

# Pharmacokinetics and pharmacodynamics of insulin detemir (Levemir®) and insulin glargine (Lantus®) after subcutaneous injection of increasing doses into morbidly obese type 2 diabetic subjects

<b>Submission date</b> 07/04/2006	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered
<b>Registration date</b> 09/05/2006	<b>Overall study status</b> Completed	<input type="checkbox"/> Protocol
<b>Last Edited</b> 01/02/2019	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<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

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## Additional identifiers

## Study information

**Scientific Title**

Pharmacokinetics and pharmacodynamics of insulin detemir (Levemir®) and insulin glargine (Lantus®) after subcutaneous injection of increasing doses into morbidly obese type 2 diabetic subjects

## **Acronym**

INSULIN-KINETICS

## **Study objectives**

The primary aim of this study is to compare the dose-response relationship of moderate and of high doses of insulin detemir and of insulin glargine in severely obese type 2 diabetic subjects.

## **Ethics approval required**

Old ethics approval format

## **Ethics approval(s)**

Approved by the Local Ethics Committee of the University of Basel (EKBB) on 16/01/2003, reference number 295/05

## **Primary study design**

Interventional

## **Study design**

Randomized cross-over trial with 2 insulins (determir and glargine) and 2 dosages each

## **Study type(s)**

Treatment

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

Diabetes, obesity

## **Interventions**

Application of insulin determir (Levemir) versus insulin glargine (Lantus)

## **Intervention Type**

Drug

## **Phase**

Not Specified

## **Drug/device/biological/vaccine name(s)**

Insulin detemir (Levemir) and insulin glargine (Lantus)

## **Primary outcome(s)**

Pharmacodynamics of the two insulins (detemir and glargine)

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

1. Pharmacokinetics of the two insulins (detemir and glargine)
2. Correlation pharmacodynamics and (central) obesity

## **Completion date**

30/04/2007

## Eligibility

### Key inclusion criteria

1. History of type 2 diabetes mellitus
2. Age 18-65 years
3. Body mass index  $>35 \text{ kg/m}^2$
4. HbA1c  $<10\%$

### Participant type(s)

Patient

### Healthy volunteers allowed

No

### Age group

Adult

### Lower age limit

18 Years

### Upper age limit

65 Years

### Sex

All

### Key exclusion criteria

1. Any severely active hepatic, cardiovascular, pulmonary, renal, neurological, musculoskeletal, hematological or endocrine disease
2. Pregnant or breast feeding women
3. Woman of childbearing potential not using a reliable method of birth control such as oral contraceptives or an intrauterine device (IUD)
4. Subjects refusing or unable to give written informed consent

### Date of first enrolment

20/04/2006

### Date of final enrolment

30/04/2007

## Locations

### Countries of recruitment

Switzerland

### Study participating centre

**University Hospital Basel**  
Basel  
Switzerland  
4031

## Sponsor information

### Organisation

University Hospital Basel (Switzerland)

### ROR

<https://ror.org/04k51q396>

## Funder(s)

### Funder type

Industry

### Funder Name

Novo Nordisk AG, Switzerland

### Funder Name

Foundations

## 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	16/08/2018	01/02/2019	Yes	No