

In the scheme of things, eyes receive little attention during the perimenopausal and menopausal years. However as Dr. Handwerger illustrates for us there are conditions that arise during these years which significantly effect vision and quality of life.

— Beverly Vaughn, MD, Medical Coordinator
of the “Menopause and You” Program



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Dry Eye Syndrome is a common occurrence of menopause and aging. It is important to be able to understand the symptoms and treatment options for this condition. Dry Eye Syndrome, if untreated, can have serious effects on one of the most important aspects of a woman's overall health, her vision. With proper treatment most women will be able to enjoy optimal vision with little or no discomfort.

What is Dry Eye Syndrome?

Dry Eye Syndrome is caused by eyelid inflammation, lacrimal gland dysfunction, medications and possibly changes in sex hormones due to menopause or hormone replacement therapy (HRT).

The tear film is very important to maintain healthy eyes. The lacrimal gland, the goblet cells and the meibomian glands all produce a different component of the tear film. The lacrimal gland is located in the upper eyelid and is the key organ in tear production. The goblet cells are located in the conjunctiva, which is the white part of the eye. The meibomian glands are located throughout the eyelids. Tears drain through the punctum, a small hole in the upper and lower eyelid, to the nose. This is why the nose drains (runs) when someone cries.

Without an adequate tear film Dry Eye Syndrome can occur. This syndrome can cause discomfort as well as damage to the eye and loss of vision. Dry Eye Syndrome may result from one or more of the following factors: inadequate tear production, increased tear evaporation and poor quality tears. Typical symptoms of Dry Eye Syndrome include eye pain, foreign body sensation, burning, blurred vision, light sensitivity and tearing. These symptoms can occur in varying degrees. Some people may experience mild eye irritation and others can experience severe eye pain and disruption of their lives. Dry Eye Syndrome occurs more commonly in women, especially post-menopausal women.

Diagnosis

Dry Eye Syndrome is diagnosed by clinical history and physical examination of the eyes and eyelids. A slit lamp examination is performed. A slit lamp is a microscope that allows the ophthalmologist to look in detail at the eye. For patients with Dry Eye Syndrome the slit lamp examination may show a tear lake that appears to be less than normal or tears that may evaporate more rapidly than normal. The cornea or the conjunctiva may “stain” with fluorescein dye or Rose Bengal dye. Also, a Schirmer's test can be performed by placing diagnostic paper strips in the corner of the eyelid for five minutes to measure the amount of tears produced. Clinical findings, in combination with symptoms of burning, stinging, grittiness, light sensitivity or eye pain, confirm the diagnosis. Patients may notice increased tearing which may seem counterintuitive to someone experiencing Dry Eye Syndrome. A reflex pathway occurs in which the eye reacts to dryness to create a high volume of low quality tears.

This is intended as an information resource providing guidelines for women. As always, check with your own healthcare practitioner with your specific concerns and questions.

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Treatment Options

The cause and severity of Dry Eye Syndrome determines the basis for treatment. There are several causes of Dry Eye Syndrome:

- Inadequate production of tears
- Irritating substances contained in the tear film
- Rapid evaporation of tears
- Inflammation of the lacrimal gland

If the tear production is inadequate or if the tear film contains irritating substances, artificial tears may be used to increase the lubrication of the eye. These will help protect the eye and relieve discomfort. Also, a prescription medication called Restasis® may increase the quantity and quality of tears produced. Restasis® is an ophthalmic emulsion which contains cyclosporine in a very low concentration.

If the tears evaporate too quickly, the oil component of the tears may need to be increased. This can be accomplished by using warm compresses and medications to help the oil glands in the eyelid release their oily secretions into the tear film. Artificial tears may be helpful as well.

The lacrimal gland is the key organ in tear production. Dry Eye Syndrome can result from inflammation in the lacrimal gland. This occurs in peri- and post-menopausal women, in Sjogren’s disease and from aging. Restasis® targets the inflammation in the lacrimal gland directly to increase tear production and improve tear quality. This medication may also improve the tear component made by the goblet cells in the conjunctiva. Restasis® is particularly beneficial in the treatment of dry eye in post-menopausal women and in the treatment of Sjogren’s Syndrome.

Tears drain through the punctum through the lacrimal system to the nose. Sometimes placing a small plug in the punctum can relieve the symptoms of Dry Eye Syndrome. This technique is similar to placing a stopper in the bathtub. With a plug in place the tears will stay in the eye longer and protect the eye with more lubrication. This is an office procedure, which only takes a few minutes and is relatively painless. Punctal plugs are microscopic and are barely visible to the eye.

Effect of Hormones

Dry Eye Syndrome occurs more frequently in post-menopausal women. The levels of certain sex hormones, such as prolactin, testosterone and estradiol, may affect the tear production. Androgen deficiency may be a factor in the cause of evaporative Dry Eye Syndrome in women. Therefore, the effect of hormone replacement therapy (HRT) has been studied. Several studies have shown that HRT may alleviate postmenopausal dry eye by increasing the density of goblet cells and tear film secretion. Subsequently, the Women’s Health study of 25,665 postmenopausal women provided information about the use of HRT and Dry Eye Syndrome. This study revealed that women who use HRT, particularly estrogen alone, are at an increased risk of Dry Eye Syndrome. Therefore, the relationship between sex hormones and Dry Eye Syndrome is unclear.

Preserving Eye Health

Recognizing the signs and symptoms of Dry Eye Syndrome is an important step in maintaining good vision. Early diagnosis and proper treatment of Dry Eye Syndrome by an ophthalmologist can help women achieve optimal eye health and improve their quality of life.

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