

# CONTACT LENSES 101, PART 1: CONTACT LENS MATERIALS

Many patients don't realize that there are various contact lens materials available, and that the material can make a big difference in their vision, comfort, and eye health. As a member of an eye care team, you need to know the advantages and disadvantages of different lens materials to help patients understand why a particular contact lens is best for them.

## Soft contact lens materials

Soft contacts are primarily made from hydrogel or silicone hydrogel (SiHy) material. The features of these materials can affect eye health and the patient's overall experience.<sup>1</sup>

### Some important features include<sup>2</sup>:



**Comfort**—affected by wettability, lens stiffness, and water content



**Handling**—SiHy lenses may be easier to insert and remove



**Wear time**—related to comfort issues and oxygen permeability



**Vision**—affected by dryness and deposits



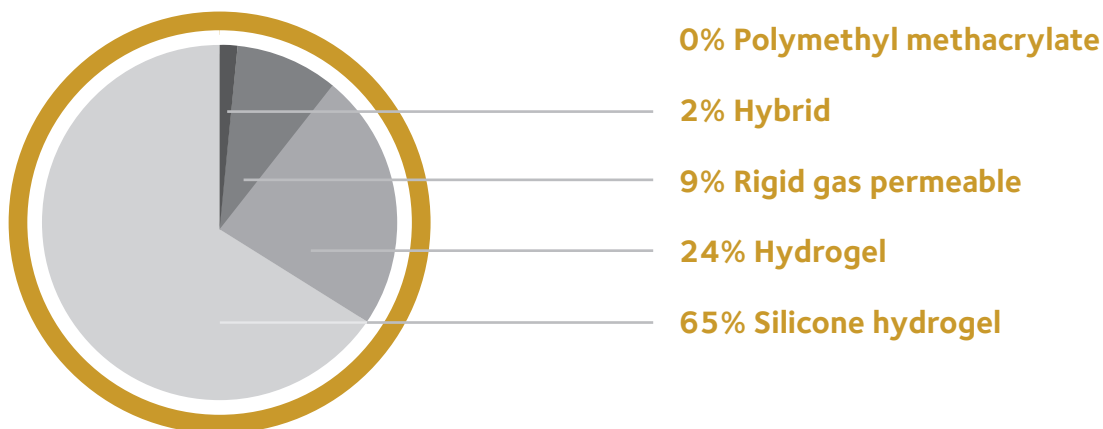
**Oxygen permeability**—how much oxygen passes through the contact lens to reach the eye

## Hydrogel vs. silicone hydrogel

The two types of soft lenses have advantages and disadvantages.

Advantages of Hydrogel	Disadvantages of Hydrogel
<ul style="list-style-type: none"><li>• Good initial comfort<sup>1</sup></li><li>• Affordable<sup>3</sup></li><li>• Highly flexible<sup>4</sup> and thinner material<sup>1</sup></li></ul>	<ul style="list-style-type: none"><li>• Low oxygen permeability<sup>1</sup></li><li>• Potentially higher risk for eye infections and other hypoxia-related issues<sup>5</sup></li><li>• Not ideal for overnight wear<sup>1</sup></li></ul>
Advantages of Silicone Hydrogel	Disadvantages of Silicone Hydrogel
<ul style="list-style-type: none"><li>• High oxygen permeability<sup>1</sup></li><li>• Easier to handle (particularly for new contact lens wearers)<sup>1</sup></li><li>• Better durability<sup>1</sup></li><li>• Extended wear and overnight wear options available<sup>6</sup></li></ul>	<ul style="list-style-type: none"><li>• Wettability challenges (newer SiHy materials have similar or better wettability than hydrogel lenses)</li><li>• Stiffer materials (newer SiHy materials have improved flexibility similar to that of hydrogels)<sup>7</sup></li><li>• Slightly higher price</li></ul>

## What materials are eye care practitioners prescribing?<sup>8</sup>



SiHy lenses are the preferred material of practitioners who fit contact lenses.<sup>8</sup>



### Did you know?

Vision Source<sup>®</sup> offers customer-branded 1-day and monthly silicone hydrogel lenses manufactured by CooperVision<sup>®</sup> to keep patients coming back to your practice again and again.

**Ask your CooperVision<sup>®</sup> sales rep about SiHy lens options today!**

## Materials can make a difference

Choosing the right contact lens material can improve comfort and vision. Many surveys show that the top reason for contact lens dropout—when patients stop wearing contacts—is discomfort.<sup>9</sup>

So, the next time a patient asks, “Is there really any difference between all these contacts?”, you’ll know how to answer.

1. Vinita Allee Henry, Steve Diamanti & Julie Ott DeKinder (2020), “Soft Material Selection (Hydrogel & Silicone Hydrogel)” in Clinical Manual of Contact Lenses, 5th Ed., Eds. Ed Bennett and Vinita Henry, China: Wolters Kluwer, pp. 288–310. 2. Musgrave CSA, Fang F. Contact Lens Materials: A Materials Science Perspective. Materials (Basel). 2019;12(2):261. 3. ODspecs. ODspecs.com. <http://www.odspecs.com/>. 4. For Ocular Health and Comfort, This Type of Daily Disposable Contact is for You. CooperVision. <https://coopervision.com/blog/ocular-health-and-comfort-type-daily-disposable-contact-you> 5. Liesegang, TJ. Physiologic Changes of the Cornea with Contact Lens Wear. CLAO J. 2002;28(1):12–27. 6. Stapleton F, Stretton S, Papas E, et al. Silicone Hydrogel Contact Lenses and the Ocular Surface. Ocul Surf. 2006;4(1):24–43. 7. Eye Contact Lens. 2013 Jan;39(1):100–108. 8. Nichols JJ, Starcher L. Contact Lenses 2019. Contact Lens Spectrum. <https://www.clspectrum.com/issues/2020/january-2020/contact-lenses-2019>. 9. Pucker AD, Tichenor AA. A Review of Contact Lens Dropout. Clin Optom (Auckl). 2020;12:85–94.