



# THE LITTLE GUIDE TO **DRY EYES**

*... and what you can do to make it better*

Written by Optometrists from  
[www.dryeyesclinic.com.au](http://www.dryeyesclinic.com.au)

# Hi there!

Thank you for downloading our Little Guide to Dry Eyes.

As optometrists we get it, dry eyes suck. It can make your day miserable and it can be very annoying trying to get through a busy day with gritty and irritated eyes. Your eyes might look red as well, which for the ladies, doesn't match with any eye shadow or mascara!

Just kidding. Dry eyes is a serious problem. It can sometimes be a symptom of a more serious systemic condition and here is the thing you need to know--dry eye doesn't get better on its own. It's an inflammatory condition and it usually gets worse.

The best time to manage dry eyes is during the early stages, when it doesn't feel so bad. It is much harder to manage the symptoms when it becomes moderate to severe. Did you know that one of the most common Google searches is "dry eyes are killing me"? And no wonder, the symptoms can be horrible.

So our optometrists had put together this little guide to help you understand the options available for dry eye sufferers. Many treatments are simple to implement and maintain--the key here is consistency and finding the right combination for your unique eyes.

**We are here to help.**



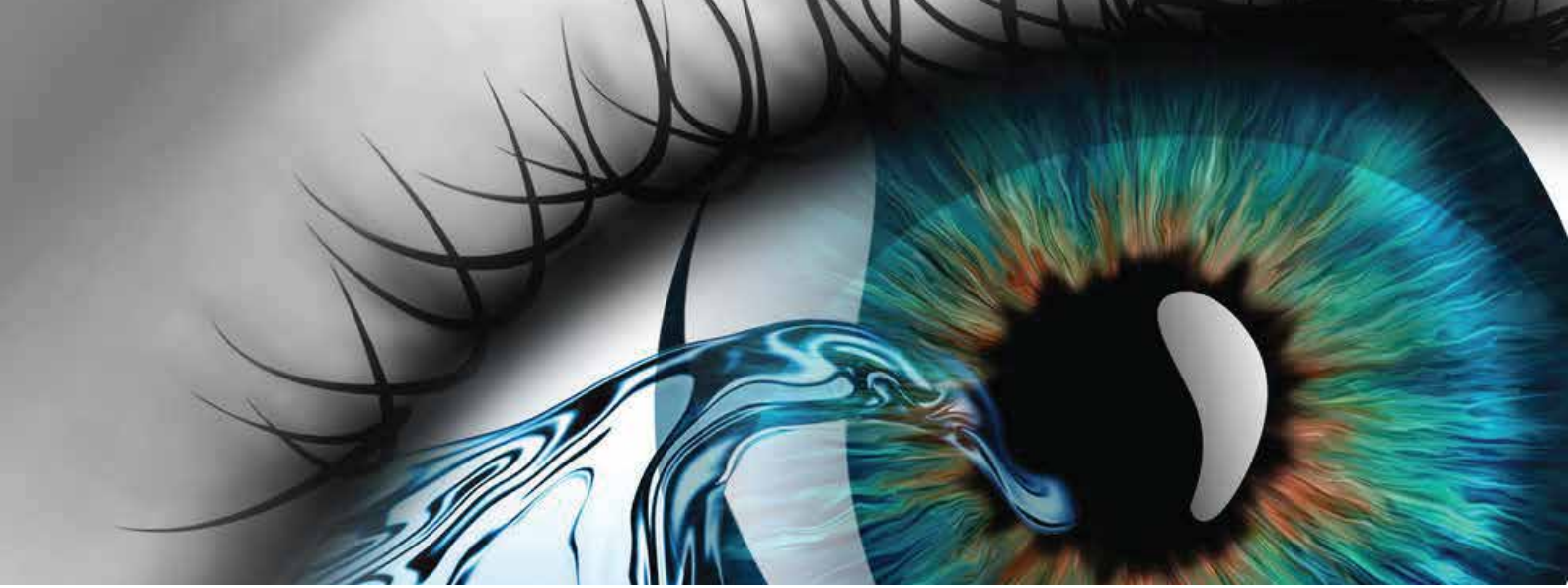
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# WHAT'S INSIDE

<b>Section 1 – Understanding Dry Eyes</b>	<b>1</b>
The difference between normal and dry eyes Everyday causes of dry eye	
<b>Section 2 – Do I have dry eyes?</b>	<b>4</b>
Signs and symptoms of dry eyes How to <i>definitively</i> know it's dry eyes Why should I treat dry eyes?	
<b>Section 3 – Classifying Dry Eyes</b>	<b>7</b>
Meibomian Gland Dysfunction (MGD) Aqueous Deficient Dry Eye (ADDE)	
<b>Section 4 – Blepharitis and Other Associated Diseases</b>	<b>9</b>
Staphylococcal Blepharitis Demodex Blepharitis Ocular Rosacea Sjogren's Disease	
<b>Section 5 - Little Environment Changes Matter</b>	<b>13</b>
<b>Section 6 - Let the Treatment Begin</b>	<b>14</b>
Aims of treatment What to expect Types of treatments available What you can do at home What your optometrist may recommend	
<b>Section 7 – So What Do I Do Now?</b>	<b>23</b>
Our recommended plan of action	
<b>How-To Instructions</b>	<b>24</b>
How to instill eye drops How to do warm compress How to do lid massage How to do a lid scrub	
<b>Screening for Dry Eyes</b>	<b>27</b>
Ocular Surface Disease Index	
<b>References</b>	<b>29</b>

# UNDERSTANDING DRY EYES

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## What are normal eyes and what are dry eyes?

Dry eye is a common condition, affecting up to 1 in 3 people! Dry eyes can cause a range of symptoms and signs which can interfere with our daily life.

When you have dry eyes, it means there is disruption and instability of your tear film, the thin layer of liquid which covers the front of the eye. The tear film keeps the eyes comfortable and contributes to clear vision.

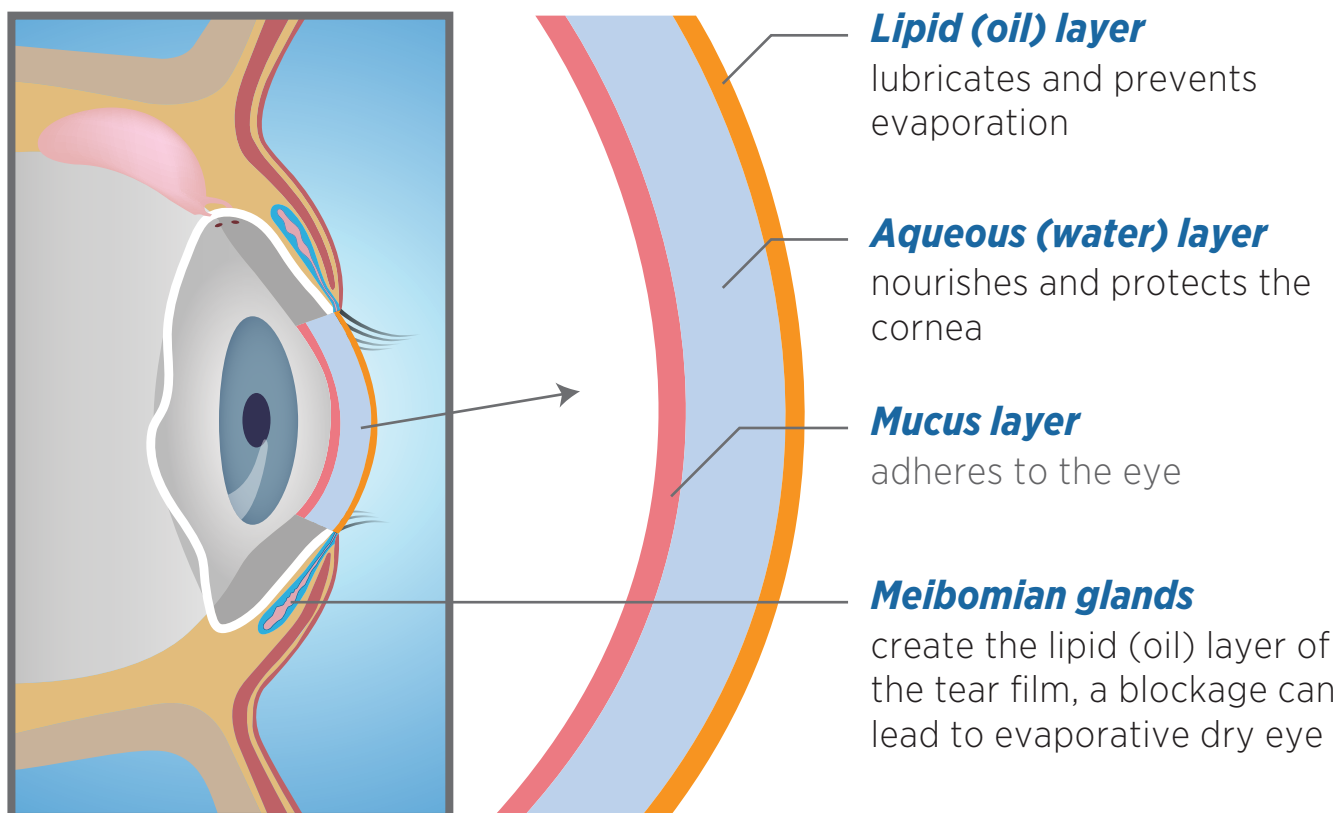
Our tears normally consist of three layers (from top to bottom):

The **lipid layer** is the top-most layer of the tear film and is made up of fats and oils. These oils are produced by the Meibomian glands which are specialised oil glands located at the edge of our eyelids. The most important function of this layer is to prevent evaporation of the aqueous layer below. If these glands do not function properly, this can cause evaporative dry eye, where the underlying tear layers evaporate faster than normal.

The **aqueous layer** is the middle layer of the tear film and is made up of a watery mixture of proteins, mucus and electrolytes. It is produced by the lacrimal gland, which is located underneath the eyelid. The aqueous layer lubricates the eye, providing a smooth surface for clear vision and also protects against bacteria. If the lacrimal gland does not produce enough aqueous, this can cause aqueous deficient dry eye.

The **mucous layer** is the bottom layer of the tear film and is made up of mucin and proteins. It is produced by the cells in the conjunctiva (or the clear membrane on top of the white part of the eye). The mucus acts as a sticky layer to hold the tear layers to the underlying cornea.

## 3 LAYERS OF THE TEAR FILM





# WHAT ARE EVERYDAY CAUSES OF DRY EYES?

Dry eyes are caused by a number of factors, either environmental or personal. The most common causes include:



## Environment

External factors like outdoor work, airconditioning, windy weather and dust.<sup>1</sup>



## Electronic use

Some medications, like acne medications, can affect the production of the different layers of the tear film.<sup>9</sup>



## Extended periods of reading<sup>2,3</sup>



## Age-related eyelid change

Our eyelids support the tear film by ensuring it remains on the eye.



## Medications

Some medications, like acne medications, can affect the production of the different layers of the tear film.<sup>9</sup>



## Auto-immune conditions

Examples of this are Rheumatoid arthritis, rosace and Sjogrens syndrome.



## Contact lens wear & eye surgery<sup>4-7,8</sup>



## Blepharitis

This means the eyelids are inflamed and irritated.<sup>10</sup>

# DO I HAVE DRY EYES?

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## What are normal eyes and what are dry eyes?

Dry eyes can cause a variety of symptoms, from mild discomfort to severe eye irritation.

The most common symptoms include<sup>11</sup>:

- ✓ Stinging
- ✓ Grittiness & scratching sensation
- ✓ Watery eyes
- ✓ Itchy eyes
- ✓ Blurry vision (may be constant or intermittent)
- ✓ Redness of eyes and eyelids
- ✓ Tired and heavy eyes
- ✓ Mucus-like discharge in the eyes

*If my eyes are dry—why do they water?*

This is a common question asked by patients. Wateriness and dryness are opposites right? Your eyes MAY water as the eye surface contains receptors which can sense when there is not enough lubrication. This will cause REFLEX tearing from the lacrimal gland, to lubricate the eye surface.



## How do I *definitively* know it's dry eyes?

Go to your local optometrist. Optometrists can assess the health of the eyes and grade the severity of dryness based on your symptoms and the signs observed. They will ask specific questions about your symptoms to accurately diagnose the type of dry eye and develop a personalised plan for you.

The tests they may perform in addition to a comprehensive eye test may include:

- ✓ Providing a questionnaire for dry eye symptoms and interpretation based on the results
- ✓ Assessment of tear quality and stability
- ✓ Measurement of tear volume
- ✓ Assessment of Meibomian glands to determine the severity of the blockages
- ✓ Lipid layer assessment
- ✓ Checking for any damage to the cornea (in cases of severe dry eyes)
- ✓ Checking for crustiness on the eyelashes





## Why should I treat dry eyes?

You might be tempted to shrug off your dry eyes. After all, the name “dry eye” doesn’t sound too sight threatening compared to glaucoma or diabetic retinopathy. You might even hope that your dry eye will resolve on their own. Very unlikely.

At its early and mild stages, dry eyes can cause no symptoms or problems. However, as dry eyes get worse, it can result to:

- ✓ Difficulty focussing when working
- ✓ Mild irritation and discomfort to the eye surface (*reversible*)
- ✓ Unstable vision (*when good vision is required, eg. driving, sports*)

Severe to extreme dry eyes can cause complications such as <sup>14</sup>:

- ✓ Corneal scarring (from chronic irritation/damage)
- ✓ Constant irritation and discomfort
- ✓ Inability to wear contact lenses
- ✓ Constant blurred vision



*“DRY EYE IS ONE OF THE MOST UNDERDIAGNOSED OCULAR DISEASES. ITS EFFECTS ON EYE COMFORT AND CLARITY OF VISION SIGNIFICANTLY AFFECTS QUALITY OF LIFE.”*

# CLASSIFYING DRY EYES

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## What medical conditions can cause dry eye?

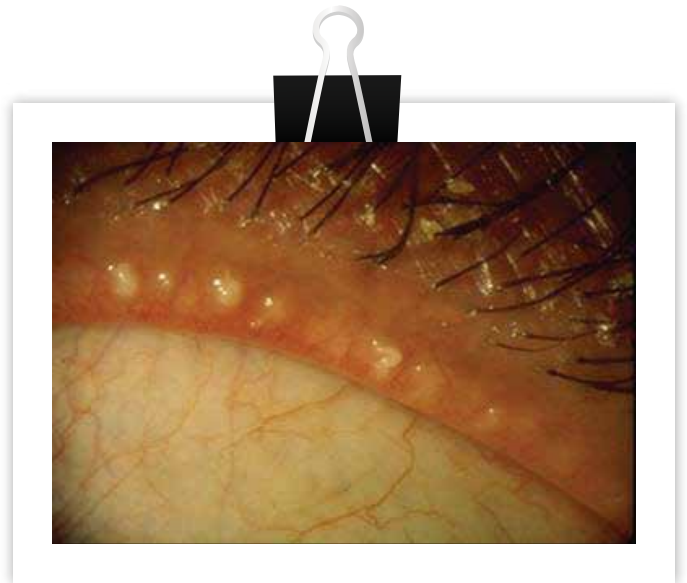
There are many underlying conditions which can cause dry eyes. These classifications include the following:

### Meibomian Gland Dysfunction (MGD)

This condition is due to abnormal production of oils by the Meibomian glands in the eyelids. In clinic-based studies and likewise using different definitions, MGD prevalence estimates range from 32% to 78%.

The main sign that the optometrist will see under the microscope when looking at the eye is oil 'capping' of the gland openings at the eyelid margins. These oil caps essentially block the glands, preventing the oil from being excreted and stabilising the tear film. It is thought that bacterial toxins cause this disruption in the oil glands.

This is important to know as it explains how our treatment of MGD-related dry eye works.

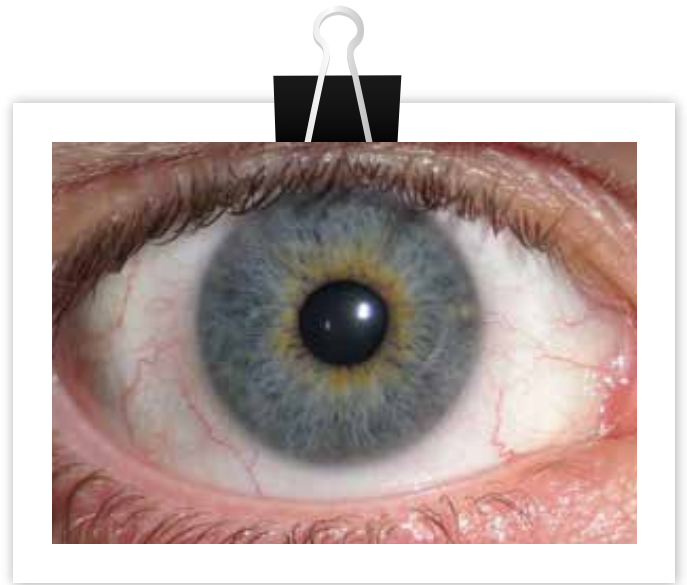


### **Aqueous Deficient Dry Eye (ADDE)**

This condition is due to the lacrimal gland not producing enough of the aqueous layer in the tear film. Purely aqueous deficient dry eye has 14.4% prevalence in dry eye patients and aqueous deficient dry eye with Meibomian gland dysfunction has a prevalence of 36% in dry eye patients.

A sign of this can be a thinner tear 'reservoir', which is the lake of tears held onto the eye by the lower eyelids. This, as well as other tests specific to aqueous deficiency, is measured clinically by the optometrist.

One major cause of ADDE is Sjogren's syndrome, which is an autoimmune disease that targets the lacrimal gland. Other causes of aqueous deficiency include age, contact lens wear, diabetes and damage to the blinking reflex of the eye.



# BLEPHARITIS AND OTHER ASSOCIATED DISEASES


Blepharitis is a common condition where the eyelid margins become inflamed (red). Symptoms could include red, irritated and itchy eyelids.

Blepharitis occurs in two forms. **Anterior blepharitis** affects the outside edge of the eyelid, where the eyelashes are attached. **Posterior blepharitis** affects the inner edge of the eyelid that touches the eyeball.

The two most common causes of anterior blepharitis are overgrowth of normal Staphylococcal skin bacteria and seborrhoeic dermatitis (scalp dandruff).

## Staphylococcal Blepharitis

Staphylococcal blepharitis is a type of blepharitis caused by Staphylococcus (or staph) bacteria. Certain types of staph bacteria are normally found on our body without causing harm. An overgrowth of some types of harmful bacteria can affect the eyelids, causing them to become sore, red and inflamed.

- ✓ This type of blepharitis is characterised by soreness and puffiness of the eyelids and may develop crust and flakes around the eyelid margin
  - ✓ More common in warmer climates
  - ✓ May occur more frequently in women
  - ✓ Can complicate into a chalazion (a cyst that forms on the inside of the eyelid), stye (boil-like lump usually filled with pus) or conjunctivitis
  - ✓ Severe, recurring staph blepharitis can infect and potentially damage the cornea
- 
- ✓ Flare-ups can be prevented with good eyelid hygiene
  - ✓ Treatment may include moistening the residue on your closed eyelids with warm compresses and massaging them gently and cleaning the eyelashes with a foam cleanser



## Demodex Blepharitis

Demodex is a mite that lives in the lash follicles and Meibomian glands of our eyes. An overgrowth of Demodex can produce chronic anterior and posterior blepharitis. A collar of debris seen at the base of the eyelashes is suggestive of Demodex. Demodex is found in 25% of 20-year-olds, 30% of 50-year-olds, 80% of 60-year-olds and 100% in patients older than 90 years.



- ✓ *Demodex folliculorum* tends to be clustered to the roots of the lashes, while *Demodex brevis* tends to present individually in the sebaceous and Meibomian glands
- ✓ This type of blepharitis is characterised by eyelashes with cylindrical dandruff
- ✓ Prevalence of Demodex blepharitis increases as a person gets older
- ✓ Demodex can be found throughout the facial skin like in the nose, cheeks and foreheads as they feed on oil secreted by the sebaceous glands
- ✓ Treatment may include lid cleaning regimen using tea tree oil or Blephadex to clean the lashes and kill the mites by covering the skin around the lids with tea tree oil cream to prevent reinfestation

## Ocular Rosacea

Rosacea is a chronic skin problem, characterised by facial redness, red bumps and smaller visible blood vessels. One in 10 people have facial skin rosacea, and 80% with facial skin rosacea have Meibomian gland dysfunction. Research also shows a significant 60 percent of rosacea patients have ocular rosacea which leads to inflammation of the eyelids and ocular surface. This can result in various types of blepharitis, Meibomian gland dysfunction and dry eye.



- ✓ The exact cause of rosacea is unknown, but may be associated with inherited tendencies and environmental factors (like too much sun exposure)
- ✓ More prevalent in women, but men are more likely to have severe forms of the disease
- ✓ Symptoms of ocular rosacea may not be noticeable if it accompanies skin rosacea, especially if eye discomfort and redness are relatively mild
- ✓ Aside from dry eyes and blepharitis, a common symptom includes bloodshot eyes
- ✓ Treatment is directed towards symptomatic control and disease prevention rather than treating the disease and may include lid hygiene, artificial tears, and anti-inflammatory medications

## Sjogren's Disease

Sjogren's disease (or Sjogren's syndrome) is an autoimmune disease that generally affects women more than men over the age of 40. Sjogren's syndrome has a prevalence ranging between 0.5% and 3% of a given population. What happens in this disease is that the immune system targets the glands that create liquid and moisture. The resulting symptoms are normally dry mouth and dry eyes.



- ✓ Sjogren's syndrome can occur alone or with other autoimmune diseases such as rheumatoid arthritis, lupus, celiac disease or scleroderma
- ✓ Classic symptoms include dry eyes, dry mouth, fatigue, and joint pain
- ✓ Other symptoms include contact lens discomfort, dry sinuses, difficulty swallowing, muscle pain without accompanying swelling and vaginal dryness
- ✓ Your optometrist will perform a series of tests including measuring the amount of tears and how quickly they evaporate
- ✓ Treatment for dry eye from Sjogren's syndrome will require ongoing treatment with artificial tears, ointments or other remedies

It is important to see an optometrist to be diagnosed with the correct type of dry eye and any other associated conditions, as this will help determine the best treatment for your eyes.

# LITTLE ENVIRONMENTAL CHANGES MATTER

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## 1. Drink lots of water.

Mild dehydration often makes dry eye problems worse. Simply drinking more water sometimes reduces the symptoms of dry eye syndrome.



## 2. Reduce your coffee intake.

Coffee and tea are diuretics, which means they make you lose more water.



## 3. Be aware of any medication that may be contributing to your dry eyes.

Check the patient information leaflet of meds you're taking if dry eyes is a side effect.



## 4. Blink more often during the day.

Blinking helps spread tears over your eyes.



## 5. Take frequent breaks during computer use.

Help re-wet your dry eyes during computer use by doing this exercise: Every 20 minutes, blink 10 times by closing your eyes as if falling asleep (very slowly).



## 6. Don't smoke.

Chemicals from tobacco can break down your tear film, not to mention smoking is linked to many more serious eye diseases like glaucoma, cataracts and macular degeneration.



## 7. Remove eye make-up thoroughly.

Make-up particles can move into the eye and make eye irritation and dry eyes worse.



## 8. Wear quality sunglasses when outdoors during the day.

People with dry eyes generally experience more sensitivity to light than those with normal eyes. Sunglasses can also protect the eyes from wind, pollen, etc.



# LET THE TREATMENT BEGIN

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## What to aim for when treating dry eyes?

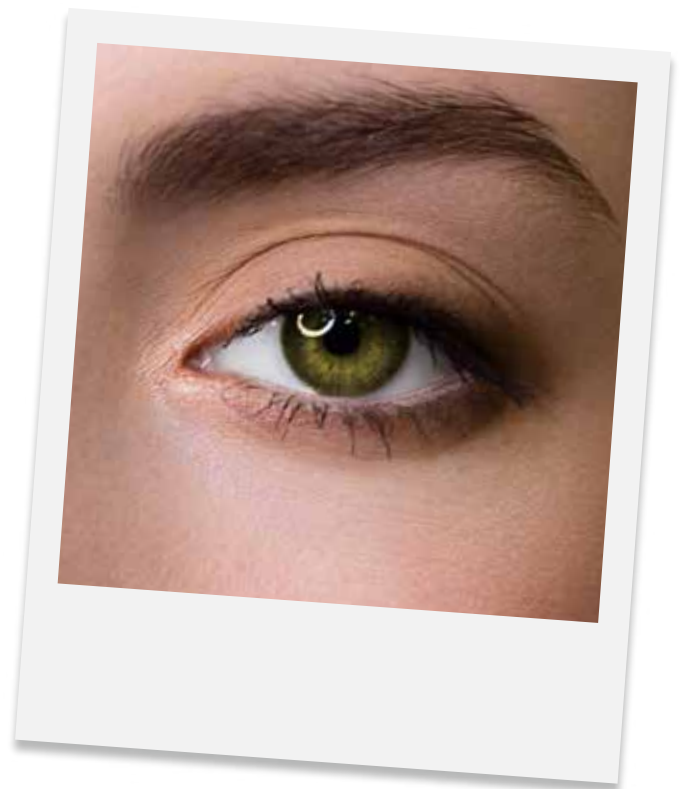
Treatment of dry eyes aims to:

- ✓ Improve comfort of eyes (*by reducing symptoms such as irritation, grittiness and stinging*)
- ✓ Provide clearer and more consistent vision
- ✓ Improve the health of the eyelids, glands and eye lashes
- ✓ Reduce eye fatigue when reading or using electronic devices
- ✓ Reduce redness of eyes and eyelids

## What to expect when treating dry eyes?

It is important to have realistic expectations when treating any type of dry eye. While mild dry eye can be managed relatively easily, moderate to severe dry eye often takes time to improve. Dry eye treatment is typically multi-layered and aims to relieve symptoms and treat any underlying conditions.

In some cases of dry eye, a definite cure is not possible. We therefore aim to reduce or remove symptoms while avoiding serious complications of dry eyes from occurring. This treatment may need to be consistently done over long periods of time and may also need to be maintained throughout your life.



# TYPES OF DRY EYE TREATMENT

## WHAT YOU CAN DO AT HOME

### Eye Drops<sup>15</sup>

Lubricating eye drops act to supplement and stabilise the tear film— which provides relief from dry eye symptoms.

### Are all lubricating eye drops the same?

Different types of dry eyes may require different eye drops to supplement either the lipid or aqueous layer of the tear film.

### Why choose preservative-free?

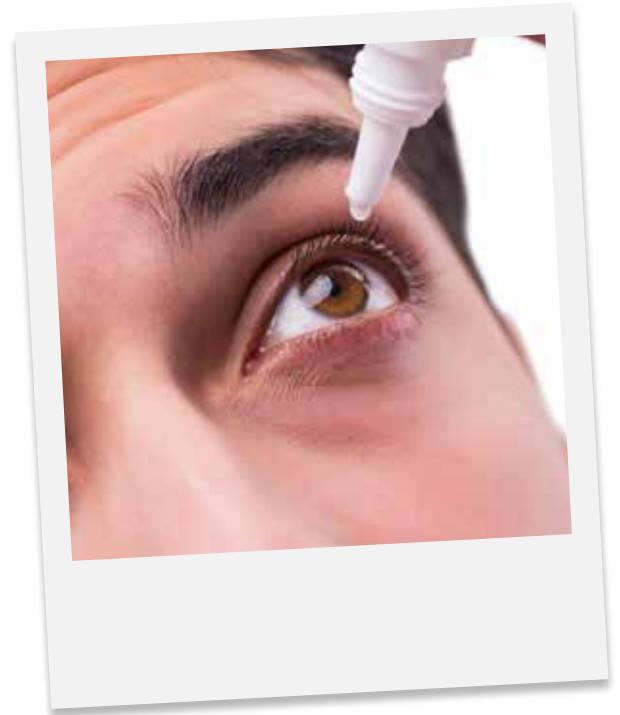
Most eye drops that come in a bottle contain preservatives which kill bacteria and other organisms and prevent contamination of the bottle. This is great, however it has been shown that preservatives can be toxic and cause damage to the corneal cells in the eye.

We generally recommend preservative-free eye drops, which come in both individual vials and bottled form. Using these drops allow you to be sure that the eye drops are not causing any harm to the eye or making your dry eyes worse.

### What happens when you use the incorrect type of eye drop?

It is important to be recommended the correct type of eye drop as using an incorrect drops may flush out the stabilising layers of the tear film and not be as effective as possible.

This treatment is effective for all types of dry eyes.



Some quality eyedrops for dry eyes : Oculocin Propo, Hyloforte, Opti-mel and Systane.

### Hot Compresses and Lid Massage<sup>16</sup>

Most dry eyes is due to excess evaporation of the tears. This means that the oily layer of the tear film is not thick enough to prevent the tears from evaporating. The most common cause of this is Meibomian gland dysfunction, where the oil glands in the eyelids have become thick, waxy and blocked.

The treatment for this is to heat the eyelids (with the eyes closed) using a warm compress on the lids for a minimum of 5 minutes. Extensive research has shown that this softens the oils inside the blocked glands, allowing the glands to flow much more easily. We recommend using our warm compress bead masks—otherwise a heated gel pack or wheat pack is also effective.

Once the lids have been warmed sufficiently, use your index finger in a rolling motion towards the eyelashes to ‘massage’ the eyelids (top to bottom for the upper eyelid and vice versa for the lower eyelid). This helps push the oil from the base of the gland all the way through to the gland opening, therefore unblocking the gland and allowing the oils to stabilise the tears.

This treatment is effective for Meibomian gland dysfunction and blepharitis.



Some quality hot compresses for dry eyes : Medibeads.

## Eyelid Scrubs <sup>17</sup>

Eyelid hygiene using lid cleaning products is important in dry eye sufferers—especially those with Meibomian gland dysfunction and blepharitis. Bacteria, toxins and dirt build up on the eyelid margins and eyelashes and cause itching, redness and flaky skin.

Tea tree oil has been found to remove dirt and kill excess bacteria on the eyelids. To see significant improvement, it is recommended to perform the eyelid scrubs twice a day for recommended to perform the eyelid scrubs twice a day for several weeks, in conjunction with warm compresses and eye drops. This treatment is effective for blepharitis and Demodex blepharitis.

## Nutritional Supplements <sup>18,19</sup>

Certain vitamins and nutrients have been shown to improve the symptoms of dry eyes by allowing the glands to naturally create better quality tears. Studies have shown that omega-3 supplements significantly improve dry eye symptoms. These supplements are most beneficial in patients with Meibomian gland dysfunction and blepharitis-related dry eyes.

Not all omega-3 supplements are equal. We recommend Lacritec or a similar formulation, which combine:

- omega-3 fatty acids
- borage oil
- flaxseed oil.

Best results are typically experienced within 4-6 weeks of continued use. Supplements have been shown to potentially reduce the need for eye drop use by approximately 50%.

NOTE:

IF YOU ARE TAKING WARFARIN/ASPIRIN OR OTHER BLOOD THINNERS PLEASE CONSULT WITH YOUR GP BEFORE TAKING ANY FORM OF SUPPLEMENTATION.



Eyeeco Tea Tree Foaming Cleanser is infused with tea tree, chamomile and shea butter. Its formulation makes it comfortable for cleaning eyelids while keeping your skin deeply hydrated.



Quality nutritional supplements for dry eyes : Lacritec.



## Visual Hygiene<sup>20</sup>

Visual hygiene involves being aware of what certain behaviours, activities and environments can cause dry eyes.



### Blinking

Use of electronic devices can significantly reduce our blinking rate by up to 60%. With a lower blink rate, the tear film is not replenished and our eyes get dry.

We recommend adopting a strategy where every 30 minutes you stand up and look to the distance while blinking your eyes. While this may seem tedious, the long term effects of this include clearer vision, less dryness and less tired eyes while using the computer.



### Environment

Being in an office environment with constant aircon blowing in your face will contribute to dry eyes. Similarly, being outside in a dusty and windy environment will also cause dry eyes.

We recommend you adjust the environment to avoid or minimise factors which may cause dry eyes. For example, turning down the aircon or pointing it away from yourself, or wearing safety glasses or sunglasses to prevent dirt and wind from entering your eyes.



Adjusting the environment to avoid or minimise factors which may cause dry eyes.

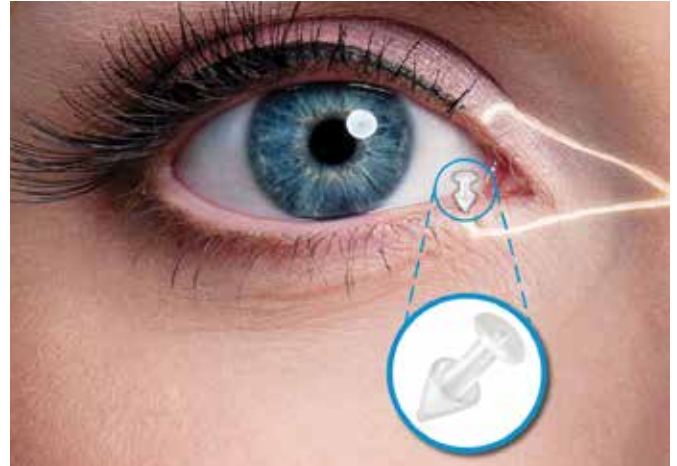
This treatment is effective for all types of dry eyes.

## WHAT YOUR OPTOMETRIST MAY RECOMMEND

### Punctal Plugs <sup>21</sup>

The puncta are the openings of the small tear ducts located at the inner corner of the upper and lower eyelids. They act to drain away the tears from the surface of the eyes.

Punctal plugs are tiny, biocompatible devices inserted into the tear ducts to block drainage of the tears. This increases the volume of tears and especially helps with aqueous deficient dry eyes. These devices are smaller than a grain of rice. They come as semi-permanent (silicone) and dissolvable (collagen).



This treatment is effective for aqueous deficient dry eye.

### Corticosteroids <sup>22</sup>

These drops are anti-inflammatory eye drops, which help relieve the symptoms of dry eye. As dry eyes are often caused by inflammatory conditions (such as blepharitis), steroid drops can help treat the underlying condition.

Our optometrist may prescribe a short course of steroid drops to reduce inflammation so that the dry eyes are more easily managed.



This treatment is effective for Meibomian gland dysfunction, blepharitis, inflammatory dry eye and aqueous deficient dry eye

**Oral Medication** <sup>23</sup>

Oral medication such as doxycycline or azithromycin has been shown to help with Ocular Rosacea and Meibomian gland dysfunction. It is an antibiotic commonly used to treat acne, but also has a beneficial side effect of improving Meibomian gland secretions.

The dosage of doxycycline is quite low and a course will typically run a few weeks to months. If the first stages of our recommended treatments do not completely solve your dry eyes then our optometrists can liaise with your GP to organise this treatment.



This treatment is effective for Ocular Rosacea, Meibomian gland dysfunction and blepharitis.

**Blephasteam** <sup>24</sup>

Blephasteam is a clinically approved in-office treatment for Meibomian gland dysfunction. Blephasteam uses moisture and heat to provide a warm chamber within eye goggles to reach the required temperature that research has shown will soften the oils within the glands. The combined heat and moisture will increase blood flow and melt the thick oil blocking the glands to help relieve dry eyes. During each session, the oils are manually expressed by the optometrist improving oil flow and tear quality.



The Blephasteam sessions are only approximately 30 minutes long. For the best result we recommend 3-4 sessions and then repeating them later on if necessary.

This treatment is effective for Meibomian gland dysfunction and blepharitis.

**BlephEx**<sup>17</sup>

Blephex is an in-office procedure similar to the lid scrubs we recommend. The difference is that it provides a more thorough and deeper clean of the eyelids and lashes. This makes it much easier to maintain lid cleanliness at home if the eyelids are already clean.

The procedure involves the optometrist using a rotating cleaning pad to scrub away debris and bacteria from the eyelid margins. This helps to clear the top of the Meibomian glands in the eyelids, which may allow the oil layer of the tears to be replenished easier.



This treatment is effective for Meibomian gland dysfunction, blepharitis and Demodex blepharitis.

### Intense Pulsed Light Treatment (IPL)

Intense Pulsed Light system is treatment for MGD. An IPL device generates a polychromatic pulsed light. The energy, spectrum and time period are precisely set to stimulate the nerves of the Meibomian glands in order for them to return to their normal function and to create a healthier and thicker oil layer for the tears. The heat generated by the flash of IPL can warm and unblock the glands.



### What does IPL involve?

The treatment is painless and no needles or injections are required. Four gentle applications of intense pulsed light are applied to each lower eyelid and to the temple side of your eye. You will feel a “warmth” on the cheeks and lids. Your eyes will be covered with a pair of goggles to protect them from the bright light. Afterwards, a drop of local anaesthetic will be instilled into your eyes. This will allow a firm squeezing of your eyelids to express some Meibomian gland fluid out of your Meibomian glands. IPL treatment and Meibomian gland expression takes approximately 30 minutes to treat both eyes.



This treatment is effective for Ocular Rosacea and Meibomian gland dysfunction.

**IMPORTANT:** Please do not wear eye or face make-up or sunscreen to your appointment when having IPL but you may put it on after the treatment.

### Is everyone with Meibomian Gland Dysfunction suitable for IPL?

It is important that we make sure the IPL treatment will be both safe and suitable for you and your eyes. For this reason we will need to carry out an initial assessment to check if you are a good fit to undergo this treatment.



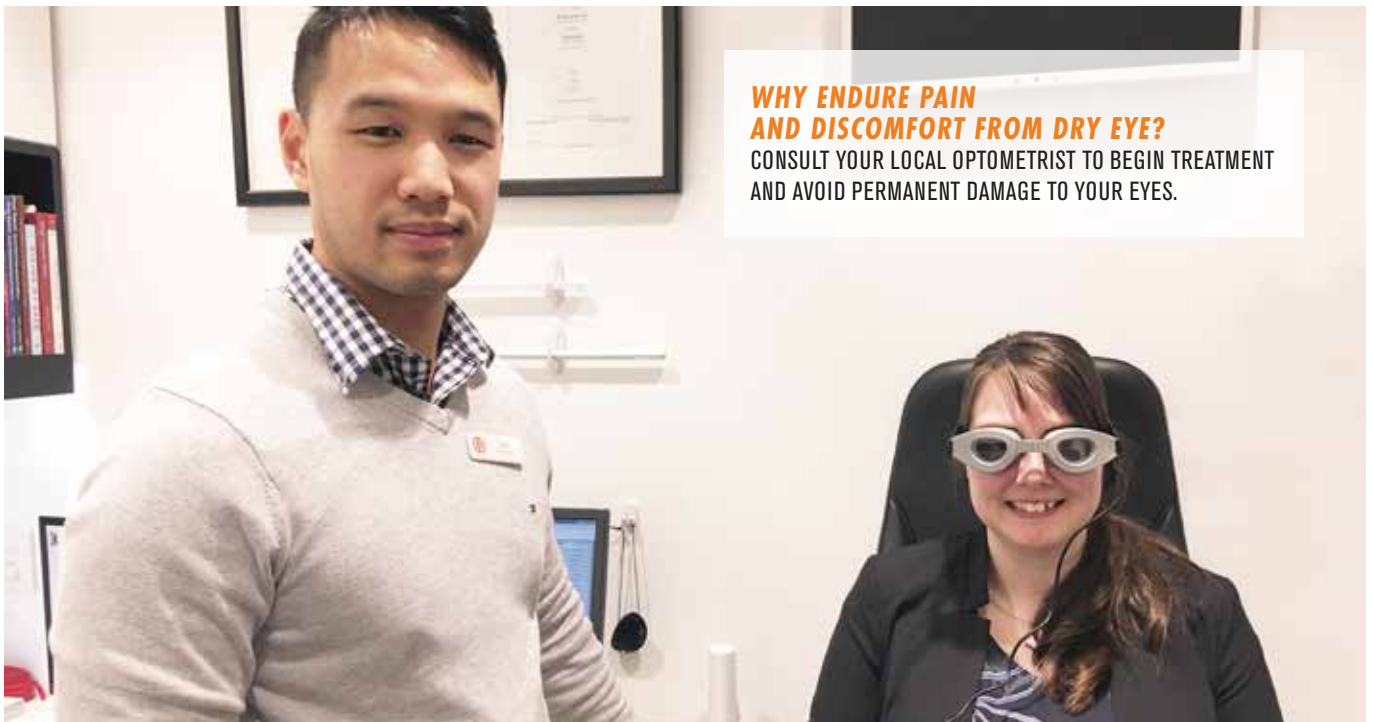
## SO WHAT DO I DO NOW?

If you experience any of the symptoms mentioned in section 2, or have any conditions or medications which you think may be causing your eyes to be dry—then visit one of our Eyecare Plus practices.

Our optometrists will be able to perform a thorough check of the eyes to assess you for dry eyes. We will be able to provide you a detailed and personalised treatment plan to best manage the health and comfort of your eyes.

If there is a need, our optometrists can refer you to an ophthalmologist for options such as oral secretagogues, autologous serum eyedrops, amniotic membrane grafts, surgical punctal occlusion, or stronger / longer prescription drugs.

Our optometrists can work closely with your ophthalmologist / eye specialist to ensure the best management for your dry eyes.



**WEBSITE**

[www.dryeyesclinic.com.au](http://www.dryeyesclinic.com.au)



**FACEBOOK**

[@DryEyesClinicAU](https://www.facebook.com/DryEyesClinicAU)

## HOW TO INSTILL EYE DROPS

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### What you will need to begin:

- Eye drops

### Instruction steps:

1. Wash and dry your hands. Make sure the tip of the bottle or vial doesn't touch your eye or any other surface.
2. Tilt back your head and look up. Gently pull down the lower eyelid with your index finger, creating a pocket.
3. Using your other hand, squeeze the upturned bottle or vial to release one or two drops into the eye.

## HOW TO DO A WARM COMPRESS

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### What you will need to begin:

- A comfortable place to sit down
- A Medibeads heat pack (alternatively a facial towel can be used, but is not as effective).
- 10 minutes

### Instruction steps:

1. If you have a heat pack/eye mask, heat it up in the microwave as much as possible without causing discomfort or burning your skin.
2. Sit back and place the eye mask over both your eyelids with your eyes shut.
3. After 10 minutes of heating your eyelids remove the eye mask—now your Meibomian glands have reached the temperature required to melt the oils.

## HOW TO DO A LID MASSAGE

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### Instruction steps:

1. After the warm compress, use your right index finger to massage your right eyelids and left finger for your left eyelid.
2. Massage the top eyelids in a downwards motion, starting from underneath your eyebrows, down towards the eyelashes. Repeat this motion for 15-20 seconds.
3. Massage the lower eyelids in an upwards motion, starting from the bottom of the eyelids towards the eyelashes. Repeat this motion for 15-20 seconds. You have begun the process of unblocking and improving the health of your Meibomian glands! It is important to continue this procedure to ensure that your glands do not get blocked with oils again.

**WARNING:** Lid massage ONLY after warm compresses. Your eyes may become red after performing lid massage due to the toxicity of the discharge. Your optometrist may prescribe you an antibiotic ointment to use after doing lid massage. If your eyes are very sore and remain red then return to your optometrist.

## HOW TO DO A LID SCRUB

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### What you will need to begin:

- Blephadex foam OR Blephadex or Ocusoft eyelid wipes

### Instruction steps (foam):

1. Wet your hands with water.
2. Squeeze one pump of foam onto your fingertips or onto a cotton pad.
3. Close your eyes. Using a horizontal motion, run your foamy fingers or cotton pad back and forth along the base of your eyelashes firmly to scrub and dislodge any bacteria and dirt. Do this for 15-20 seconds for each eye.
4. Wash the residue foam off your eyes with water straight after scrubbing. Take care to not get the foam in your eyes as it may cause mild irritation.

### Instruction steps (eyelid wipes):

1. Open a lid wipe pad.
2. Using one side of the pad, wipe the pad back and forth in a horizontal motion along the base of your eyelashes firmly. Do this for 15-20 seconds for each eye.
3. Wash your eyelids and hands afterwards.

## HOW TO DO FACIAL STEAMING

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Facial steaming with essential oils is very relaxing and some studies have proven it's a great preventative tool for eye infections.

### **What you will need to begin:**

- A large bowl
- Hot water with steam coming out
- A large towel
- 2 drops of tea tree oil (you can get this from the pharmacy)

### **Instruction steps:**

1. First bring about 1 litre of water to a boil and then transfer this water into a large bowl.
2. Add in the essential oils.
3. Place your head over the steam and allow the steam to reach your face, including your eyes/eyelids.
4. You can throw a large towel over your head and the bowl to prevent the steam from escaping.

# SCREENING FOR DRY EYES

The Ocular Surface Disease Index © (OSDI©) is a 12-question screening tool used by optometrists to assess for dry eye and the degree of dry eye on their patients. See how you score.

**Instructions:** Circle the number in the box that best represents each answer. Then, fill in boxes A, B, C, D and E according to the instructions beside each.

Have you experienced any of the following during the last week?	All of the time	Most of the time	Half of the time	Some of the time	None of the time
1. Eyes that are sensitive to light?	4	3	2	1	0
2. Eyes that feel gritty?	4	3	2	1	0
3. Painful or sore eyes?	4	3	2	1	0
4. Blurred vision?	4	3	2	1	0
5. Poor vision?	4	3	2	1	0

Subtotal score for answers 1 to 5

Have problems with your eyes limited you in performing any of the following during the last week?	All of the time	Most of the time	Half of the time	Some of the time	None of the time	N/A
6. Reading?	4	3	2	1	0	N/A
7. Driving at night?	4	3	2	1	0	N/A
8. Working with a computer or bank machine (ATM)?	4	3	2	1	0	N/A
9. Watching TV?	4	3	2	1	0	N/A

in Subtotal score for answers 6 to 9

Have your eyes felt uncomfortable any <sup>1</sup> of the following situations during the last week?	All of the time	Most of the time	Half of the time	Some of the time	None of the time	N/A
10. Windy conditions?	4	3	2	1	0	N/A
1. Places or areas with low humidity (very dry)?	4	3	2	1	0	N/A
12. Areas that are air conditioned?	4	3	2	1	0	N/A

Subtotal score for answers 10 to 12

Add subtotals A, B, and C to obtain D (D = sum of scores for all questions answered)

Total number of questions answered (do not include questions answered N/A)

Please turn over the questionnaire to calculate your final OSDI© score.

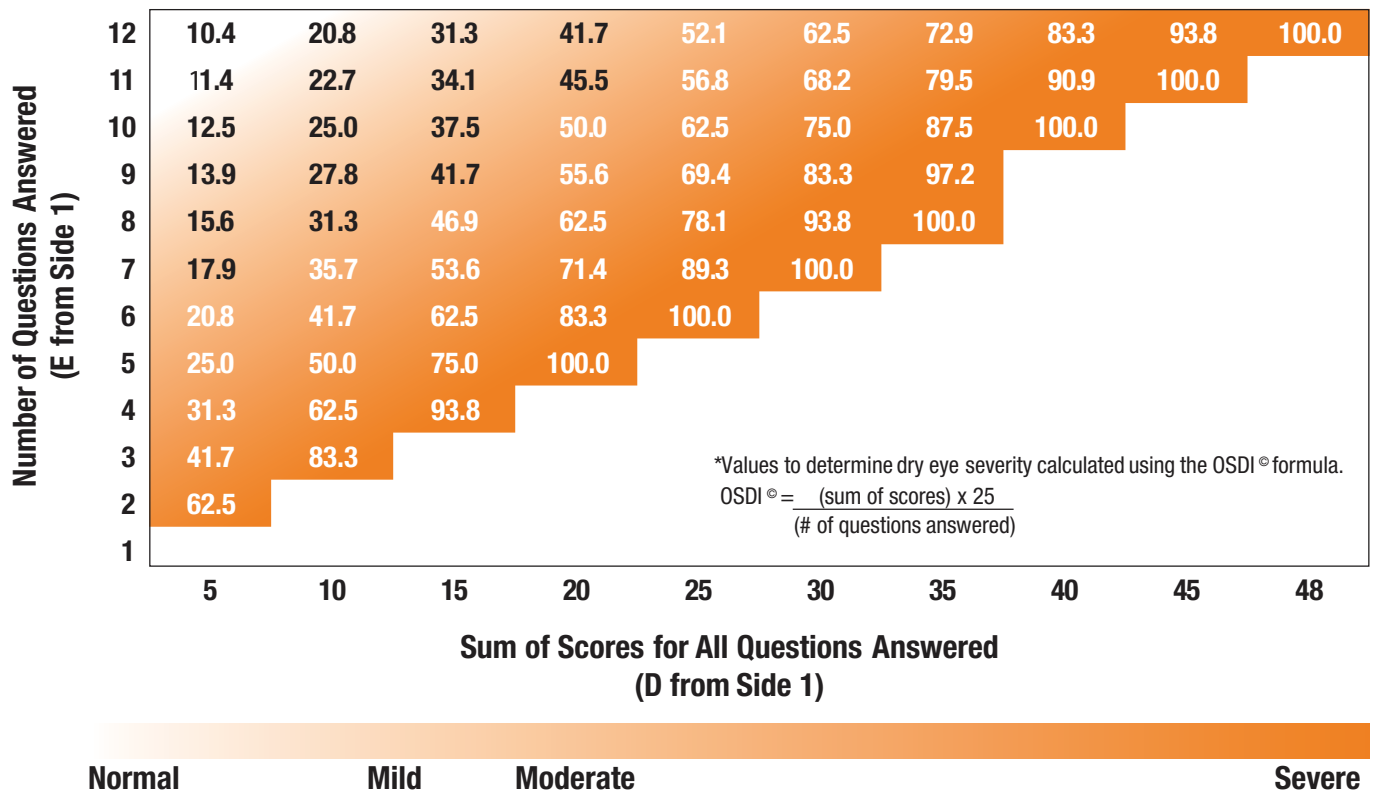


### Evaluating the OSDI® Score<sup>1</sup>

The OSDI® is assessed on a scale of 0 to 100, with higher scores representing greater disability. The index demonstrates sensitivity and specificity in distinguishing between normal subjects and patients with dry eye disease. The OSDI® is a valid and reliable instrument for measuring dry eye disease (normal, mild to moderate, and severe) and effect on vision-related function.

### Assessing Your Dry Eye Disease<sup>1,2</sup>

Use your answers D and E from side 1 to compare the sum of scores for all questions answered (D) and the number of questions answered (E) with the chart below.\* Find where your score would fall. Match the corresponding shade of red to the key below to determine whether your score indicates normal, mild, moderate, or severe dry eye disease.



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### Useful Websites for Further Studies

1. <http://www.allaboutvision.com/conditions/dryeye-syndrome.htm>
2. <http://goodvisionforlife.com.au/>
3. <http://australiandryeye.webs.com/>
4. <https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/dry-eye>
5. <https://dryeyeandmgd.com/>
6. <https://nei.nih.gov/health/dryeye/dryeye>
7. <https://www.healthline.com/health/dry-eyes-home-remedies>

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**Eyecare Kids Hillsdale** - (02) 93114600