



# Rejuvenating Aftercare for Contact Lens Patients

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**Karen Walsh explores the opportunities that exist in routine contact lens aftercare to enhance patient satisfaction and retention.**

The title of this article implies that the contact lens aftercare appointment does in fact need rejuvenating. It is perhaps best to look at the evidence and reasoning behind this starting point before proceeding further.

Rejuvenate is defined as: to make an organisation or system more effective, productive and modern by introducing new methods and ideas. Interestingly, it is also defined as: to make someone look or feel young and energetic again.<sup>1</sup> A changed approach to aftercare cannot be claimed to make either the practitioner or the patient feel younger, but it is feasible to believe that a fresh attitude to the appointment could leave both parties feeling energised from the experience.

## **Opportunity: recognise the opportunity**

So, why is it necessary to look at making this routine appointment more productive and modern? Why do new methods and ideas need to be introduced? It is easy to appreciate how the busy practitioner can view a routine contact lens aftercare as a simple and straightforward appointment; possibly a chance to make up lost time in a day of otherwise more “challenging” cases. Equally, with only an appointment fee being charged, or, for those on direct debit schemes where no money changes hands on the day, the value of a contact lens wearer to the practice is not as obvious as a high-index varifocal spectacle dispense. The fact of the matter is that a typical contact lens wearer, who of course needs spectacles too, is worth more to a practice over time than a spectacle only wearer.<sup>2</sup>

**Table 1: The rejuvenated aftercare**

<b>O</b>	Opportunity: recognise the opportunity and start with correct attitude
<b>P</b>	Patient contact lens wearing experience and their expectations of the practitioner
<b>T</b>	Tailored clinical investigation
<b>I</b>	Innovations: be familiar with new technologies and products to provide solutions to any issues raised, or proactively suggest a better option
<b>M</b>	Make a professional recommendation
<b>U</b>	Undertake immediate action: ideally try and refit on the day
<b>M</b>	Make a difference in each and every aftercare



It is also true that as a profession, we are still faced with significant numbers dropping out from contact lens wear annually. In 2007, while 363,000 new contact lens wearers were fitted, during the same twelve-month period, 223,000 people ceased wearing lenses.<sup>3</sup> The most common reasons given for this are that contact lenses felt dry and uncomfortable.<sup>4</sup> With new contact lens technology regularly appearing on the market, increasingly the opportunity exists to improve on the situation for the patient. A proactive stance towards upgrade not only maximises the contact lens experience for the wearer, but can also increase practice revenue through both better retention of more satisfied patients and higher value contact lens dispensing.

The routine aftercare visit is the perfect time to optimise the contact lens wearing experience for many patients. To understand the key elements of a rejuvenated aftercare, this article will walk through the appointment in order, highlighting the areas where the maximum effect can be achieved, sometimes from just a small change in approach or attitude. Each step of the appointment builds towards a new way of thinking about aftercare, and, as highlighted in *Table 1*, an **OPTIMUM** approach to aftercare is proposed.

### Patient experience and expectations

Understanding the patient's perspective in each and every aftercare represents the first step in the process. This encompasses both their experience of wearing contact lenses and also their expectations of their practitioner. This crucial stage allows the practitioner to start the appointment with an open mind. With this they can look for a chance to make a difference for the patient rather than hope all is fine and expect a "no change" outcome.

There are of course many routine questions asked in history and symptoms surrounding the wearing schedule and comfort of the lenses. Indeed, careful questioning around comfort gives the practitioner a head start in establishing the presence of any problems, specifically contact lens related dry eye symptoms.<sup>5</sup> It is also important at this stage to establish patient compliance. This includes compliance to the wear and replacement schedule along with correct use of the recommended care regime.

It is revealing however to appreciate the thoughts and experience of the patient themselves. Greater understanding here allows the practitioner to be alive to the possible areas of dissatisfaction and the opportunity to upgrade. A recent survey of wearers of monthly contact lenses asked specifically about decrease in comfort over the course of the month.<sup>6</sup> More than two-thirds of wearers notice this; moreover, the sensation

is equally experienced by wearers of hydrogel and silicone hydrogel lenses. Understanding both that this happens, and that more than 9 out of 10 first become aware of the discomfort in weeks three and four of the month allows two actions. Firstly, the practitioner is primed to ask specific questions around the timing and onset of discomfort. Secondly, a possible solution to the issue is presented through the consideration of shorter replacement frequencies such as daily disposable or 2 weekly replacement that avoid the wearer experience reported in the second half of the month.

Equally important is to recognise the expectations the contact lens wearer has of their practitioner. When wearers of monthly contact lenses are asked, 90% expect to have lenses that may improve ocular health recommended to them and more than 80% are prepared to pay more for this.<sup>6</sup> It is vital to understand just how motivated a patient is by ocular health. This key opportunity exists in every aftercare appointment and the **OPTIMUM** approach enables the practitioner to ensure the patient is either wearing, or given the chance to try, the most up to date, healthiest and most comfortable option.

### Tailor the clinical investigation

Following a good open initial conversation to fully establish the wearing experience, the appointment moves into the clinical investigation. Clearly, there are fundamental elements that are mandatory and as such, will be conducted at every aftercare. These are defined in the College of Optometrists guidelines and include a detailed assessment of the anterior eye that might be affected by contact lens wear and the detection of any contact lens related adverse events.<sup>7</sup> The opportunity here is to tailor the investigations to both the outcomes of the initial patient discussion and towards any potential upgrade that may be under consideration.

#### Vision assessment

Whilst conducting visual acuity measurements and over refraction, it is useful to enquire about end of day vision, consistency of vision both over the course of the day and the replacement schedule, along with quality of vision for specific tasks such as computer-use and driving. A recent analysis of the prescribing of soft contact lens powers showed that a surprising proportion of soft lenses are prescribed to the nearest half dioptre.<sup>8</sup> Hence an accurate sphero-cylindrical over-refraction is recommended, since this can highlight uncorrected refractive errors that can cause asthenopia or headaches. For uncorrected cylinders, the increasing availability of soft toric materials and replacement modalities means there is no reason why practitioners should not recommend a soft toric to correct even low astigmats.<sup>9,10</sup>



**Table 2: Problem Solving Opportunities**

From History and Symptoms	
Reporting	Actions to consider
<p><b>Discomfort and reduced wearing times</b></p> <p>Overall</p> <p>At end of day</p> <p>At end of wearing schedule</p>	<p>Refit with material that provides additional benefits to the wearer: balance modulus, wettability, lubricity and resistance to dehydration with Dk/t; use smooth, lubricious and wettable materials</p> <p>Use silicone hydrogel, or hydrogel with added wetting agent – use smooth, lubricious and wettable materials with low modulus; poor tear quality can respond to warm compresses and lid massage</p> <p>Refit with shorter replacement schedule – two weekly or daily disposable</p>
<p><b>Vision</b></p> <p>Blurred vision</p> <ul style="list-style-type: none"> <li>- Constant</li> <li>- End of day</li> <li>- End of replacement schedule</li> </ul> <p>Inconsistent vision</p> <ul style="list-style-type: none"> <li>- With blink</li> </ul>	<p>Prescribe accurately to over-refraction; correct cylindrical errors</p> <p>Use material that resists on-eye dehydration and deposits; replace lenses daily</p> <p>Shorter replacement frequency</p> <p>Optimise fit; fit with stable design soft toric; use frequent replacement to avoid build up of deposits; Rub and rinse to remove lipid deposits</p>
From Clinical Investigation	
Signs	Actions to consider
<p><b>Tears</b></p> <ul style="list-style-type: none"> <li>- Low tear volume</li> <li>- Poor tear quality</li> </ul>	<p>Use material with internal wetting agents; dehydration resistance; consider rewetting drops</p> <p>Address any cause of poor tear quality – lids/MGD. Fit with frequent replacement to minimise deposition; use smooth, lubricious and wettable materials</p>
<p><b>Lids</b></p> <ul style="list-style-type: none"> <li>- Meibomium Gland Dysfunction</li> <li>- Blepharitis</li> </ul>	<p>Instruct regime of warm compresses and lid massage. Fit with daily disposable or frequent replacement to minimise deposition</p> <p>Instruct in lid hygiene regime and follow lens advice above. Daily disposable lenses and avoidance of overnight wear important when staphylococcal blepharitis present</p>
<p><b>Hyperaemia</b></p> <ul style="list-style-type: none"> <li>- Bulbar conjunctival</li> <li>- Limbal</li> </ul>	<p>Improve wettability – use smooth, lubricious and wettable materials; review compatibility with CL and care regimen</p> <p>Increase oxygen supply - refit from hydrogel to silicone hydrogel materials</p>
<p><b>Signs of Hypoxia</b></p> <ul style="list-style-type: none"> <li>- Neovascularisation, Corneal oedema, Striae, Myopic creep</li> </ul>	<p>Increase oxygen supply and refit from hydrogel to silicone hydrogel materials</p> <p>Change from Overnight to Daily Wear</p>
<p><b>Staining</b></p> <ul style="list-style-type: none"> <li>- Corneal (Fluorescein)</li> <li>- Conjunctival (Lissamine Green)</li> </ul>	<p>If solution induced corneal stain (SICS) suspected, change to multipurpose solution (MPS) with alternative formulation or non-preserved. Or change lens material to one less prone to solution/lens interactions</p> <p>For desiccation (dryness), refit with materials that have minimal dehydration. Use lubricious (low friction) materials to minimise lid wiper epitheliopathy; use of lubricant drops</p>

Refitting with materials that are smooth and highly wettable, with shorter replacement periods to minimise deposition build up and with the accurate correction of any astigmatism are all options that can improve the wearing experience for the patient (Table 2). A study to investigate whether polymer composition of contact lenses affected higher-order aberrations concluded that a hydrogel daily disposable containing the wetting agent PVP (*I•DAY ACUVUE® MOIST™*) not only gave significantly less dryness symptoms compared to a conventional daily disposable (*I•DAY ACUVUE®*), but also led to lower and more stable higher-order aberrations for a group of symptomatic CL-wearers.<sup>10</sup> Thus improving the material performance would also be a way of potentially improving the vision performance in some patients when improvements cannot be made with a mere change in prescription or lens fit.

Presbyopes will benefit from accurate assessment of their visual demands and discussion of the options of monovision, modified monovision, multifocal or correction via additional spectacles.

#### Clinical Assessment – Lids and Tear Film

Moving into the examination of the anterior eye and contact lens it is important to remember the two key messages discussed earlier: comfort and health. Many factors contribute to the comfort of a contact lens. Clinically it is useful to establish both the quality and quantity of the tears through examination of non- and invasive break-up time, tear prism height and presence of any corneal or conjunctival staining. Careful examination of the lid margins for signs of meibomian gland dysfunction (MGD - blocked glands, irregular lid margin, frothing of tears, lipid debris in tear layer), blepharitis (hyperaemic rounded and inflamed lid margins, crusting around base of lashes), contact lens induced papillary conjunctivitis (CLIPC) and lid wiper epitheliopathy (upper lid margin staining seen with lissamine green) all provide evidence for the need to upgrade. Where any lid margin disease is identified, it is important to give instructions on its management. The chronic conditions such as MGD and blepharitis benefit from the ongoing attention of a lid hygiene routine incorporating hot compresses, lid massage and lid scrubs.

Recommending rewetting drops for use during wear or lubricating visco-elastic agents that can be used pre-and post wear may also improve symptoms of dryness and minimise signs. Possible improvements that can also be made through changes to the contact lens are outlined in Table 2. They include the use of smooth and wettable materials, those that resist on-eye dehydration and deposition, in addition to consideration of an increase in replacement frequency or even daily disposable modalities.

#### Clinical Assessment – Cornea and conjunctiva

The classic signs of hypoxia are well documented and include corneal neovascularisation, limbal and bulbar conjunctival hyperaemia, microcysts, striae, endothelial blebs and myopic creep. It is known that refitting with silicone hydrogel materials eliminates such changes.<sup>11-16</sup> The presence of such hypoxic changes in a hydrogel wearer provides a good reason to recommend a refit to a silicone hydrogel material. Additionally, it is understood that a significant proportion of patients “nap” in their lenses. In a recent study,<sup>17</sup> the hydrogel materials tested showed a significant increase in corneal swelling response (indicating hypoxia) after an hour of napping. Wearing a silicone hydrogel material in this situation induced no significant increase in corneal swelling compared to no lens wear.

The practitioner should always appreciate how motivated the contact lens wearer is to be told about and to try healthier options. The **OPTIMUM** approach to aftercare would indicate that even if the signs of hypoxia are not seen, it is still in the patients best interest to discuss healthier and more comfortable options. Indeed, by doing so, contact lens wearers indicate that their satisfaction and loyalty towards their practitioner would increase.<sup>6</sup>

#### Innovation: knowledge of the latest contact lens innovations

Clearly, in order to be able to act upon any findings from either the patient wearing experience or the clinical examination, it is important to be aware of the latest available contact lens technology. Understanding the most recent contact lens innovations is the next part in the process. More accurately, it is important to understand the advantages of certain lens materials and modalities, and how those attributes can positively benefit the patient. Comfort can be maximised through utilising modern materials. For example, some incorporate a wetting agent that is permanently bound into the polymer to maintain comfort to the end of the day<sup>18</sup> whilst other products utilise a blink activated release technology to try and achieve the same aim.<sup>19</sup> Additionally, shorter replacement schedules have been shown to have comfort benefits.<sup>20</sup> Likewise, when compared to longer replacement schedules, daily disposables result in fewer overall complications, increased patient satisfaction and reduced unscheduled aftercare visits.<sup>20</sup> Recent research has shown that although the incidence of microbial keratitis is no lower with daily disposable contact lenses<sup>21</sup>, in general, wear of this modality seems to be associated with the lowest risk of severe microbial keratitis compared to other soft lens modalities.<sup>22</sup>

Maximising oxygen delivery through a contact lens is critical when considering ocular health. All silicone hydrogel lenses provide ample oxygen to the eye for daily wear.<sup>23</sup> Consideration

should be given to the combination of multipurpose cleaning solution and silicone hydrogel materials being recommended in order to minimise possible solution induced corneal staining (SICS) reactions.<sup>24</sup> The importance of compliance, for all types of contact lenses, to the wearing and replacement schedules along with correct cleaning procedures is paramount.

A final health message, and one that is perhaps under-used at present, concerns ultra-violet radiation (UVR) protection. The importance of understanding the patient is apparent once again here because more than 70% of wearers feel that UVR protection is an important element of a contact lens.<sup>25</sup> A selection of hydrogel contact lenses incorporate UV blockers, with the highest form of protection, Class 1, being available in range of silicone hydrogels from Johnson & Johnson Vision Care.

### **Make a professional recommendation**

Having reached this stage in the appointment it is now time to make a professional recommendation. Over half of the time, the patient is looking to their practitioner to tell them exactly what to do.<sup>26</sup> This illustrates the opportunity that exists to be clear and direct in recommending a course of action. Where a thorough initial history and symptoms has elicited the potential for an upgrade early in the appointment, it is helpful to mention this possibility to the patient. When the recommendation is made, the patient is already open to the idea of trying a new option, making the explanation shorter and more straightforward

The message of any recommendation can be made more effective by remembering the key areas that are of particular interest to the contact lens wearer: vision, comfort, health and new innovation. Providing recommendations that offer the potential of improvement in any or all of these areas is a message that resonates very well with the patient. Equally, as illustrated earlier, taking a proactive approach in the communication of new innovations leads to the benefits of improved patient satisfaction and loyalty for the practitioner.<sup>6</sup>

Of course, not every aftercare appointment, even when the **OPTIMUM** approach is used, will result in the need to try a different contact lens. The professional recommendation, after careful assessment of patient satisfaction, wearing habits, lifestyle demands and clinical investigation, may be that the patient is already wearing the most appropriate lens for them. In this case, it is important to explain clearly how the final decision has been reached, to reinforce the benefits of the lens already being worn and to reassure the wearer that they are wearing the best option for them that is currently available.

### **Undertake immediate action**

Where a decision has been taken to try an alternative lens, the question arises how best to proceed? This moves the appointment onto the penultimate section, defined in *Table 1* as: undertake immediate action.

To maximise the experience for the patient and, of course, to minimise extra chair time, the ideal situation is to refit on the day whenever possible. There can be barriers to this in the mind of the practitioner: time, prior use of fluorescein and availability of trial lenses perhaps being the most common. A routine aftercare should include the use of fluorescein. Applying minimal, diluted fluorescein is both advantageous for the examination where it will fluoresce more readily, and the fact that it is more likely to have naturally washed out of the eye by the end of the appointment. If a practitioner feels it prudent, any excess dye can be easily washed from the eye by irrigation with saline.

Having diagnostic trial banks well stocked and easily accessible facilitates the refit. Indeed, one proactive approach employed by some clinicians is to put a pair of new lenses with the patient record at the start of the day.<sup>27</sup> This, at the very least acts as an aide-mémoire to consider an upgrade, and at best, where the type of lens and prescription is correct, enables the new lenses to be fitted in an extremely timely manner. This forward planning can be extended to toric lenses. Practice staff can be primed to highlight wearers of soft torics as they book their routine appointment. A suitable pair of trial lenses can then be pre-ordered. For the average astigmatic patient, who appreciates the “stigma” they carry, there is no better way to surprise and delight than by being able to act immediately on any recommendation. They will be unlikely to have experienced this level of service before.

The visual acuity and initial fit of the lenses can be checked soon after insertion. A five to ten minute settling period can be used to record details of the trial fitting in the patient records, while also giving any new instructions to the patient regarding changes to the replacement frequency, cleaning regimen or wearing schedule. Written material is helpful to communicate the key changes. Additionally, a member of the practice staff can spend time with the patient to cover any points in further detail. It is extremely important to reinforce the need for compliance to all aspects of contact lens use.

The follow-up after a refit will vary depending on practitioner preference, the patient and the type of lenses being used. Where lens material has been changed, for example, from hydrogel to silicone hydrogel, or where a multi purpose solution is being used that may be interacting with a different lens material for the

first time, it is prudent to arrange a short appointment at the end of the trial period. To maximise the likelihood of finding solution induced corneal staining, the patient should be seen after 2-4 hours of wear, and the view of fluorescein enhanced with the use of a yellow barrier filter.<sup>28</sup> Where the practitioner feels confident to do so, perhaps following a refit to an enhanced version of the same lens, a follow up phone call rather than practice visit can be more convenient for both parties.

### Make a difference every time

The very final part of this rejuvenated approach to aftercare can almost be seen as a personal challenge to the individual practitioner. The **OPTIMUM** aftercare finishes with a call to action: make a difference in each and every aftercare. It is a final sense check for the practitioner to ensure that every possibility has been explored. Where a sub-optimal experience has been described, a new lens has been recommended; where the current contact lens may be compromising on health, a refit has been conducted and where visual acuity can be maximised through a change in prescription or correction of astigmatism, this has been acted upon. For those instances where the patient is wearing the most optimal lens, the challenge is to ensure they leave the practice with something new: a new piece of advice regarding compliance, a lid hygiene regime or comfort drops if required, travel sized solutions or a discussion about full ocular UVR protection and a pair of quality sunglasses.

The end result is to ensure the patient perceives and indeed receives, value from the routine aftercare visit. The outcome is to build a stronger relationship between patient and practitioner, so laying the foundation for improved patient satisfaction and the long-term goodwill needed for successful practice building. A rejuvenated aftercare appointment should be an extremely positive, and dare it be said, energising experience for all involved.

### About the author

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