

## **Fundus Examination**

Ophthalmic fundus examination is a medical imaging technique to visualize and photograph the fundus - the interior lining of the eyeball, including the retina, optic disc, and macula. It that requires a specialized device – the fundus camera – a specialized microscope with an attached camera linked with a computer. The fundus camera is designed so the eye specialist can examine the fundus by focusing light through the cornea, pupil and lens.

Fundus photography is performed with specialized filters to reveal important diagnostic information. It is also routinely used in combination with angiography to study the retinal or choroidal circulation.

## **Why it is performed**

Fundus examination is one of the most valuable tests conducted during an eye examination because it can detect some signs and physiological effects of various circulatory, metabolic and neurological disorders.

Fundus examination is routinely used to assess and diagnose vitro-retinal diseases (such as diabetic retinopathy, retinal tear and detachment, macular hole, retinal haemorrhage, retinal artery and vein occlusion, choroidal tumor, or macular edema), optic nerve defects, and hereditary diseases.

Fundus examination is used to:

- Identify and locate vitro-retinal and optical nerve defects caused by eye diseases or trauma.
- Examine the extent of the defects or abnormalities to plan a proper treatment.
- Evaluate the success of treatment.

## **How to prepare**

No special preparation is required for the fundus examination.

## **How it is performed**

Before beginning, the pupil is dilated with drops. Otherwise, it would automatically constrict from the bright light of the camera flash.

Shortly after the pupil dilation, the patient is asked to position his or her head in the head mount of the fundus camera (as illustrated below).



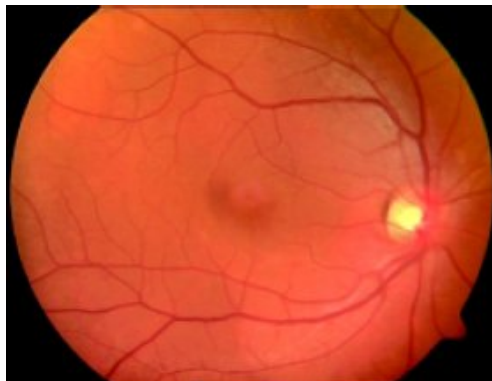
The patient is asked to stare at a fixation device so the eyes are still. While the eye care professional is taking the pictures, the patient will see a series of bright flashes.

After the test, the ophthalmologist makes a careful interpretation of the images. If the results of the examination are inconclusive, the procedure may be repeated.

The fundus examination takes approximately 5 to 10 minutes.

## **Results**

The image below is an illustration of a result that may be obtained during the OCT examination.



The specific fundus imaging results vary significantly depending on the condition being studied and the patient.

## **How it feels**

The ocular fundus examination is completely painless.

If dilating eye drops are used, some people may notice a brief stinging sensation when the drops are put into their eye or feel a test of medicine in your mouth when the eye drops drain through the tear ducts into the back of the throat. Furthermore, some people may have difficulties focusing their eyes for a few hours. The dilating eye drops typically wear off in about 20-30 minutes.

## **What the risks are**

The ocular fundus examination involves no risk. In some patients, however, the dilating eye drops can cause brief episodes of nausea, dryness of the mouth, flushing, and dizziness. In rare cases, severe reactions can occur.