

# Normal values for central retinal thickness asymmetry in healthy Caucasians

<b>Submission date</b> 27/02/2014	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 27/03/2014	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 16/06/2015	<b>Condition category</b> Eye Diseases	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Glaucoma is a term that describes a group of eye conditions that affect vision. Several previous studies in glaucoma patients have shown the importance of structural changes in the retina, a complex layer of tissue at the back of your eye. Optical coherence tomography (OCT) is a technique which uses a light beam to scan the different layers of the retina and can detect very subtle changes. A new OCT software assesses any possible asymmetry between the two eyes and the upper and lower hemisphere in both eyes. Recent studies have found that retinal asymmetry may be the first sign in the development of glaucoma. However, at present we have no information regarding the 'normal' asymmetry values in healthy individuals, therefore it is hard to distinguish 'normal' asymmetry from asymmetries which may be early signs of glaucoma. Our aim is to study the retinal asymmetry that normally exists in healthy individuals.

### Who can participate?

Healthy volunteers between the ages of 18 and 45 who have no eye disease and have normal visual acuity with no or minor correction (glasses or contact lenses).

### What does the study involve?

Every volunteer will undergo a general eye examination (visual acuity and slit lamp examination) and an OCT scan.

### What are the possible benefits and risks of participating?

Volunteers participating in our study may have the benefit of a detailed eye examination. The study has no extra risk in comparison to a general eye examination.

### Where is the study run from?

Our study will run at the Department of Ophthalmology, Thy-Mors Hospital in Thisted, Denmark.

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

The study will run from March 2014 to July 2014.

### Who is funding the study?

Department of Ophthalmology, Thy-Mors Hospital, Denmark.

Who is the main contact?

Janos Hargitai  
janos.hargitai@rn.dk

## Contact information

### Type(s)

Scientific

### Contact name

Dr Janos Hargitai

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## Additional identifiers

## Study information

### Scientific Title

Normal values for central retinal thickness asymmetry in healthy Caucasians, measured by Spectral-Domain optical coherence tomography (OCT) posterior pole asymmetry analysis

### Study objectives

To determine the normal variation in central retinal thickness asymmetry in healthy Caucasians using Spectralis HRA+OCT's posterior pole asymmetry analysis.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Regional Ethics Committee of North Jutland (Den Videnskabetiske Komité for Region Nordjylland), 24/01/2014

### Study design

Cross-sectional study

### Primary study design

Observational

### Study type(s)

Other

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

Retina

### **Interventions**

1. Visual acuity measured using the Snellen Chart
2. Retinal thickness and RNFL measured by Spectralis HRA+OCT's volume and circle scan mode, respectively

### **Intervention Type**

Other

### **Phase**

Not Applicable

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

1. Right eye - left eye retinal thickness asymmetry of the paired 64 cells in the posterior pole retina thickness map
2. Superior-inferior retinal thickness asymmetry of the paired 32 cells

Outcome measures will be assessed at baseline.

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

1. Variance in asymmetry across the macula
2. Association between the temporal RNFL thickness and the mean central retinal thickness
3. Effect of age and sex on interocular asymmetry

Outcome measures will be assessed at baseline.

### **Completion date**

01/07/2014

## **Eligibility**

### **Key inclusion criteria**

1. Healthy volunteer
2. Caucasian
3. Age 18-45 years

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

Healthy volunteer

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Lower age limit**

18 years

### **Upper age limit**

45 years

**Sex**

All

**Key exclusion criteria**

1. Visual acuity < 1.0
2. Spherical equivalent > 1.5 D
3. Morphological changes in macula
4. Retinal nerve fiber layer (RNFL) thickness out of normal limits

**Date of first enrolment**

01/03/2014

**Date of final enrolment**

01/07/2014

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

Denmark

**Study participating centre**

Højtoftevej 2

Thisted

Denmark

7700

**Sponsor information****Organisation**

Thy-Mors Hospital (Denmark)

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

Hospital/treatment centre

**Funder Name**

Thy-Mors Hospital (Denmark)

# 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	01/06/2015		Yes	No