

OptiMUM Nutrition: a web-based dietary intervention in pregnancy to optimise neonatal outcomes

Submission date 27/02/2016	Recruitment status No longer recruiting	<input type="checkbox"/> Prospectively registered
Registration date 04/03/2016	Overall study status Completed	<input type="checkbox"/> Protocol
Last Edited 18/10/2017	Condition category Pregnancy and Childbirth	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data
		<input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

Nutrition during pregnancy plays a key role in providing the best environment for the baby's growth and development. If the baby is not provided with appropriate nutrition during pregnancy, they may be at increased risk of poor health later in life. This study aims to investigate if a web-based dietary intervention during pregnancy improves the health of the mother and the baby.

Who can participate?

Women aged over 18 who are in the first trimester of a single pregnancy.

What does the study involve?

Participants complete a number of questionnaires about their dietary, physical activity and lifestyle behaviours, and have their weight measured. They are then allocated at random to either the intervention group or the control group. The intervention group receive individualised dietary advice at regular intervals throughout the remainder of their pregnancy. This advice is delivered over the web. In addition, the intervention group receive information to promote positive behaviours such as exercise. Participants who are diagnosed with gestational diabetes are also provided with dietary and lifestyle advice in line with gestational diabetes guidelines. These participants' blood glucose and serum lipid measurements are collected. The control group re-take the dietary questionnaire over the course of their pregnancy, but instead of the individualised dietary advice provided to the intervention group, they receive standard care.

What are the possible benefits and risks of participating?

Not provided at time of registration

Where is the study run from?

The Coombe Women and Infants University Hospital (Ireland)

When is the study starting and how long is it expected to run for?

October 2015 to October 2017

Who is funding the study?
Dublin Institute of Technology (Ireland)

Who is the main contact?
Dr Daniel McCartney

Contact information

Type(s)
Scientific

Contact name
Dr Daniel McCartney

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Additional identifiers

Protocol serial number
N/A

Study information

Scientific Title
OptiMUM Nutrition: a web-based dietary intervention in pregnancy to optimise neonatal outcomes

Acronym
OptiMUM

Study objectives
Current hypothesis as of 09/10/2017:
This study aims to establish whether access to a customised website providing evidence-based nutrition information from early pregnancy improves pregnancy outcomes.

Previous hypothesis:
This study aims to establish whether individualised online dietary advice to enhance maternal dietary intakes from early pregnancy yields improvements in neonatal health outcomes at birth.

Ethics approval required
Old ethics approval format

Ethics approval(s)

1. The Coombe Women and Infants University Hospital's Research Ethics Committee, ref: Study No. 6 – 2015
2. The Dublin Institute of Technology's Research Ethics Committee, ref: 15-45

Study design

Single-blinded randomised controlled trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Pregnancy, gestational diabetes

Interventions

Current interventions as of 09/10/2017:

Participating mothers will be recruited using a convenience sampling method of a confirmed singleton pregnancy as per the inclusion criteria. Written consent will be obtained. Once recruited, women will complete a number of questionnaires to determine their current socio-economic status, attitudinal and psychometric parameters, and their dietary, physical activity and lifestyle behaviours. Women will also have their weight status measured at this point.

Women will then be allocated at random to either the intervention group or the control group.

1. The intervention group will receive access to an evidence-based nutrition and lifestyle website in addition to standard care.
2. The control group will receive standard care alone.

Previous interventions:

Participating mothers will be recruited using a convenience sampling method in their first trimester of a confirmed singleton pregnancy as per the above inclusion criteria. Written consent will be obtained. Once recruited, women will complete a number of questionnaires to determine their current socio-economic status, attitudinal and psychometric parameters, and their dietary, physical activity and lifestyle behaviours. Women will also have their weight status measured at this point. Women will then be allocated at random to either the intervention group or the control group.

1. The intervention group will receive individualised dietary advice at regular intervals throughout the remainder of their pregnancy. This advice will be delivered over the web. In addition, the intervention group will receive information to promote positive lifestyle behaviours such as exercise. Consenting participants diagnosed with gestational diabetes will be sub-categorised within the intervention group and provided with dietary and lifestyle advice in line with gestational diabetes guidelines. These participants' blood glucose and serum lipid measurements will be collected.

2. The control group will re-take the dietary questionnaire over the course of their pregnancy, but instead of the individualised dietary advice provided to the intervention group, they will receive standard care alone.

Intervention Type

Behavioural

Primary outcome(s)

Current primary outcome measures as of 09/10/2017:

Birth weight, measured as part of standard antenatal and postnatal care

Previous primary outcome measures:

Neonatal weight and health status

Key secondary outcome(s)

Current secondary outcome measures as of 09/10/2017:

1. Maternal engagement with the website, measured using web-stat analytics from recruitment at baseline throughout the gestational period
2. Neonatal OFC, measured as part of standard antenatal and postnatal care
3. Maternal GDM diagnosis, measured as part of standard antenatal and postnatal care
4. Maternal mode of delivery, measured as part of standard antenatal and postnatal care
5. Neonatal mode of feeding, measured as part of standard antenatal and postnatal care

Previous secondary outcome measures:

1. Maternal weight
2. Maternal dietary intakes
3. Maternal dietary quality
4. Maternal blood glucose and serum lipids
5. Maternal dietary and lifestyle knowledge
6. Maternal psychometric measurements

Completion date

30/10/2017

Eligibility

Key inclusion criteria

Current inclusion criteria as of 09/10/2017:

1. Women with a singleton pregnancy
2. Aged over 18
3. Have internet access
4. Proficient English
5. <18 weeks gestation

Previous inclusion criteria:

1. Women with a singleton pregnancy
2. Aged over 18
3. Have internet access
4. Proficient English
5. In their first trimester of pregnancy

Participant type(s)

Other

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

Female

Key exclusion criteria

Women who do not meet the inclusion criteria

Date of first enrolment

01/10/2015

Date of final enrolment

30/10/2017

Locations**Countries of recruitment**

Ireland

Study participating centre

The Coombe Women and Infants University Hospital

Ireland

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Sponsor information**Organisation**

Dublin Institute of Technology (Ireland)

ROR

<https://ror.org/04t0qbt32>

Funder(s)**Funder type**

University/education

Funder Name

Dublin Institute of Technology (Ireland)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Other