

# Corneal Blindness - How Can We Help? (Eye Donation Facts)

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## Introduction

Corneally blind persons can get sight only when their damaged cornea is replaced by a healthy cornea which is received from a deceased donor. So, if we have God's gift of vision, why not try to pass it on to someone who doesn't have it, instead of burning or burying? To eradicate corneal blindness, we need a greater number of eye donations in our country. One eye donation can give sight to 2 corneally blind persons. There is no substitute for human cornea. The transplantation surgery depends upon the priceless gift of cornea donation from one human to next.

## Lack of Available Donor Eyes in India

In a corneal transplantation, the damaged opaque cornea is replaced by a healthy one, taken from the eye of a deceased person. There is a severe lack of availability of donor eyes in India. There are enough qualified eye surgeons but the corneal grafting operations cannot be performed because of the scarcity of donor eyes. This is where eye donation offers hope as one eye donation can give vision to 2 persons.

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## Eye Donation - Frequently Asked Questions

### What is Eye Donation?

Eye donation means people pledging today, to donate their eyes after death, to be used for corneal grafting operations, which restore the vision to the corneal blind persons. The eyes of the deceased person, who has not pledged his eyes, can be donated by the next of his kin.

### What is corneal blindness?

Cornea is the clear tissue covering the front of the eye. It is a focussing element of the eye. Vision will be dramatically reduced or lost if the cornea becomes cloudy or scarred from disease, injury or infection. This condition is known as corneal blindness.

### What are the causes of corneal blindness?

Injuries to the eye, malnutrition, infections, chemical burns, congenital disorders and post-operative complications or infections of eye surgery

### What is a corneal transplant?

A corneal transplant is the replacement of damaged or diseased cornea with healthy donor cornea.

### Who can donate eyes?

- Eye donors could be of any age group or sex.
- Spectacles wearers, diabetics, patients with high blood pressure, patients who have undergone cataract surgery can also donate eyes.

- Persons with AIDS, Hepatitis B and C, Rabies, Septicaemia, Acute Leucaemia (Blood cancer), Tetanus, Cholera, and infectious diseases like Meningitis and Encephalitis cannot donate eyes.

**How do you donate your eyes?**

You sign and mail the voluntary eye pledge card obtainable from the Eye Banks. You will receive back some instructions and Eye donor pocket card to be carried by you.

**How soon eyes must be removed?**

Eyes should be removed as soon as possible, preferably within 4 to 6 hours of death.

**How does the Eye Bank collect donated eyes?**

The Eye Bank is informed by the next of kin or the family physician immediately after the death of the donor (day or night by telephone). The Eye Bank then takes care of all arrangements without delay.

**How long can the eyes be preserved?**

Eyes are used within 48 - 72 hours. However, by special preservation methods, they can be stored up to 2 weeks.

**How are these eyes used?**

The eyes thus obtained are properly examined and preserved aseptically in the Eye Bank. They are supplied to eye surgeons for the treatment of their patients.

**Does removal of eyes cause disfigurement of the body?**

No. Removal of the eyes is done carefully and skillfully without causing any disfigurement of the face.

**Is there any delay in funeral arrangements?**

No. Eye tissue is procured within

hours of death, so families may proceed with funeral arrangements as planned.

**Will the donor's family pay or receive any fees?**

No. It is illegal to buy and sell human eyes, organs and tissues.

**Will the recipients be told the identity of the donor?**

No. Donor anonymity is strictly preserved by law.

**Can a person with weak eye sight or having spectacles donate his eyes?**

Yes. Weak eyesight has no effect on donor cornea and subsequent corneal grafting operation. Even operated eye with healthy cornea can be used for grafting.

**Can the whole eyeball be grafted?**

No. Only cornea is transplanted.

**Are there certain types of eyes, which cannot be used?**

All donated eyes are useful. The majority can be used for corneal grafting. But some eyes from certain diseases are not fit to be used for corneal grafting; however, these are valuable for research purpose to prevent blindness.

**Who Can Donate?**

- There is no age limit to donate eyes.
- Anyone can donate the eyes, irrespective of age, sex, blood group or religion
- People with diabetes or hypertension and suffering from systemic disorders like asthma, tuberculosis can also donate their eyes.
- People who suffer from cataracts or glaucoma can also donate the eyes.
- People who have poor vision and use spectacles, or have had previous eye diseases or surgery can still donate,

since these conditions may not affect the cornea. Eyes donated to The Eye-Bank that are not medically suitable for transplant may be used for medical research and education.

#### **How to register as an Eye Donor?**

- One can contact the nearest eye bank and fill in the Eye Pledge Form and mail it to the Eye Bank.
- One can also register online
- His name will be registered as voluntary eye donor on receipt of the pledge card and will receive a pocket donor card.
- Carry the Donor Card in wallet/ diary.
- Intimate the Eye Bank about any change in the address.
- Most importantly discuss the wish with respect to Eye Donation with family members.

#### **How to donate?**

##### **Instruction for Next of Kin and Family Physician**

Even if the person has not filled any Pledge card or Donor card during his lifetime, his/her next of kin can donate the eyes of the deceased without any legal hassle.

The role of the next of kin and family physician (of voluntary Eye donor) is also of utmost importance. They may act according to the word of the deceased.

##### **The guidelines for them are as under**

- In case the voluntary eye donor dies, please inform immediately, to the nearest Eye Bank. The eyes could be collected by any nearest eye bank irrespective to the place where registration has been done.
- The information should be conveyed to

the Eye Bank as early as possible preferably within 2-3 hours of the death of the donor.

- Please give full co-operation to personnel who come to remove eyes.
- The doctor will take necessary steps to avoid any disfigurement of the body while the removal of the eyes.

##### **Important instructions to donor's next of kin regarding care of donor eyes**

The care of donor's eyes is very necessary to keep them viable for transplantation.

- Eyelids should be closed immediately after death & place wet cotton/ cloth with ice cubes over the closed eyelids. It will keep eyes moist.
- Switch off the fan (keep A/C on). Raise the Donor's head with a couple of pillows.
- Get the death certificate ready quickly by a family physician by the time Eye Bank team arrives.

Eye bank team will take consent of the next of kin before starting the procedure. The entire procedure takes about half an hour. Whole eye balls / corneas are retrieved and replaced with artificial eye caps, which retain the shape of the eyes. As well, a small amount of blood sample is taken for testing. Once the procedure is over, there are usually no obvious signs that the donation took place.

Once the eyes are at the eye bank, they are evaluated. If the eyes cannot be used for transplantation, they can be used for research & training.

The Donor's blood is screened for HIV 1 & 2, Hepatitis B & C, and Syphilis. The blood tests must be negative in order for

the corneas to be used for transplant.

#### **Take Home Message**

- Everyone can be a potential eye donor
- If a donor's eyes cannot be used for transplant due to medical conditions, it can be directed to medical research & training.
- The gift of eye donation is made anonymously
- Information about the donor is not available to recipients or their families.
- There is no cost to become an eye donor.
- There is no financial cost to the donor or their family members for eye donation.
- Donation will not interfere with funeral arrangements.
- Corneas are recovered shortly after death. So, there is no need to delay the funeral. Eye Bank team takes great care to preserve the donor's appearance. Through the entire procedure of eye donation, the body is

created with care, respect and dignity.

- One need to tell his family & loved ones about the decision to donate the eyes.
- Signing and carrying the donor card along with is an important step towards becoming an eye donor. But the family will be involved in the final decision and families are more willing to agree to donate their loved one's eyes if they had prior conversation about donation. Sharing the decision with family now will help them carry out the wishes later.

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#### **Triple therapy for symptomatic patients with COPD**

Global initiative for Chronic Obstructive Lung Disease (GOLD) recommendation for highly symptomatic chronic obstructive pulmonary disease COPD patients at risk of exacerbations or severe airflow limitation (GOLD D) was treatment with either long-acting muscarinic antagonists (LAMA) or long-acting  $\beta_2$ -agonists (LABA) in combination with inhaled glucocorticosteroids (ICS), both with strong evidence.

Triple therapy with LAMA/LABA/ICS is recommended as a step-up option with a limited body of evidence.

However, Singh and colleagues showed the superiority of triple therapy over LABA/ICS, not only for lung function (primary outcome), but also for moderate-to-severe exacerbations, a prespecified secondary outcome.

**Leonardo M Fabbri, Sara Roversi, Bianca Beghe, The Lancet, 2017, Vol 389, 1864-1865**