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## Comparison of vision related quality of life between wearing contact lenses and spectacles: A review

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### Abstract

Contact lenses are thin lenses positioned directly at the surface of the eyes. Contact lenses are ocular prosthetic gadgets used by humans worldwide, and they may be worn to correct vision for cosmetic and therapeutic reason. Humans pick to wear contact lenses for lots reasons. Aesthetics and cosmetics are the principle motivating elements for folks who want to avoid wearing glasses or to trade the advent or color of their eyes. Others put on contact lenses for functional or optical motives. When compared with spectacles, contact lenses commonly offer better peripheral vision and do not acquire moisture (from rain, snow, condensation, and many others.) or perspiration. This can cause them to ideal for sports and other out of doors activities. Contact lens wearers can also put on sun shades, goggles, or different eyewear of their choice while not having to healthy them with prescription lenses or worry about compatibility with glasses. Additionally, there are conditions inclusive of keratoconus and aniseikonia which might be commonly corrected higher with contact lenses than with glasses. Correction of presbyopia (a need for a reading prescription specific from the prescription wanted for distance) provides a further challenge in the becoming of contact lenses. Predominant techniques exist: multifocal lenses and mono vision.

**Keywords:** Cosmetic, therapeutic, refractive error, oxygen permeable

### Introduction

A contact lens is a thin, curved lens placed on the film of tears that covers the surface of your eye. The lens itself is naturally clear, but is often given the slightest tinge of color to make them easier for wearers to handle. Today's contact lenses are either hard or soft. Most people wear the latter form now, but it wasn't too long ago that contact lenses were even glass blown! While contact lenses may seem to be a modern addition to eye care, they actually have a long and illustrious history, kick-started by none other than Leonardo da Vinci and Rene Descartes. It wasn't until the late 19th century, however, that a German glassblower produced a lens that could be seen through and reasonably tolerated, and a German ophthalmologist came up with and fitted the first contact lens, which could be worn for a few hours at a time.

People select to wear Contact lenses for lots motives. Aesthetics and cosmetics are principal motivating elements for those who need to avoid sporting glasses or to change the appearance or color in their eyes. Others put on contact lenses for purposeful or optical reasons. When as compared with spectacles, Contact lenses normally provide higher peripheral vision and do no longer acquire moisture (from rain and snow) or perspiration. This can cause those to top-rated for sports activities and different outdoors activities. Contact lens wearers can also put on shades, goggles, or different eyewear in their preference without having to fit them with prescription lenses or fear approximately compatibility with glasses. Additionally, there are situations which include keratoconus and aniseikonia which is normally corrected better with contact lenses than with glasses.

### Contact Lenses

Contact lenses are prescribed for the management of refractive errors that cannot be addressed through spectacles along with aphakia, keratoconus, irregular cornea and high anisometropia. In addition, they can be used for the management of simple refractive errors as options to spectacles.

Furthermore, contact lenses may be prescribed for the control of dry eye in Stevens-Johnson syndrome or Sjogren syndrome, post refractive surgical procedure rehabilitation, and chronic epithelial illness. Furthermore, the cosmetic utilization of contact lenses may be very popular nowadays. Contact lenses have stepped forward the best of life no longer only by means of correcting refractive errors but additionally by offering higher appearance and much less restriction in activities.

## Functions

**Correction of Refractive error:** Corrective contact lenses is designed to improve vision, most typically by using correcting refractive errors. That is accomplished by means of directly focusing light so it enters the attention with the right power for clean vision.

A spherical contact lens bends light evenly in each directions (horizontally, vertically, and many others.). They are generally used to correct myopia and hypermetropia.

There are methods that contact lenses can correct astigmatism. One way is with toric soft lenses that work essentially the same manner as eyeglasses with cylindrical correction a toric lens has extraordinary focusing power horizontally than vertically, and as a result can correct for astigmatism. Some other manner is by way of the usage of a rigid gas permeable lens given that maximum astigmatism is caused by the form of the cornea, rigid lenses can enhance vision due to the fact the front surface of the optical system is the perfect spherical lens. Both methods have blessings and downsides. Toric lenses ought to have the proper orientation to accurate for astigmatism, so such lenses should have additional design characteristics to save you them from rotating out of alignment. This could be completed by weighting the bottom of the lens or by using the usage of different bodily characteristics to rotate the lens returned into role, however these mechanisms hardly ever work perfectly, so a few misalignment is commonplace and consequences in truly imperfect correction, and blurring of sight after blinking rotates the lens. Toric soft lenses have all the benefits of soft lenses in widespread, which can be low initial price, ease of becoming, and minimum adjustment period. rigid gas permeable lenses typically provide superior optical correction, however have emerge as much less famous relative to soft lenses because of higher preliminary fees, longer initial adjustment duration, and more worried becoming.

**Correction of Presbyopia:** Correction of presbyopia (a need for an analyzing prescription one of a kind from the prescription wanted for distance) gives an additional venture within the becoming of contact lenses. The most important techniques exist multifocal lenses and monovision.

Multifocal contact lenses (e.g. bifocals or progressives) are corresponding to spectacles with bifocals or revolutionary lenses because they have more than one focal points. Multifocal contact lenses are commonly designed for regular viewing through the center of the lens, but a few designs do comprise a shift in lens position to view through the reading power (much like bifocal glasses).

Monovision is the usage of single vision lenses (one focal factor in line with lens) to consciousness a watch (normally the dominant one) for distance vision and the opposite for near work. The mind then learns to use this setup to peer definitely in any respect distances. A technique referred to

as changed monovision makes use of multifocal lenses and also specializes one eye for distance and the other for near, as a result gaining the benefits of each system. Care is suggested for persons with preceding records of strabismus and those with vast phorias, who're prone to eye misalignment beneath monovision. Studies have shown no unfavorable effect to using performance in tailored monovision contact lens wearers. Instead, a person may additionally actually put on analyzing glasses over their distance contact lenses.

**Cosmetic contact lenses:** A cosmetic contact lens is designed to change the appearance of the eye. These lenses may correct refractive errors. Although many brands of contact lenses are lightly tinted to cause them to easier to deal with, cosmetic lenses worn to change eye coloration are long ways less common, accounting for only 3% of contact lens fits in 2004.

Due to their medical nature, coloured contact lenses, similar to regular ones. People with perfect vision can purchase color contacts for cosmetic motives, but they nevertheless want their eyes to be measured for a "Plano" prescription, meaning one with zero vision correction. This is for protection reasons so the lenses will fit without causing inflammation or redness.

A few colored contact lenses absolutely cover the iris, therefore dramatically changing eye coloration. Other colored contact lenses simply tint the iris, highlighting its natural color. A brand new trend is the circle contact lens, which increase the arrival of the iris onto the sclera by using having a dark tinted place all around. The end result is an appearance of a bigger, wider iris, a look reminiscent of dolls' eyes.

Cosmetic lenses could have wear due to medical reason. Some contact lenses can correct the appearance and, to some extent the feature, of a damaged or missing iris and cornea.

**Therapeutic scleral lenses:** A scleral lens is a huge, firm, transparent, oxygen-permeable contact lens that rests on the sclera and creates a tear-filled vault over the cornea. The reason of this precise positioning is generally applicable to a selected affected person whose cornea is too sensitive to help the lens directly. Scleral lenses can be used to enhance vision and decrease pain and light sensitivity for humans with issues or injuries to the eye, including extreme dry eye syndrome (Keratoconjunctivitis SICCA), microphthalmia, keratoconus, corneal ectasia, Stevens-Johnson syndrome, Sjögren's syndrome, aniridia, neurotrophic keratitis (Anesthetic corneas), complications publish-LASIK, excessive order aberrations of the eye, headaches put up-corneal transplant and pellucid degeneration. Accidents to the attention inclusive of surgical headaches, distorted corneal implants, as well as chemical and burn injuries also may be dealt with scleral lenses.

## Spectacles

Spectacles, also called eyeglasses, are vision eyewear with lenses (clear or tinted) installed in a frame that holds over-the-counters in front of someone's eyes, generally utilizing a bridge over the nose and hinged fingers that rest over the ears.

Glasses are commonly used for vision correction, consisting of with studying glasses and glasses used for

nearsightedness; however, without specialized lenses, they are used time to time for cosmetic functions.

Safety glasses provide eye protection in opposition to flying debris for production people or lab technicians; those glasses may also have protected the eyes. Some sorts of protection glasses are used to protect in opposition to visible and near-seen light or radiation. Glasses are worn for eye safety in some sports, which includes squash.

Glasses wearers might also use a strap to save your glasses from falling off. Wearers of glasses which are used best a part of time may additionally have glasses attached to a cord that is going round over the neck to save you glasses loss and breaking of glasses. The lack of glasses could be unfavorable to working in these situations.

Shades permit for better vision in shiny sunlight hours and might protect one's eyes against harm from immoderate ranges of ultraviolet light. normal sunglasses lenses are tinted for protection towards brilliant mild or polarized to eliminate glare; photochromic glasses are blacked out or gently tinted in darkish or indoor situations, but turn into shades when the glasses into contact with ultraviolet mild. People with conditions that have photophobia as a number one symptom (like positive migraine disorders), often put on sunglasses or precision tinted glasses, even interior and at night time

### Functions

**Correction of Refractive error:** By bending the light that enters the eye, corrective lenses are used to correct refractive errors such as nearsightedness (myopia), farsightedness (Hypermetropia), and astigmatism. The capacity of one's eyes to oblige their concentration to approach and far off center modifies over the long run. Presbyopia, a condition in which the eye's crystalline lens gradually loses its ability to accommodate (i.e., focus on objects close to the eye), is a common condition in people over forty. Few individuals have eyes with identical refractive characteristics; one eye might require a "stronger," or lens with more refraction, than the other.

The image is brought back into focus on the retina with corrective lenses. They are made to adjust to the solution of an ophthalmologist or optometrist. An existing pair of glasses' specifications can be checked with a Lensometer. The wearer's quality of life can be significantly enhanced by wearing corrective eyeglasses. In addition to the fact that they improve the wearer's visual experience, yet can likewise diminish issues that outcome from eye strain, like migraines or squinting.

The most widely recognized sort of restorative focal point is "single vision", which has a uniform refractive record. Bifocal and trifocal glasses offer two or three distinct refractive indices, respectively, while progressive lenses have a continuous gradient. Lenses can also be manufactured with high refractive indicate, which enable them to be lighter and thinner than their counterparts with "low" refractive indices. This is helpful for people who have presbyopia or hyperopia.

A separate pair of glasses for focusing on nearby objects is provided by reading glasses. Although they have a pair of simple lenses of equal power and will not correct refraction issues like astigmatism or refractive or prismatic variations between the left and right eyes, prescription-free reading glasses are a cost-effective and practical option. Glasses

with a current ophthalmic prescription are needed to completely correct the patient's vision.

### Safety

Safety glasses are worn to safeguard the eyes in different circumstances. They have lenses made of break-resistant plastic to shield the eye from flying objects and other things. Safety glasses are frequently required of construction workers, factory workers, machinists, and laboratory technicians to protect the eyes from flying debris and hazardous splatters like blood or chemicals. To prevent infection from patients' blood or other body fluids, dentists and surgeons must now wear safety glasses. There are likewise security glasses for welding, which are styled like wraparound shades, yet with a lot more obscure focal points, for use in welding where a standard welding head protector is badly designed or awkward. Due to the fact that they shield you from welding flash, these are frequently referred to as "flash goggles." Because they are light and flexible, nylon frames are typically used for sports eye protection. Safety glasses, in contrast to the majority of regular glasses, frequently include protection in front of and beside the eyes.

**Sunglasses:** Sunglasses offer greater comfort as well as protection from bright light and, frequently, ultraviolet (UV) light. Sunglass lenses should have a UV-400 blocker in order to adequately shield the eyes from the dangers posed by ultraviolet light. Light polarization is an additional feature that can be incorporated into them. Polarization filters are positioned to remove rays of light that are polarized in the horizontal direction. This reduces glare on horizontal surfaces and lets wearers see into water when reflected light would otherwise obscure the scene. Spellbound shades might introduce a few challenges for pilots since reflections from water and different designs frequently used to measure height might be taken out. Fluid gem shows radiate energized light, making them here and there hard to see with spellbound shades. Sunglasses can be worn to conceal the eyes or for aesthetic reasons. Tea shades and mirrorshades are two examples of sunglasses that gained popularity as a result of these factors. Many visually impaired individuals wear almost misty glasses to conceal their eyes for restorative reasons. Many individuals with light awareness conditions wear shades or other colored glasses to make the light more average.

**Fashion:** When designing frames and lenses, a variety of shapes, colors, and materials can be utilized in various combinations. A lot of the time, a person will choose a frame based on how it will make them look. As a fashion statement, some people who have good natural vision enjoy wearing eyeglasses. In Japan, a few organizations restrict ladies from wearing glasses.

### Conclusion

To improve their vision, many people use contacts or eyeglasses. There is evidence that approximately 45 million people wear contact lenses and 164 million people wear eyeglasses.

People may take into account their way of life, hobbies, comfort, and cost when deciding between the two. For instance, despite the fact that they are less likely to cause eye infections and are easier to wear when you are active, contact lenses are more likely to cause eye infections.

Eyeglasses by and large work out to be less expensive and are simpler to wear, however an individual might break or lose them.

Alternately, individuals can choose to alternate between eyeglasses and contacts if they so choose, despite the fact that this is the most expensive option. This might also be a good idea to give people who wear contacts a break or for times when they can't wear them.

#### Pros of Contact lenses

- Without changing how you look, contact lenses can correct and improve your vision.
- They are an excellent option for outdoor sports and activities.
- Users can quickly get used to wearing them because they are comfortable to wear and simple to put on and take off.
- They can be worn for up to seven days without needing to be taken off, and some FDA-approved lenses can be worn for up to thirty days.
- Contact lenses worn on a daily basis can be disposed of without concern for proper cleaning.
- Like eyeglasses, contact lenses do not impair peripheral vision.
- The lenses will not become cloudy or dirty, impairing vision.
- They might make the wearer feel better about themselves.

#### Cons of Contact lenses

- Up to 1 in 500. Trusted Source contact focal point wearers fosters a serious eye disease consistently, prompting visual impairment.
- It's possible that sleeping with contact lenses increases infection risk significantly.
- Eye infections, irritation, and inflammation can result from improper hygiene and cleaning practices.
- They might irritate people whose eyes are dry or sensitive.
- Contact lenses necessitate more frequent prescription renewals and examinations.
- Sometimes debris can enter the eye through the lens's underside.
- In the long run, they may be more expensive than glasses.

#### Pros of Spectacle

- They are a fast, simple, and generally modest method for further developing vision.
- Clients don't have to contact their eyes, so they are more averse to experience the ill effects of eye diseases than contact focal point wearers.
- Wearers can customize their look by selecting from a wide range of frame options and styles.
- They don't require as much consideration and cleaning as contact focal points.
- UV rays can be blocked out of the wearer's eyes by prescription sunglasses.
- Defensive coatings can likewise assist with staying away from eye strain while working with PCs.

#### Cons of Spectacle

- Peripheral vision can be impaired or blocked by glasses.
- They may be lost or damaged.

- Some people simply do not like the way that wearing glasses makes them appear.
- Focal points can haze up and get filthy in wearing or open air exercises.
- Elegant fashioner casings can be costly.

There are benefits and drawbacks to both glasses and contact lenses when it comes to improving vision. Clients might wish to think about spending plan, leisure activities, and way of life factors prior to picking between the two. Many brands and administrations are accessible to supply the most reasonable choice.

**Conflict of interest:** There is no conflict of interest.

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