

# The effect of astigmatism on multifocal contact lens visual performance

<b>Submission date</b> 10/12/2020	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 27/01/2021	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 29/01/2021	<b>Condition category</b> Eye Diseases	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

Astigmatism means the eye is shaped more like a rugby ball than a football, so light is focused at more than one place in the eye. Astigmatism, along with short sight and long sight, is a common cause of blurry vision. It is usually corrected with glasses or contact lenses. Multifocal contact lens wearers have varying low degrees of astigmatism which affect both visual performance and visual satisfaction. The aim of this study is to measure the effect of astigmatism on visual acuity and vision satisfaction when wearing multifocal contact lenses.

### Who can participate?

Adults who are at least 40 years old, who have healthy eyes and wear multifocal contact lenses and have astigmatism from -0.50 D in both eyes or -0.75 DC to -1.25 DC in one eye.

### What does the study involve?

The study involves a single visit where a series of vision measurements will be carried out. Participants wear MyDay Multifocal and Proclear 1Day Multifocal contact lenses for about 2 hours each in the clinic.

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

The participants are current multifocal contact lens wearers and they will use multifocal contact lenses which are CE marked. The risk to the participants is no greater than wearing their own contact lenses. The risks are further minimised by the fact that the contact lenses will only be worn in the clinic under the supervision of the investigators. The possible benefit to the participant is for them to experience the effect of correcting their astigmatism on their vision.

### Where is the study run from?

Ocular Technology Group - International (UK)

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

May 2019 to December 2019

### Who is funding the study?

CooperVision Inc. (USA)

Who is the main contact?

Deborah Moore  
dmoore@otg.co.uk

## Contact information

### Type(s)

Public

### Contact name

Miss Deborah Moore

### Contact details

66 Buckingham Gate  
London  
United Kingdom  
SW1E 6AU  
+44 (0)207 222 4224  
dmoore@otg.co.uk

## Additional identifiers

### Clinical Trials Information System (CTIS)

Nil known

### Integrated Research Application System (IRAS)

271679

### ClinicalTrials.gov (NCT)

Nil known

### Protocol serial number

CV19-64 ID19-38, IRAS 271679

## Study information

### Scientific Title

The effect of astigmatism on multifocal contact lens visual performance - a pilot study

### Study objectives

The study is a pilot feasibility study so formal hypothesis testing is not possible. Multifocal contact lenses are used in patients with astigmatism up to 0.75DC as per their CE marking. The rationale for the study is to measure the effect of astigmatism of the visual performance on multifocal contact lenses.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

Approved 25/09/2019, West Midlands - Solihull Research Ethics Committee (The Old Chapel, Royal Standard Place, Nottingham, NG1 6FS, UK; +44 (0)207 104 8191; NRESCommittee. WestMidlands-Solihull@nhs.net), REC ref: 19/WM/0270

## **Study design**

Prospective randomized double-masked single-group crossover study

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

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

Presbyopia vision correction using multifocal contact lenses

## **Interventions**

Multifocal contact lenses are used in wearers with various levels of astigmatism. It is important to understand the effect of astigmatism on visual performance of multifocal contact lenses. In this study the researchers will measure visual performance and visual satisfaction for patients with different levels of astigmatism.

Randomisation is computer-generated for the order of testing the different corrections (MyDay Multifocal and Proclear 1Day Multifocal). There is only one intervention arm as it is a cross over study. Each correction is only worn for approx. 2 hours in the clinic.

## **Intervention Type**

Device

## **Phase**

Not Applicable

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

MyDay Multifocal, Proclear 1Day Multifocal

## **Primary outcome(s)**

Visual performance (overall binocular and monocular) measured using LogMar charts at approximately 30 mins after the contact lenses are inserted

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

Visual satisfaction (overall binocular and monocular) measured using LogMar charts at approximately 30 mins after the contact lens are inserted

## **Completion date**

31/12/2019

## **Eligibility**

### **Key inclusion criteria**

1. At least 40 years old
2. Have read and understood the Participant Information Sheet in English
3. Have read, signed and dated the Informed Consent
4. Best corrected visual acuity of at least 20/25 in each eye
5. Have normal eyes with the exception of the need for visual correction
6. Current multifocal contact lens wearer
7. Spectacle refraction: Distance:  
Sphere: -6.00DS to + 4.00DS Astigmatism: a. -0.50 DC in both eyes or b. -0.75 DC to -1.25 DC in one eye  
Near Addition: +0.75 D to +2.50 D
8. Be willing and able to adhere to the instructions set in the clinical protocol and maintain the appointment schedule

**Participant type(s)**

Healthy volunteer

**Healthy volunteers allowed**

No

**Age group**

Adult

**Sex**

All

**Total final enrolment**

15

**Key exclusion criteria**

1. Ocular anterior segment infection, inflammation, abnormality, or active disease that would contraindicate contact lens wear
2. Newly prescribed use of some systemic or ocular medications for which contact lens wear could be contraindicated as determined by the investigator
3. Monocular participants (only one eye with functional vision) or participants fit with only one lens
4. Any moderate or severe ocular condition observed during the slit-lamp examination at the enrolment visit
5. History of herpetic keratitis, ocular surgery or irregular cornea
6. Known pregnancy or lactation during the study period
7. Enrolment of the investigator or his/her staff, family members of the investigator, family members of the investigator's staff, or individuals living in the households of these individuals

**Date of first enrolment**

01/09/2019

**Date of final enrolment**

31/12/2019

**Locations**

## Countries of recruitment

United Kingdom

England

## Study participating centre

Ocular Technology Group - International

66 Buckingham Gate

London

United Kingdom

SW1E 6AU

## Sponsor information

### Organisation

CooperVision (United States)

## Funder(s)

### Funder type

Industry

### Funder Name

CooperVision Inc. (USA)

## 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

### Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Basic results</a>	Participant information sheet	28/01/2021	29/01/2021	No	No
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Participant information sheet</a>		11/11/2025	11/11/2025	No	Yes