

## OCUFREE Capsules

### Composition:

Each soft gelatin capsule contains:

|                |         |
|----------------|---------|
| Lutein         | 4 mg    |
| Zeaxanthin     | 0.8mg   |
| L- Glutathione | 5 mg    |
| Beta carotene  | 10 mg   |
| Vitamin A      | 2500 iu |
| Vitamin C      | 150 mg  |
| Vitamin E      | 25 mg   |
| Selenium       | 70 mcg  |
| Zinc           | 27.5 mg |
| Manganese      | 5 mg    |
| Copper         | 2 mg    |

### Pharmacology

Ocufree capsules are specifically designed for providing antioxidant back up for the eyes. The eye is the most vulnerable organ for free radical damage as almost all the surrounding factors such as sunlight, dust, infectious organisms could cause excessive free radical generation. So much so, the existing antioxidant mechanism is not enough to counter the free radical upsurge. Such situations demand an incessant supply of antioxidants from external sources. Ocufree is one such formulation, which provides three-way support to eyes:

1. Enhancement of natural antioxidant mechanism – Superoxide dismutase [SOD], Glutathione peroxidase [GPX] and Catalase [CAT].
2. Scavenging free radicals causing tissue damage.
3. Providing ocular-specific nutrients such Lutein, Zeaxanthin to enrich the ocular tissue

### Lutein and Zeaxanthin:

These are the most important antioxidants for the macula. Zeaxanthin's role is to help protect the eye from harmful high-energy blue-wave light (u.v. radiation) in the same way sunglasses protect our eyes from sun glare. Zeaxanthin also protects the eye's vision cells and helps the eye repair itself. In fact, studies have shown that the portion of the macula with the highest concentration of Zeaxanthin is the last to degenerate. Lutein is found in the outer area of the circular macular spot. Both Lutein and Zeaxanthin are also

found in the human crystalline lens and are said to play a role in protection against age-related macular degeneration and age-related cataract formation.

#### L-Glutathione:

L-Glutathione is a powerful antioxidant to the body. Within the lens of the eye, levels of L-Glutathione significantly decrease with age and changes in glutathione levels significantly increase the vulnerability of the lens to cataract formation. High levels of glutathione afford protection for a number of lens related functions. Glutathione protects sulfur-containing proteins from oxidizing or free radical damage. Most cases of cataracts may be linked to scant supplies of glutathione within the body, and can easily be prevented with appropriate supplementation. Recent research has found that macular degeneration was correlated to low glutathione levels.

#### Vitamin A and Beta-carotene:

Vitamin A is essential in vision health, cellular differentiation and embryonic function. Ocufree also supplies natural mixed carotenoids (NMCs), which contain alpha- carotene, beta-carotene, lutein, zeaxanthin and cryptoxanthin. The NMCs act as pro-Vitamin A, which is a precursor in the body for Vit A.

#### Vitamin C:

Vitamin C is a water-soluble antioxidant that inactivates free radicals in ocular tissues. As an integral component of the body's antioxidant defense system, vitamin C also aids in the recycling of other antioxidants such as vitamin E. Also helps raise blood levels of l-glutathione.

#### Vitamin E:

Because of its antioxidant action, Vit E may help protect against cataracts and ARMD and improves visual clarity in uveitis.

#### Selenium:

Selenium is an essential mineral required for the proper function of glutathione peroxidase, an antioxidant enzyme found in the eye's lens and localized in photoreceptor and retinal pigment epithelial cells.

#### Zinc:

Zinc is an essential mineral that is selectively concentrated in the eye. It is found in the retina and choroid, ciliary body, iris, optic nerve, sclera, cornea and lens. Within these ocular structures zinc is believed to interact with vitamin A to modify photoreceptor

membranes, to help regulate the light-rhodopsin reaction, to influence nerve transmission and to serve as an antioxidant.

#### Copper:

Copper is necessary for normal development of connective tissue, nerve sheaths, skin pigment and for efficient utilization of iron.

#### Manganese:

With its antioxidant activity, manganese ions scavenge hydroxyl and superoxide radicals. Manganese is a crucial component of manganese superoxide dismutase (MnSOD), which is found in mitochondria and is the principal constituent of the mitochondrial oxidant defense system.

#### **Indications:**

Ocufree is indicated as prophylaxis in:

- Age-related Macular Degeneration,
- Diabetic Retinopathy
- Diabetic cataract
- Senile Cataract

#### **Contraindications:**

Ocufree is contraindicated to the patients who are sensitive to any of the ingredients.

#### **Pregnancy & Lactation**

**Ocufree** may be used during pregnancy and lactation with caution. None of the ingredients are harmful to fetus.

#### **Drug Interactions**

Antioxidants should not be prescribed with quinolones, as they affect absorption of quinolones.

#### **Adverse Reactions**

There are no known adverse reactions of Ocufree.

#### **Dosage & Administration**

The usual recommended dose of **Ocufree** is one capsule daily.

#### **Presentation**

Each blister strip of 10 soft gelatin capsules is available in patient information catch cover.