

# Infant anthropometry and body composition in Ethiopia

<b>Submission date</b> 08/12/2010	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
<b>Registration date</b> 10/01/2011	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 11/03/2024	<b>Condition category</b> Pregnancy and Childbirth	<input type="checkbox"/> Statistical analysis plan
		<input checked="" type="checkbox"/> Results
		<input type="checkbox"/> Individual participant data

**Plain English summary of protocol**  
Not provided at time of registration

## Contact information

**Type(s)**  
Scientific

**Contact name**  
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## Additional identifiers

**Protocol serial number**  
N/A

## Study information

**Scientific Title**

Predictors of neonatal and early infant body composition and growth and its effect on health in Jimma, Ethiopia: an observational study of infant body composition using infant air displacement plethysmography

## **Acronym**

iABC

## **Study objectives**

The rationale for the study is that little is known about fat and lean mass development in foetal and early life, in particular in the studies population. Answering the following questions will provide new understanding of body composition in early life:

1. What are the fat and lean mass levels at birth?
2. Which maternal and infant factors predict neonatal body composition?
3. Which maternal and infant factors - including birth weight - predict changes in fat and lean mass from 0 to 6 months?
4. What is the relationship between birth weight and 6 month body composition?
5. What is the relationship between neonatal body composition and infant morbidity and growth?

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

1. Jimma University Ethical Review Committee approved on the 23rd December 2008 (ref: RPO /56/2001) (Air Displacement Plethysmography Study)
2. Jimma University Ethical Review Committee approved on the 12th October 2009 (ref: RPGC /J05/2002) (Deuterium Dilution substudy)

N.B. The reference numbers are based on the Ethiopian calendar, which is approximately 8 years behind the Gregorian calendar

## **Study design**

Observational cohort study with nested cross-sectional study

## **Primary study design**

Observational

## **Study type(s)**

Quality of life

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

Neonatal and infant fat and lean mass

## **Interventions**

Neonatal and infant body composition is measured using infant air displacement plethysmography (PeaPod, Life Measurement, Inc). On a subsample of 120 individuals infant body composition is measured using deuterium dilution. Maternal body composition is measured using bio-impedance analysis (BC-418MA, Tanita B.V.). Anthropometry are measured using conventional methods, and questionnaire information is taken orally in local language.

The duration of the study is 6 months, as newborns and mothers are assessed 6 times: at birth, 6, 10, 14, 18 and 26 weeks of age. Duration of follow-up is also 6 months.

Contact details for Ethiopian Principal Investigator:

Dr Tsinuel Girma  
Department of Pediatrics and Child Health  
PO Box 574  
Jimma  
Ethiopia

### **Intervention Type**

Other

### **Phase**

Not Applicable

### **Primary outcome(s)**

Fat and lean mass at birth, 6-, 10-, 14-, 18- and 26 weeks of age, measured with infant air displacement plethymography and deuterium dilution (in a sub-sample)

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

Anthropometry and self-reported (by the mother) morbidity at birth, 6-, 10-, 14-, 18- and 26 weeks of age

### **Completion date**

01/01/2012

## **Eligibility**

### **Key inclusion criteria**

1. Pregnant mother aged between 15 - 45 years
2. Currently living in Jimma town
3. Planning to stay in Jimma town for at least 6 months after birth
4. Consent is given
5. Children are between 0 - 6 months of age

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

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Lower age limit**

15 years

### **Upper age limit**

45 years

**Sex**

Female

**Total final enrolment**

378

**Key exclusion criteria**

1. Birth weight less than 1500 g
2. Congenital malformation

**Date of first enrolment**

17/12/2008

**Date of final enrolment**

01/01/2012

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

Denmark

Ethiopia

**Study participating centre**

University of Copenhagen

Frederiksberg C.

Denmark

1958

**Sponsor information****Organisation**

University of Copenhagen (Denmark)

**ROR**

<https://ror.org/035b05819>

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

Industry

## Funder Name

Danida (Denmark)

## Funder Name

University of Copenhagen (Denmark) - Faculty of Life Sciences

# Results and Publications

## Individual participant data (IPD) sharing plan

### IPD sharing plan summary

Not provided at time of registration

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	01/10/2013		Yes	No
<a href="#">Results article</a>	results	01/10/2019	21/06/2019	Yes	No
<a href="#">Results article</a>	results	01/11/2019	12/09/2019	Yes	No
<a href="#">Results article</a>	results	01/07/2018	17/09/2019	Yes	No
<a href="#">Results article</a>		14/06/2023	19/06/2023	Yes	No
<a href="#">Results article</a>		06/03/2024	11/03/2024	Yes	No
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes