# Effect of large diameter and plasma coating on the initial adaptation of gas permeable contact lens fitting for neophytes

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## Introduction
- Rigid Gas Permeable (RGP) contact lenses occupy 13% of global contact lens fits, with 10% fits for conventional RGP lenses.
- The primary concern is that 'Rigid' lenses are uncomfortable and often painful, particularly for the initial adaptation period.
- It is unclear how the initial problem with comfort and epiphora for neophytes can be minimised to reduce fear within patients and enhance GP lens use?

## Purpose
To determine if any of the following strategies can make RGP lenses more comfortable for neophytes:
1. Plasma coating on to lens surface
2. Larger diameter lenses

## Results
- **119 participants** for the plasma coated RGP lens trial was 21.1±3.5 years, among them 77% were female.
- **114 participants** for large diameter RGP lens trial was 20.1±1.0 years and 72% of them were female.

### Impact of plasma coating on RGP lens
- **N=59**
- Week 1: Lens unilaterally fitted
- Week 2: Lens unilaterally fitted

### Impact of large diameter RGP lens
- **N=63**
- GP unilaterally fitted

## Methods
- **Prospective, double-masked, randomised study** followed Good Clinical Practice Guidelines.
- Received approval from Aston University human research ethics committee.
- Participants were recruited from University population.

## Conclusions
This study provides valuable information for contact lens practitioners that additional plasma coating or larger diameter corneal RGP lenses may not be a viable option to mitigate the initial discomfort and adaptation problems related to first time RGP lens wear.

## References

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