

Contact Lens Update

CLINICAL INSIGHTS BASED IN CURRENT RESEARCH

The many uses of daily disposable contact lenses

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The increased prescribing of daily disposable contact lenses has been observed over the last few years.¹ The contact lens industry has responded to the increased demand by continuously expanding parameters and introducing new products to this contact lens modality. Here, we aim to review some unique features and occasions to use daily disposable contact lenses.

High prescriptions

Many patients benefit from contact lenses; however, some of these benefits are accentuated in cases involving high prescriptions. Contact lenses provide clarity of vision in all directions of gaze because their optical centers stay over the visual axis. In spectacle lenses, especially those of low quality, eye movements away from the optical centers are often accompanied by noticeable changes in prescription or distortions. These changes are more pronounced as prescriptions increase. In addition, the weight of spectacle lenses or the aesthetic appearance of “coke-bottle” lenses can be bothersome for patients. Contact lenses alleviate both these problems.

Due to the advantages mentioned previously, patients with high prescriptions may be more likely to favor their contact lenses. This could be one reason that one study showed that patients who discontinue lens wear have a lower prescription on average than those that do not discontinue lens wear.² In an effort help these patients with high prescriptions, it is important to recommend lenses that provide the best chance to success. Daily disposables provide the advantage of fewer contact lens complications compared to other lenses and better comfort.³⁻⁶ Luckily, manufactures are continuing to expand the parameters available in daily disposables.

Myopia control

One method proposed to slow myopic progression is the use of center distance multifocal contact lenses.^{7,8} Daily disposable contact lenses are an obvious modality of choice for this treatment because it is best utilized in children, who benefit from the safety profile of daily disposable lenses.⁹ Studies are on-going to show the effectiveness of multifocal contact lenses in myopia control; however, some practitioners are already fitting children into center distance multifocal contact lenses. These practitioners have the option of several lenses with a center distance design in other modalities, and these center distance designs have begun being manufactured as daily disposables. The use of these lenses for myopia control is not approved or proven effective, but it may be an option for practitioners who would like to treat a patient before the introduction of lenses specifically designed for myopia control.

Outdoor enthusiasts

For patients who play outdoor sports, enjoy outdoor activities, or may be a parent who is always on the sidelines,

eye protection from ultraviolet (UV) light is important. There are two classes of UV-blocking contact lenses. Class II block more than 50% of UVA (316-380 nm wavelengths) and 95% of UVB (280-315 nm wavelengths). Class I block more than 90% of UVA and 99% of UVB.

Despite the ability of these lenses to block UV light, we should continue to encourage patients who wear these lenses to also use sunglasses and other forms of UV protection. These contact lenses only protect the cornea, which leaves the conjunctiva and adnexa exposed to UV light. Therefore, these contact lenses should be considered an additional line of protection in addition to sunglasses, hats and sunscreen.

Part-time wearers

If patients only wear lenses a few times a week or a few times a month, a monthly or biweekly lens is likely to sit in solution that is days or weeks old. Patients are more likely to forget when the lenses were last replaced. Daily disposables offer convenience for these patients. However, they could also be a better financial investment for these patients. Their cost per wear could be lower with daily disposables compared to monthly or biweekly replacements.¹⁰

Some patients may prefer monthly or biweekly lenses most of the time, but they have not considered the benefits of using daily disposables in other parts of their life. For example, patients may benefit from daily disposables when traveling because bulky lens solutions do not have to be packed. These lenses are also great for some patients who may be traveling overseas with the armed forces. While each situation is different for these service men and women, daily disposables may offer some flexibility that will help them focus on their duties and less on where to place their contact lens solution and case. Daily disposables may also be good for new parents. The flexibility offered by daily disposables is great because these parents may not be able to count on having a full night for their contact lenses to disinfect properly. It is not easy to rub, rinse and properly aim your contact lens into a lens case well or the peroxide soaking basket while balancing a new baby. Therefore, suggesting daily disposables for these new parents makes sense. When offered as an alternative option, these patients may eventually become full time daily disposable wearers because they enjoy the convenience.

Continued discomfort

Whenever patients present with contact lens discomfort, the authors and many other eye care providers refit a patient into a daily disposable lens.¹¹ This is an excellent first step given the results of one study that specifically targeted contact lens wearers with discomfort.¹² However, if the discomfort continues and you confirm that the patient is following the appropriate replacement regimen and the contact lens has a good fit, consider changing materials. While this has often traditionally meant changing from a hydrogel to a silicone hydrogel or vice versa, practitioners can now also consider moving to newer silicone hydrogel materials to troubleshoot issues of discomfort. Early silicone hydrogels used surface treatments. Then, manufacturers began adding hydrophilic groups to the lens molecules. Finally, newer generations have changed the silicone-based molecules to be longer.^{13,14} Several technologies have emerged from contact lens manufacturers to make contact lenses as comfortable as possible for patients. These include the use of materials with varying levels of silicone material and the incorporation of molecules to better interact with patients' tears.

If a patient complains of discomfort upon lens insertion, consider a lens with a different packaging solution within its blister packs. Monthly and biweekly lenses are treated with multipurpose solutions or hydrogen peroxide agents, which makes their interactions with the solutions important for comfort. For daily disposable lenses, the packaging solution is very important because they are designed for patients to remove the lens and immediately place it into the eye. One study showed that the packaging solutions varied in osmolarity and ability to wet the surface of the contact lens.¹⁵ These factors could contribute to contact lens success in the same way that solutions contribute to the success of lenses with less frequent replacement schedules.

Conclusion

Daily disposable contact lenses provide many options for eye care providers. The parameters and options within this lens modality are constantly changing in ways that further enhance our ability to provide patients with good vision and comfort. As new lenses become available, it is important to consider conditions when each may be best utilized to provide the best experience for the patient.

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