

# Lipid content in human milk is higher in overweight/obese infants

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<b>Registration date</b> 26/04/2022	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 25/04/2022	<b>Condition category</b> Other	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

Background and study aims

Human milk (HM) is the best nutritional source for infant to support their growth during the first 6 months. Breast-fed infants were thinner compared to formula-fed infants, but some breast-fed infants are overweight/obese.

Aim: To investigate the macronutrient content of HM in normal infants and overweight/obese infants aged <12 months old.

Who can participate?

Mothers of normal/overweight/obese infants aged 1 -12 months, who breast-fed predominantly.

What does the study involve?

The researchers collect 1.5 ml of human milk from lactating women using breast pumps in a closed room for analysis.

What are the possible benefits and risks of participating?

Benefits: Mothers will be able to predict the optimum volume of human milk for the infants to achieve optimum growth without being overweight or obese.

Risks: there is no health risk for the participants (mothers and infants)

Where is the study run from?

RSUD Dr. Soetomo (Indonesia)

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

January 2018 to April 2018

Who is funding the study?

Investigator initiated and funded

Who is the main contact?

Nur Aisyah Widjaja, MD

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# Contact information

## Type(s)

Principal investigator

## Contact name

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# Additional identifiers

## Protocol serial number

0234/KEPK/IV/2018

# Study information

## Scientific Title

Comparison of human milk macronutrient content between overweight and normal infants: a case-control study

## Study objectives

is there a significant difference on the macronutrients content (energy, carbohydrate, protein and lipid) of human milk on overweight/obese infant (OW group) compared to normal infant (N group)?

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Approved 25/04/2018, Health Research Ethics Committee of RSUD Dr. Soetomo Hospital (Jl. Mayjen Prof. Dr. Moestopo No. 6-8 Surabaya, Indonesia, +62 31-5501164; [kepk@rsudrsoetomo.jatimprov.go.id](mailto:kepk@rsudrsoetomo.jatimprov.go.id)), ref. 0234/KEPK/IV/2018

## Study design

Observational case-control study

## Primary study design

Observational

**Study type(s)**

Screening

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

Comparison of human milk macronutrient content between overweight and normal infants

**Interventions**

Researchers collected the human milk using a breast pump in closed rooms at neonates wards, as much as 1.5 ml was syringed and replaced on a sterile tube with caps, and stored in an icebox until the analysis using MIRIS was performed.

The measurement of HM components was performed in the nursery room using a human milk analyzer (HMA) (MIRIS®, Uppsala, Sweden) with an accuracy of <0.1 g/100 ml.

The samples of human milk were divided into 2 groups: normal (N group) and overweight/obese (OW group) according to the nutritional status of infants, determined by a pediatrician (the researcher/Nur Aisyah Widjaja).

**Intervention Type**

Other

**Primary outcome(s)**

Measured using a human milk analyzer (HMA) (MIRIS®) at a single time point:

1. Carbohydrate content of milk
2. Lipid content of milk
3. Energy content of milk

**Key secondary outcome(s)**

Measured using a human milk analyzer (HMA) (MIRIS®) at a single time point:

1. Protein content of milk

**Completion date**

30/04/2018

**Eligibility****Key inclusion criteria**

1. Healthy lactating mother and does not consume steroids, drugs, alcohol, or a smoker
2. Healthy infant with nutritional status: normal, overweight or obese, aged 1-12 months old
3. Eager to participate in the study

**Participant type(s)**

Other

**Healthy volunteers allowed**

No

**Age group**

Child

**Lower age limit**

1 months

**Upper age limit**

12 months

**Sex**

All

**Total final enrolment**

20

**Key exclusion criteria**

1. Infants with growth deliration (underweight/ severely underweight, stunted/ severely stunted, wasted/ severely wasted)
2. Medically ill (infection, non infection)

**Date of first enrolment**

25/04/2018

**Date of final enrolment**

29/04/2018

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

Indonesia

**Study participating centre**

**RSUD Dr. Soetomo**

Jl. Mayjen Prof. Dr. Moestopo No. 6-8

Surabaya

Indonesia

60286

**Sponsor information****Organisation**

Airlangga University

**ROR**

<https://ror.org/04ctejd88>

# 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