

Vision Shaping Treatment

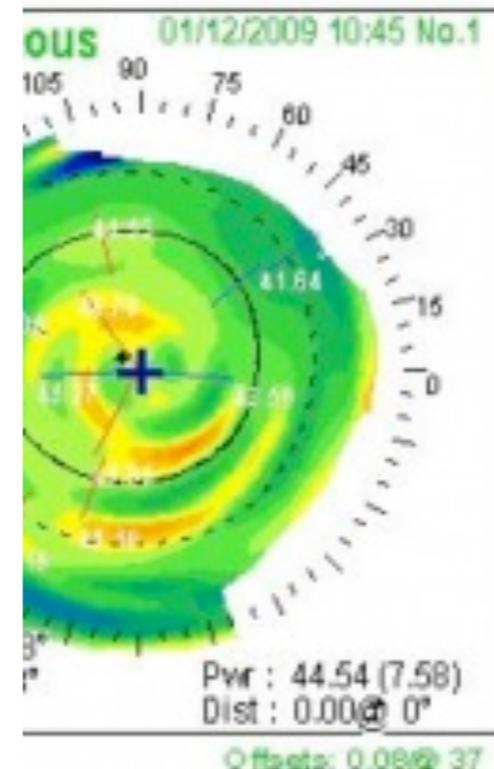
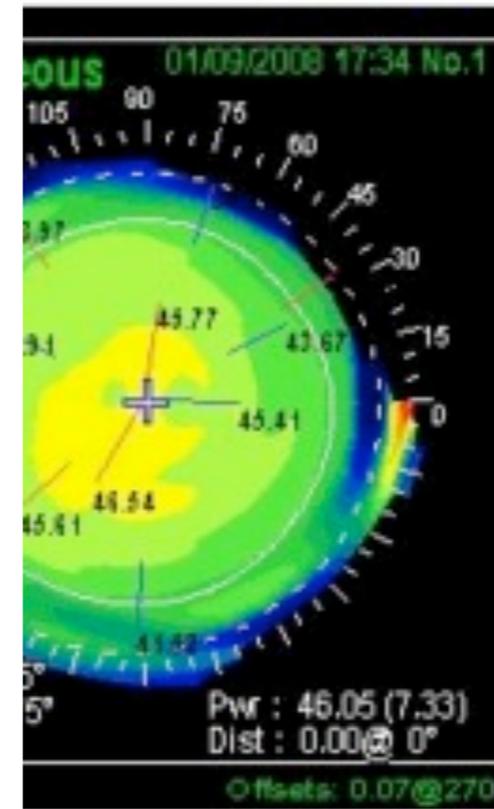


warren
EYE CARE

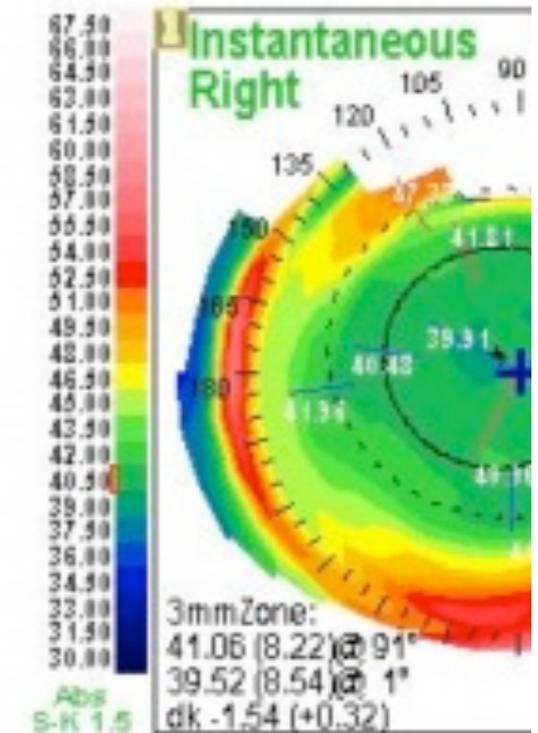
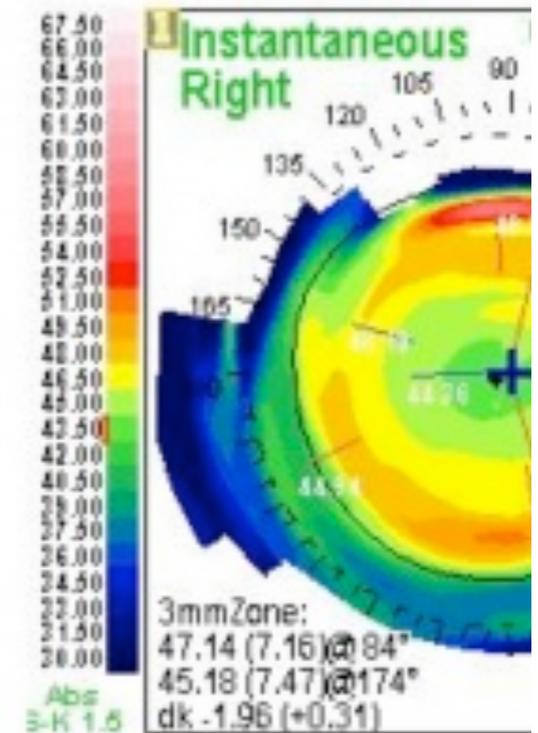
What Is VST?

Using customized vision retainer lenses, VST reshapes the front surface of the eye, reducing nearsightedness and astigmatism

Before



After



Introduction

VST is a technologically advanced procedure that reshapes the front surface of the eye (the cornea) to modify the patient's prescription. The goal is to totally eliminate nearsightedness and/or astigmatism.

There are limitations to how much prescription can be treated with VST, with lower amounts of prescription being more likely to be totally eliminated. However, every eye is different and some patients with high amounts of Rx can do very well with VST. About 90% of the nearsighted patient population are good candidates for VST.

Flattening the cornea reduces nearsightedness, whether the patient undergoes LASIK (laser refractive surgery which is permanent and non-reversible) or VST which is not permanent and reversible/adjustable. The goal is the same, reducing the curvature of the central cornea while increasing the curvature of the mid cornea region.

Vision Shaping Treatment uses specially designed vision retainers to gently and gradually reshape the front surface of the eye (the cornea) to eliminate or reduce nearsightedness (myopia) or astigmatism. The principle is similar to the use of a dental retainer used by an orthodontist to realign crooked teeth.

The vision retainers are similar to contact lenses and are only worn at night while sleeping. They are then removed upon awakening to provide clear vision without using glasses or contact lenses! The retainers are comfortable and very easy to care for.

VST compared to glasses or contact

While glasses and contact lenses work well, there are patients and situations that just don't do well with either option



VST vs Glasses or Contact Lenses

The main purpose of VST is to be free from both contact lenses and eyeglasses during waking hours. While this is ideal for sports enthusiasts or those who work in dusty or dirty environments, for others VST offers the appeal of being free from corrective lenses during the day.

VST also offers relief from the problems sometimes associated with full time contact lens wear like drying and things getting on or under the lenses.

Whether it issue is a dusty environment, ocular allergies, allergies to contact lens solutions or problems with activities jarring glasses or displacing your contact lenses from the eye, there are times when it simply is not feasible to wear glasses or contact lenses.

And then there are patients who just don't want to have a lens in their eyes during the day for personal preference reasons. For all of these type of patients, VST is a great vision correction option.

VST vs Refractive Surgery

There are several benefits of VST over refractive surgery;

VST is less than half the cost of Excimer Laser Surgery. It does not involve any post-operative pain. Also, the hazy post-operative vision that can be associated with laser surgery does not occur with VST. Both eyes can easily be done at the same time with VST. And prescription changes are easy to deal with using VST. If you need more or less correction, we just make changes to your vision retainers and your new vision is in place in a matter of days.

There are no strong steroid or antibiotic drugs needed with VST as there are during the post-operative period for laser surgery. Lastly, and perhaps most importantly, VST is reversible. Laser surgery is not.

Who Can Undergo VST?

Is VST Right For Every Patient And Every Prescription?



Who Can Undergo VST?

The answer to both questions is no. It does not work on every patient and needs to be performed in a very exact and meticulous manner. Dr. Warren has received special training and has the necessary diagnostic equipment, computer software and expertise to perform VST. He has been performing VST for over 10 years and has been using the technology necessary to perform VST for close to 20 years.

The procedure works best on mild to moderate amounts of nearsightedness or astigmatism. More severe cases can have their vision improved, but will still need some vision correction.

The procedure also does not work well on certain shaped corneas. Also, there are several unmeasurable factors for each patient - most notably the cornea's rigidity. Thus the speed of VST varies with each patient. Generally, but not always, less nearsighted patients respond faster than more nearsighted ones.

There are no age barriers for VST. It is safe for children and adults and is an excellent alternative for children who are just first becoming nearsighted as VST will prevent any further nearsightedness from occurring!

Also, while success rates are very high, success cannot be guaranteed due to factors like the inability to wear the vision retainer for physiological reasons or other systemic health problems that may reduce wearing time.

What Does The VST Procedure Involve?

A comprehensive eye health examination is performed first. Then, a corneal topographer is used to obtain a very precise computerized “map” of the cornea’s shape. This information is placed into the VST computer software and a customized retainer is designed. If at that time it is determined that you are a good candidate for VST, your own vision retainers will be ordered. It takes about one week for the retainers to be made and delivered.

When you pick up your retainers, you will be instructed on how to use and care for them. The maintenance is very easy and involves only one bottle of solution. If the retainers fit properly, you will wear them that first night. Your vision should be clear with the retainers on.

You will be seen in the office the next morning. You should come to the office wearing your vision retainers. We will remove them for you. Of course, should you experience any problems while at home with your retainers, simply remove them.

Most of the visual changes occur rapidly over the first few days. As the cornea changes shape and vision improves, we will refit and reorder successive vision retainers (if needed). During this interim period we will supply you with (no-charge) contact lenses to be worn during the day. These are usually only needed for the first few days.

The majority of patients achieve excellent vision in only a few days. Even after you are seeing well, we will continue to see you a while longer to ensure your cornea is adapting to the re-

ainers. Most patients are done with their follow up care in two months although some may take more or less time. When the treatment is completed, the last retainer used will be worn on a nightly basis. Some patients are able to use the retainers every other night.

Astigmatism

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See also: [Aberration in optical systems](#) and [Astigmatism \(eye\)](#)

An [optical system](#) with **astigmatism** is one where [rays](#) that propagate in two perpendicular [planes](#) have different [foci](#). If an optical system with astigmatism is used to form an image of a [cross](#), the vertical and horizontal lines will be in sharp focus at two different distances. The term comes from the [Greek](#) α- (*a-*) meaning "without" and [στίγμα](#) (*stigma*), "a mark, spot, puncture".^[1]

■ [v](#) [t](#) [e](#) **Optical aberration**

[Distortion](#)

[Spherical aberration](#)

[Coma](#)

Astigmatism

[Petzval field curvature](#)

[Chromatic aberration](#)

[Defocus](#)

[Tilt](#)

Related Glossary Terms

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Index

Find Term

Hyperopia

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Jump to: [navigation](#), [search](#)

Hypermetropia

Classification and external resources

ICD-10 [H52.0](#)
ICD-9 [367.0](#)
MedlinePlus [001020](#)

Hyperopia, also known as **farsightedness**, **longsightedness** or **hypermetropia**, is a [defect](#) of [vision](#) caused by an imperfection in the [eye](#) (often when the eye-ball is too short or the [lens](#) cannot become round enough), causing difficulty [focusing](#) on near objects, and in extreme cases causing a sufferer to be unable to focus on objects at any [distance](#). As an object moves toward the eye, the eye must increase its [optical power](#) to keep the image in focus on the retina. If the power of the cornea and lens is insufficient, as in hyperopia, the image will appear blurred.

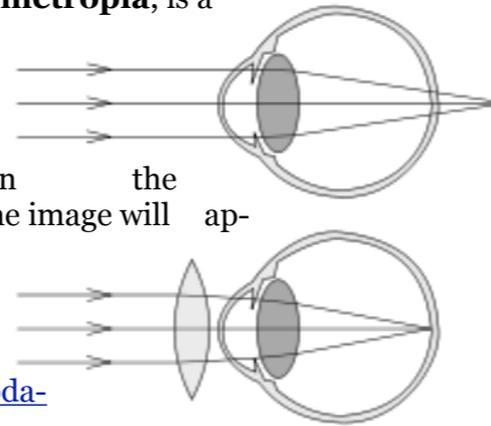


Hyperopia, and restoring of vision with convex lens.

People with hyperopia can experience [blurred vision](#), [asthenopia](#), [accommodative dysfunction](#), [binocular dysfunction](#), [amblyopia](#), and [strabismus](#).^[1]

Hyperopia is often confused with [presbyopia](#),^[2]^[3] another condition that frequently causes blurry near vision.^[4] Presbyopes who report good far vision typically experience blurry near vision because of a reduced [accommodative amplitude](#) brought about by natural aging changes with the [crystalline lens](#).^[4] It is also sometimes referred to as farsightedness, since in otherwise normally-sighted persons it makes it more difficult to focus on near objects than on far objects.^[5]

The causes of hyperopia are typically genetic and involve an eye that is too short or a cornea that is too flat, so that images focus at a point behind the retina.



Related Glossary Terms

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Index

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Myopia

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Jump to: [navigation](#), [search](#)



For other uses, see [Myopia \(disambiguation\)](#).

Myopia ([Greek](#): μυωπία, *muōpia*, ^[1] from myein "to shut" + ops (gen. opos) "eye"^[2]), commonly known as being **nearsighted** ([American English](#)) and **shortsighted** ([British English](#)). A condition of the eye where the light that comes in does not directly focus on the retina but in front of it. This causes the image that one sees when looking at a distant object to be out of focus but in focus when looking at a close object.

[Eye care professionals](#) most commonly correct myopia through the use of [corrective lenses](#), such as [glasses](#) or [contact lenses](#). It may also be corrected by [refractive surgery](#), though there are cases of associated side effects. The corrective [lenses](#) have a negative [optical power](#) (*i.e.* are [concave](#)) which compensates for the excessive positive [diopters](#) of the myopic eye.

Myopia

Classification and external resources

ICD-10	H52.1
ICD-9	367.1
DiseasesDB	8729
MedlinePlus	001023
MeSH	D009216

Related Glossary Terms

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Index

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