purpose of this study?

The purpose of the study is to investigate how the COVID-19 pandemic affected physical activity levels and sedentary behaviour of pregnant women with gestational diabetes in the UK, in order to allow policy makers and health services to understand how best to support pregnant women during a potential second wave of this virus or future pandemics.

### Why have I been asked to participate?

We are looking for women who meet the following criteria:

- UK resident
- Were pregnant **and** had gestational diabetes during the COVID-19 pandemic (UK lockdown began 23rd March 2020)
- Aged 18 years or older

### What is involved in taking part?

Participation involves completing an online survey which should take no longer than 15 minutes. You will be asked about yourself, your activity levels before the COVID outbreak and during it, about your levels of worry and view on ways to increase physical activity. There are no right or wrong answers and you do not need to be physically active to take part.

### **Who is organising and funding this research?**

This study is being funded by the Northern Ireland Department for the Economy (DfE) and will form part of a PhD study being undertaken at the Maternal Fetal and Infant Research Centre in Ulster University under the supervision of Professor Marlene Sinclair, Professor Marie Murphy and Dr Karen Casson.

### **Do I have to take part?**

It is your decision whether or not you complete the survey. As your identity is completely anonymous, once you complete the survey, there is no further opportunity to withdraw.

### **Is this survey confidential?**

Yes completely.

### **Will there be any benefit if I take part?**

Sharing your experience may help other women in the future as we seek to discover the most appropriate ways to support pregnant women to remain/become active.

### **Are there any risks?**

In the unlikely event that answering the questions causes any distress you should contact your midwife or doctor in the first instance, or if you have already had your baby, your GP. Here are some links to information and support services, these details will be provided again at the end of the survey.

- ***Maternal mental Health Alliance***

<https://maternalmentalhealthalliance.org>

- ***Tommys***

<https://www.tommys.org>

- ***Every mind matters- looking after your mental health.***

<https://www.nhs.uk/oneyou/every-mind-matters/>

- ***NHS Support***

<https://www.nhs.uk/conditions/pregnancy-and-baby/services-support-for-parents/?tabname=im-pregnant>

### **Who do I contact for further information about the study?**

You can find out more about this study by emailing Medbh Hillyard (PhD Researcher): [hillyard-m@ulster.ac.uk](mailto:hillyard-m@ulster.ac.uk) or Professor Marlene Sinclair (Chief Investigator): [m.sinclair1@ulster.ac.uk](mailto:m.sinclair1@ulster.ac.uk)

### **What will happen with the results from this survey?**

Results from this survey will be written up as part of a PhD project, published in papers and disseminated through the Doctoral Midwifery Research Society (DMRS) and relevant health care trusts. The results will also be shared on the social media sites where it was advertised so you can read a summary of the results. Data will be presented for the overall group of respondents, no results will be attributed to any individual in any report, presentation or publication.

### **Who has approved this study?**

This study has been peer reviewed and approved by an Ulster University Research Ethics Filter Committee in the School of Nursing.

### **What if there is a problem?**

As this study has been carefully planned by the research team and approved by the Institute of Nursing and Health Research Governance Filter Committee at Ulster University, it is extremely unlikely that something will go wrong. However, the university has procedures in place for reporting, investigating, recording and handling adverse events and complaints from study volunteers. Further information on the complaints procedure can be found at the University's "Research Ethics and Governance" web page ([https://www.ulster.ac.uk/\\_\\_data/assets/pdf\\_file/0011/75638/Complaints.pdf](https://www.ulster.ac.uk/__data/assets/pdf_file/0011/75638/Complaints.pdf)). Any complaint

or concerns should be made, in the first instance, to the Chief Investigator for this study (contact details are below).

### Further Information

Thank you for reading this information sheet, if you would like further information about the research study please contact:

Medbh Hillyard (PhD Researcher): hillyard-m@ulster.ac.uk

Prof Marlene Sinclair (Chief Investigator): m.sinclair1@ulster.ac.uk

### Participant's Consent

I understand the information that has been presented to me and, in consideration of all of the above, I give my consent to participate in this research study. (Please select appropriate box below).

I can confirm I have read this information sheet and consent to taking part in this survey

I do not give consent to take part in this survey

### Default Question Block

Are you a resident in the UK?

Yes

No

Were you pregnant **and** diagnosed with gestational diabetes during the COVID-19 pandemic?

Yes

No

Are you 18 years old or older?

Yes

No

In what type of area do you live?

City

Town

Rural

Other

What type of accommodation do you live in?

Detached house

Semi-detached house

Terraced house

Apartment/flat

Other

Do you have access to any of the following?

A garden/balcony large enough for exercise

A garden/balcony NOT large enough for exercise

Public green space within walking distance and open during COVID-19

None of the above

Do you have an area inside your home large enough for exercise?

Yes

No

When is your baby due? If postnatal, when was your baby born? (Please use the format DD.MM.YY)

How many babies are/were you expecting?

One

Twins

Triplets or more

Have you been diagnosed with any of the following during your pregnancy?

Please give approximate number of **weeks** pregnant you were at diagnosis.

Gestational diabetes

Gestational hypertension

Proteinuria

Preeclampsia

Eclampsia

Placenta Previa

Preterm labour

Short cervix

Depression

Anxiety

Other

How is/was your gestational diabetes managed?

Diet only

Metformin only

Insulin only

Metformin and insulin

Other-please specify

*The next section of questions are about your activity levels.*

By **physical activity**, we mean all the movement you undertake over the course of the day e.g. walking or cycling to get from A to B. activity while at work or in or around the home (e.g. gardening, housework, walking to the shop, playing with children).

By **exercise**, we mean planned or structured physical activity which you are undertaking to maintain or improve your fitness, e.g. working out in the gym, swimming, joining in an exercise class (online or live), brisk walking or running.

In an average week, **prior** to the COVID outbreak but during your pregnancy, on how many days would you have done a total of 30 minutes or more of physical activity, which was **enough** to raise your breathing rate? This may include sport, exercise and brisk walking or cycling for recreation or to get you to and from places. (Please give answer **0-7** days)

In an average week, **during** the COVID outbreak, on how many days would you have done a total of 30 minutes or more of physical activity, which was **enough** to raise your breathing rate? This may include sport, exercise and brisk walking or cycling for recreation or to get you to and from places. (Please give answer **0-7** days)

In the **past week**, on how many days did you do a total of 30 minutes or more of physical activity, which was **enough** to raise your breathing rate? This may include sport, exercise and brisk walking or cycling for recreation or to get you to and from places. (Please give answer **0-7** days)

If you were doing **less** physical activity during the COVID outbreak than you were **before**, what barriers did you face? (Please select all that apply)

Activities you normally do are not on due to COVID-19

Advancing stage of pregnancy

Bad weather

Caring responsibilities

Didn't know how to be physically active in lockdown

Don't think you should be physically active as you become further on in pregnancy

Fears around safety of physical activity in pregnancy

Fears of leaving the home due to COVID-19

Found lockdown hard

Lack of childcare

Lack of energy

Lack of motivation



Lack of time

No interest

Pain related to pregnancy

Sickness

Unable to do activity with friends and family

Working from home

Other (Please state)

N/A

If you were doing **more** physical activity during the COVID-19 pandemic, what helped you to be physically active? (Please select all that apply)

Better weather

Chance to try different activities

Children were home and you were active with them

Exercise was an approved reason to leave the house

Felt it was important to be physically active due to gestational diabetes

Felt it was important to try and stay healthy during pandemic

Government encouragement to be physically active

More options available

More time

Working from home

Other- (please state)

N/A

What different types of physical activity would you have done during pregnancy **before** the COVID outbreak, **during** the COVID outbreak and **currently**? (Please select all that apply at each time point).

	During pregnancy before COVID	During COVID outbreak	Currently
Cycling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gym (classes)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gym (working out alone or with a friend)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online exercise session	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pilates (class)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pilates (Not in a class)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Running	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Swimming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Team sport (Please specify) <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking (For recreation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yoga (class)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yoga (Not in a class)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other- please specify <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Where would you normally have done your physical activity **before** COVID outbreak? (Please select all that apply)

- At home (inside)
- At home (outside)
- Outdoors (Park, green space, local area)
- Leisure centre or gym
- Community facility (inside)

Where would you normally have done your physical activity **during** the COVID outbreak? (Please select all that apply)

- At home (Indoors)
- At home (Outdoors)
- Outdoors (Park, green space, local area)
- Leisure centre or gym
- Community facility (inside)

Please note your level of agreement with EACH of the following statements in relation to your physical activity **before** COVID outbreak but during your pregnancy?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I had the ability to be physically active	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had the opportunity to be physically active	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was important to me to be physically active	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found exercise enjoyable and satisfying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt guilty when I don't exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please note your level of agreement with EACH of the following statements in relation to your

physical activity **during** the COVID outbreak?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I had the ability to be physically active	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I had the opportunity to be physically active	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It was important to me to be physically active	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I found exercise enjoyable and satisfying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt guilty when I don't exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

*The next section of questions are on sedentary behaviour. Sedentary behaviour is any time spent sitting or lying whilst awake.*

**During** the COVID outbreak was your sedentary time

- Much less than normal
- A little less than normal
- About the same
- A little more than normal
- A lot more than normal

If your sedentary time was **more** than normal, what were the reasons for this? (Please select all

that apply)

Advancing stage of pregnancy

More time in the house

More time watching TV/on phone/tablet/computer

No active travel to work- eg walking to the bus

Changing working patterns (eg working from home, working longer hours, not working)

Other- please state

If your sedentary time was **less than** normal, what were the reasons for this? (Please select all that apply)

Children at home

Less time sitting whilst travelling-eg walking not using public transport

Negative effects when sitting for too long

Changing working patterns (eg working from home, working longer hours, not working)

Other-please state

Below is a list of statements about worrying. Please read each statement and indicate how true each one is in describing your general/usual experiencing of worrying. Please select the **one** option that most likely applies to you. ©

Not true at all                      Somewhat true                      Moderately true                      Definitely true

1. When I worry, it interferes with my day-to-day functioning (eg. Stops me getting my work done, organising myself or

activities).

2. When I think I should be finished worrying about something, I find myself worrying about the same thing, over and over.

3. My worrying leads me to feel down and depressed.

4. When I worry, it interferes with my ability to make decisions or solve problems.

5. I feel tense and anxious when I worry

6. I worry that bad things or events are certain to happen.

7. I often worry about not being able to stop myself from worrying.

8. As a consequence of my worrying, I tend to feel emotional unease or discomfort.

## Block 4

Do you use social media? (For example Facebook, Twitter, Instagram)

Yes

No

Which social media platforms do you use? (Please select all that apply)

Facebook

Instagram

Snapchat

TikTok

Twitter

Other

Do you own an activity tracker? (For example, Apple Watch, Fitbit, Garmin etc.)

Yes

No

What type of activity tracker do you have?

Do you regularly wear the activity tracker? (On most days of the week)

Yes

No

Do you have any fitness equipment at home? (for example weights, exercise mat, resistance band, exercise bike).

Yes

No

Have you sought content/resources to help you be physically active during lockdown?

Yes

No

Where have you sought content/resources to help you be physically active during lockdown?  
(Please select all that apply)

Family/friends

Fitness instructor

Health Professionals

Social media- eg Instagram

Websites

Other- please specify

N/A

Please select if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree with the following statements

			Neithe
			agree
			nor
Strongly			disagre
agree	Agree		



- I know how to exercise safely in pregnancy
- It would be useful to receive instruction on how and what types of physical activity to do in pregnancy
- It would be useful to be given information on the benefits of physical activity in pregnancy, especially with regards to gestational diabetes
- It would be useful to receive information on the physical activity guidelines in pregnancy.
- I am aware of the negative impacts of sedentary behaviour (long unbroken periods of sitting) in pregnancy
- I would take part in online pregnancy exercise classes if they were available
- I would take part in exercise classes during pregnancy if it was taken by an exercise instructor qualified in pregnancy exercise
- I would be more likely to take part in an online exercise class if it was live rather than pre-recorded
- Online peer support, for example, through a private Facebook group for women with gestational diabetes, would have helped me to discuss my feelings with others in a similar situation
- Regular motivational text messages, such as “ Research has found that women with gestational diabetes who took part in regular physical activity were 47% less likely to require insulin than those who were inactive. Try and fit some physical activity into your week”, would have encouraged you to be more physically active
- I blamed myself for getting gestational diabetes
- An activity tracker which alerted me if I had been sitting for over an hour would encourage me to break up long periods of sedentary time

### Block 3

Are you currently on maternity leave from work?

Yes

No

What is/was your current employment status (when not on maternity leave)?  
(Please select one option)

Employed Full Time

Employed Part Time (less than 16 hours/week)

Employed before COVID-19 but laid off during pandemic

Furloughed from Full-Time employment

Furloughed from Part-Time employment

Full Time student

Looking after home/family

Self employed

Unemployed before COVID and looking for work

Unemployed before COVID and not looking for work

Unable to work- please give reason

Prefer not to say

Are you/were you working from home during the COVID pandemic? (Please select one option)

Have been working from home during pandemic and still working from home

Was working from home but now working outside home

Mixture of working from home and outside home

Not worked from home at all

Had been working from home but now on maternity leave

Mixture of working from home and outside home but now on maternity leave

What is your main occupation?

What is the highest level of educational qualification you have obtained?

No qualifications

Secondary Education (GCSE/O-Levels)

Post-Secondary Education (College, A-Levels, NVQ3 or below, or similar)

Vocational Qualification (Diploma, Certificate, BTEC, NVQ 4 and above, or similar)

Undergraduate Degree (BA, BSc etc.)

Post-graduate Degree (MA, MSc etc.)

Doctorate (PhD, DPhil etc.)

What is your ethnicity?

White

Chinese

Pakistani

Other Asian

Black African

Mixed

Irish traveller

Indian

Bangladeshi

Black Caribbean

Black other

Other

How old are you (years)?

What is your relationship status?

Single

In a relationship/married-living apart

In a relationship/married -living together

Prefer not to say

Other

Is your partner a key worker?

Yes

No

Are you a key worker?

Yes

No

Do you have any long term health conditions (Lasting longer than 12 months)

Yes

No

Does it affect your ability to be physically active?

Yes (Please give details)

No

## Block 5

Do you have any other children?

Yes (Please give ages, eg. 2 and 4)

No

Does anyone else live with you other than your partner and children?

Yes (Please specify)

No

What is the first part of your postcode (For example BT27).

(This information is for the sole purpose of comparing responses across the UK).

## End of Survey

Thank you for taking part in this survey. If you have been upset by any questions please contact your midwife or doctor in the first instance, or if you have already had your baby, your GP. Here are some links to support services:

- Maternal mental Health Alliance <https://maternalmentalhealthalliance.org>
- Tommys <https://www.tommys.org>
- Every mind matters- looking after your mental health. <https://www.nhs.uk/oneyou/every-mind-matters/>
- NHS Support  
<https://www.nhs.uk/conditions/pregnancy-and-baby/services-support-for-parents/?tabname=im-pregnant>

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