

# Analysis of Polish eye care professionals' opinions about deposits on contact lenses

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## Background

Contact lenses represent a widely used method of correcting ametropia, applied all over the world.<sup>1</sup> When contact lenses are in place (eye surface), they are exposed to the accumulation of deposits from the tear film, such as proteins and lipids.<sup>2</sup> More lipid deposits build up on the newer generation of contact lenses, silicone hydrogel (Si-Hy).<sup>3,4</sup> The literature review concludes that the effects of lipid deposits on Si-Hy lenses on patients' clinical response, particularly their impact on discomfort, are not fully understood.<sup>5</sup>

### References:

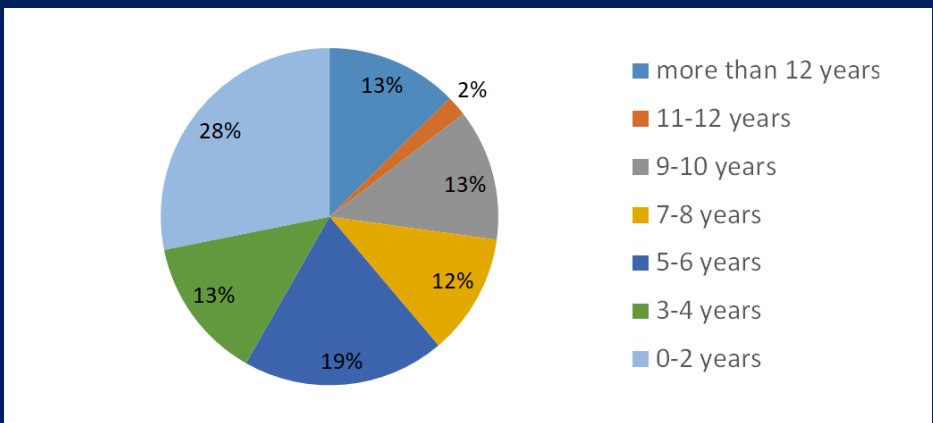
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# Purpose

The aim of this study is to analyse the opinions of Polish ECP practitioners about deposits on contact lenses, and in particular about lipids and Si-Hy lenses. This study aims to analyze the opinions of Polish ECPs on the subject of deposits on contact lenses, particularly regarding lipids and Si-Hy lenses.

# Methods

Data from 103 responses (Eye Care Professionals (ECPs) responsible for contact lens fitting in his/her work) were collected via an online survey. A total of 73 women and 30 men responded to 5 demographic and 13 related to the survey topic questions. The mean age was 34.64 years, while the youngest respondent was 24 and the oldest 62. Respondents declared that they held the titles of: optician (n = 1), optometry student (n = 9), ophthalmologist (n = 15), or optometrist (n = 78). 59% of the professionals surveyed had at least five years of lens fitting experience (Fig. 1), most of them have practiced in large towns .



*The surveyed professionals' experience in lens fitting (years).*

# Results & Disussion

26% of professionals reported that they always evaluate deposits on contact lenses during follow-up visits, 40% do it in most cases, 28% only in some cases, and only 6% of the respondents stated that they did not assess lens deposits at the follow-up visit, suggesting that this is a commonly used procedure in the lens fitting.

Polish ECPs' responses concerning the occurrence of different types of deposits on various lens materials are consistent with literature data.<sup>1,2</sup> Lipid deposits occurred most frequently on Si-Hy lenses, and protein deposits on hydrogel lenses. The occurrence of both types of deposits is more often indicated on reusable lenses. Regarding daily disposable lenses, 34% of ECPs reported no deposits, which is in line with the practical approach that if there are deposits on reusable lenses, a change to daily disposable lenses should be considered.<sup>3</sup>

What types of deposits are most likely to appear on different type of contact lenses				
Replacement mode	Daily		Reusable	
Material	hydrogel	Si-Hy	hydrogel	Si-Hy
Protein	45%	13%	71%	22%
Lipid	18%	49%	21%	69%
No deposits	34%	34%	7%	8%
Other answers	Depends on the patient, Makeup	Depends on the patient, Do not know, Makeup, Very rarely, but sometimes, lipid deposits occur	Does not fit hydrogels	Makeup

Results show that Polish ECPs view lipid deposits as a potential source of discomfort in contact lens wear, with the great majority reporting that this happens occasionally. Only 8% of respondents believe that lipid deposits do not affect lens comfort at all. Yet direct evidence that lipid deposits can result in discomfort is not fully confirmed in the literature.<sup>4</sup> Most respondents also stated that lipid deposits can lead to decreased quality of vision.

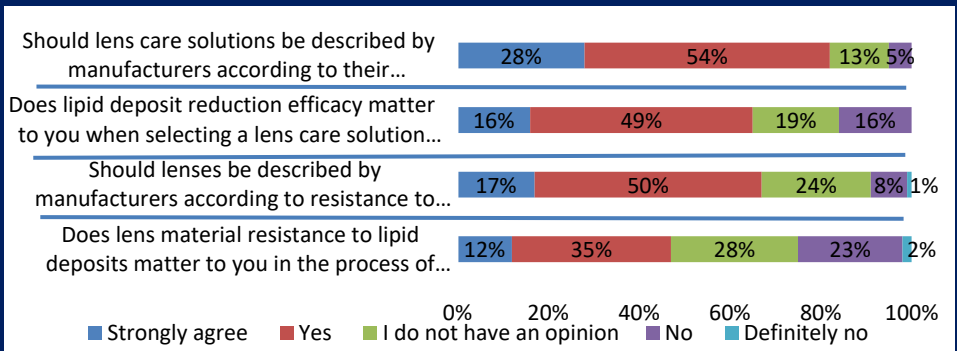
What is the impact of lipid deposits on contact lens comfort?		What is the impact of lipid deposits on contact lens vision quality?	
Answer	Rate	Answer	Rate
Always lead to a discomfort	9%	Always lead to a reduced quality of vision	18%
Sometimes lead to a discomfort	83%	Sometimes lead to a reduced quality of vision	75%
Do not affect the comfort	8%	Do not affect the quality of vision	7%

References:

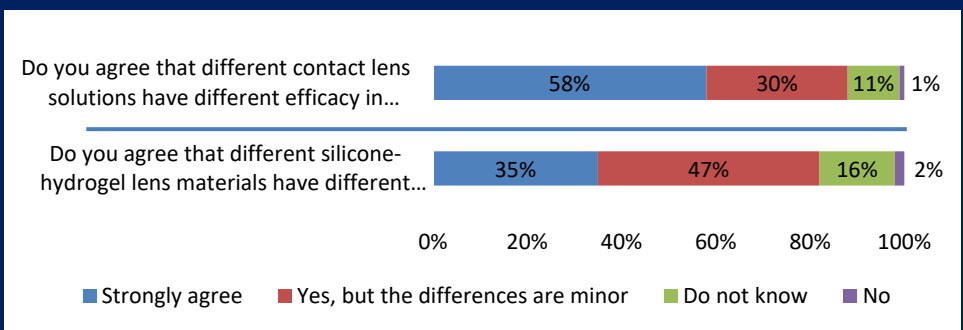
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# Results & Discussion

The majority of the interviewed professionals agree that various Si-Hy lens materials have different resistance to lipid deposits. But about half believe that these differences are minor, contrasting with literature data that shows wide variation in lipid deposits for different lens materials.<sup>1-6</sup> There are even more practitioners who agree that various contact lens solutions have different efficacy in reducing lipid deposits, with over half reporting that they strongly agree. These opinions are supported by literature data.<sup>7</sup>



Most respondents stated that the resistance of a lens material to lipid deposits is essential when selecting a lens for a patient. Even more said that the effectiveness of lipid deposit reduction is important when selecting a care solution. The majority of Polish ECPs believe that manufacturers should describe lenses according to their resistance to lipid deposits, and even more stated that manufacturers should describe lens care solutions according to their effectiveness in reducing lipid deposits.



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# Conclusions

Polish ECPs find that evaluating deposits is an important step in the contact lens fitting procedure. Their observations of the types of deposits on each type of lens are in line with data in the literature. Neither the literature data nor the responses obtained in this study clearly indicate an association between lipid deposits on lenses and the occurrence of discomfort and decreased quality of vision among patients. Respondents believe that different lenses and lens care solutions differ in terms of their interaction with lipid deposits. Furthermore, these parameters should be taken into account when choosing a product. Further, this is more important to them when choosing care solutions. Finally, producers should provide information on the resistance of lenses to lipid deposits and the effectiveness of care solutions in reducing lipid deposits.

