PRO TO PRO
CONTINUING EDUCATION

KEEP IT CLEAN AND FOG FREE

Lens and High-Touch Single-Use Surface Solutions

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[1 CE CREDIT]

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LEARNING OBJECTIVES:

Upon completion of this program, the participant should be able to:

1. Review high-touch surfaces including lenses for both the practice and the consumer.
2. Review advantages of single-use over reusable microfiber cloths.
3. Learn about the rigorous independent testing of single-use ZEISS Wipes by COLTS Laboratory.
4. Learn how wipes and other disposable and replenishable products increase average sales and encourage reorders.

TO EARN CONTINUING EDUCATION CREDIT:

This course has been approved for one (1) hour of Ophthalmic Level II continuing education credit by the ABO. To earn ABO credit, please review the questions and take the test at 2020mag.com/ce.

We have all spent considerable time planning for re-opening. How can we improve hygienic practices in the office, exam room and dispensary? This course covers single-use disposable wipes to facilitate easy and convenient lens and high-touch surface cleaning, frequently and conveniently. Additionally, consumers, more than ever before, want convenient products to clean lenses and other frequently-touched surfaces like their smartphones and tablets. For the ECP practice, this is another easy-to-implement practice-builder product category. A box or two of wipes increases the average sale and is a product reordered regularly. With its small footprint, wipes and small spray bottles fit neatly into the retail space. And for those expanding into eCommerce in response to brick-and-mortar business disruption, these tiny cleaning wipe packets and anti-fog spray fit the new eCommerce opportunities that many ECPs are pursuing, in light of the lessons learned from COVID-19. Let's face it; microfiber cloths don't get cleaned enough and are often filthier than the lens or other surface you are trying to clean. Personally, I love to open a tiny little package, remove a single-use wipe and voila, instant sparkling lenses with the Lens Wipes and shiny clear screens with Mobile Screen Wipes; these little packets make me happy, and they make your patients happy too. I visited ZEISS corporate headquarters in San Diego, Calif., and I was like a kid in a candy store. They have a giant bowl filled with ZEISS Wipes at the reception counter. It took immense control not to use both hands to grab bunches of these little gems. In addition to retailing ZEISS Wipes, I suggest giving a freebie to every patient. After they use them once, they will never want to go back to standard cleaning cloths.

LENS AND SCREEN CLEANING SOLUTIONS

Washing your hands is a proven practice to ensure good hygiene to help prevent the spread of harmful germs, but it is not the only sensible protective measure that we should be taking. Regular cleaning of the surfaces that we use daily such as door handles need to be performed appropriately to minimize the spread of germs within our households and at work. However, other surfaces are often omitted from regular cleanings, such as personal items that we touch or interact with frequently during the day. These items are referred to as high-touch surfaces. I recently spoke with a friend of mine who was an ER nurse, and she laughs because she has been called OCD and a germaphobe for her diligence to hygiene and cleanliness, but it turns out that germs lurk on routinely touched surfaces, and with COVID-19, "keep it clean" has become "a thing."

What are high-touch surfaces? For the majority of people, high-touch surfaces consist of the following:

- Keys
- Wallets and purses

- Smart devices--mobiles, tablets and smart watches
- Computers—laptops, keyboards, etc.
- Eyeglasses and sunglasses
- Drink bottles

Due to the regular contact with hands, it is important that these high-touch surfaces/objects be regularly cleaned. With the exception of drink bottles and wallets, which can be machine-washed, the other items would require wiping or cleaning with cleaning products to ensure they are cleaned regularly and thoroughly. The key to frequent cleaning is convenience, and nothing is more convenient than a wipe.

How dirty can these items become? There have been a number of research studies conducted that have looked at the bacterial content of some of these frequently touched items, and these can give us some context to how dirty these items can get.

SMART DEVICES

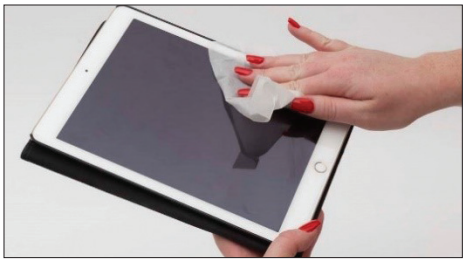
Smartphone usage is extremely high, and we all use our phones a number of times throughout the day. A recent survey by asurion, a global tech care company, estimates that Americans touch their phone on average 96 times day.

This means there are a number of opportunities for germs to be transferred to smartphones. A study by a leading German university (Hochschule Furtwangen University) analyzed 60 smartphones for bacteria growth, and 100 percent of phones that had not been cleaned showed evidence of bacterial presence on them in small concentrations. The research indicated that on an uncleaned 4-inch touch screen approximately 60 microorganisms are present. It is important to note that not all of these microorganisms are harmful and/or dangerous. However, the study does show that small numbers of some potentially dangerous bacteria, such as Escherichia coli, can be found on the touch screens. Fifty percent of the bacteria identified belonged to "Risk Group 2," meaning they were potential pathogens.

What is the best cleaning method for smart devices? Researchers recommend either cleaning a smartphone with microfiber cloths or even better, cleaning wipes that are specifically designed for smartphones, to improve hygiene and reduce bacteria by up to 96 percent.

ZEISS Mobile Screen Wipes are specially designed to provide convenient, safe and effective cleaning for digital devices. The fast-drying pre-moistened alcohol-free wipes are designed to remove fingerprints and dirt from your mobile device.

In order to effectively clean your smart device, then take the following steps:



1. First, if your phone or tablet is in a case, then you should remove the device, so you can clean the actual device fully.
2. Open a packet of ZEISS Mobile Screen Wipes and remove the folded wipe.
3. Lightly brush away any dust and dirt from the screen with the folded wipe.
4. Next, unfold the wipe and begin to clean the screen and body of the phone/tablet or smartwatch with circular motions. Ensure you clean all around the surface of the device.
5. One area of the devices that does tend to accumulate dirt and grime is the charging points. Use the wipes to clean the surface area around these points and then use a small brush, dry foam swab, or a dry cotton bud to gently remove dirt from within this area.
6. Finally, you should ensure if you use a case for your phone/tablet that this is also cleaned appropriately based on its material. For the majority of plastic or hard cases, warm water and soap are adequate. When the case is completely dry, you can re-attach it to your device.

Eyeglass lenses are high contact: Due to their close contact with the human skin, nose and mouth, and regular contact with human hands, it is safe to assume that spectacles could potentially carry germs, and therefore it would be beneficial to clean them regularly. In 2018, a study was performed by Hochschule Furtwangen University in Germany to investigate the bacterial levels on spectacles and analyze the efficacy of four different cleaning methods to reduce microbial loads. The cleaning methods tested were moist alcohol and alcohol-free lens cleaning wipes, dry tissue and dry microfabric cloth.

The results of the study were: All spectacles are contaminated with bacteria including potentially pathogenic ones and therefore should be considered as objects which could carry infection.

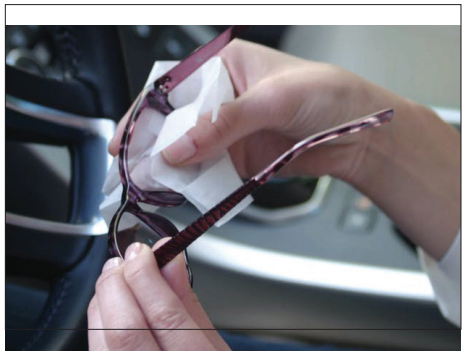
Of the four methods tested, moist lens cleaning wipes showed the most germ reduction at ≥99 percent (means reduction). Cleaning with dry tissues and microfabric cloths showed lower levels of bacteria reduction. Evidently, wet cleaning with a moist lens cleaning wipe is more effective than simple mechanical cleaning with dry tissues and cloths.

The benefit of ZEISS Lens Wipes vs. Microfiber cloth:

- Lens Wipes are single-use, and therefore dirt cannot be transferred to other lenses. Microfiber cloths need to be washed regularly.
- Lens Wipes are a soft micro-fine tissue made from natural cellulose to ensure a gentle clean.
- Lens Wipes are individually wrapped, meaning they are convenient and portable and are much more likely to be on hand for consumers to use whenever needed.
- Lens Wipes are premoistened with alcohol and cleaning surfactants that support the removal of dirt and grime.

Why is caring for eyeglass lenses so important?

- High quality eyeglass lenses are an investment; proper cleaning protects your patients' investment.



- Incorrect eyeglass cleaning can cause microscopic scratches—which are initially invisible—on the eyeglass lenses. Gradually, the eyeglass lens wears down, the potential of even the best lenses is diminished, and vision is ultimately impaired.

Warn patients and help them avoid damaging their eyeglasses!

- Do not clean eyeglass lenses with clothing, towels or paper.
- Do not use commercial glass or household cleaners for cleaning eyeglasses.
- Do not put eyeglasses down on the lenses, always on the frames. Always store eyeglasses in an eyeglass case wrapped in a microfiber cloth to avoid damage by shaking the case.
- Do not expose eyeglasses to high temperatures of more than 176 degrees Fahrenheit (e.g., in a sauna or on the car dashboard in sunlight).
- To avoid damage to the eyeglass frames and thus to the centering, do not put glasses on casually with one hand.

ZEISS Pre Moistened Lens wipes are designed to provide convenient, safe and effective cleaning for optical surfaces, including coated lenses. The fast-drying pre-moistened alcohol wipes are designed to leave a streak-free finish with no risk of scratching.

How to clean your glasses:

1. Open a sachet of ZEISS Lens Wipes and remove the folded wipe.
2. Hold the glasses gently by the frame.
3. Using the folded wipe, gently wipe away any surface dust.
4. Next, unfold the wipe and begin to clean the lens using circular movements until clean.

What products can be used to clean other high-touch items?

Benefits of ZEISS Lens Wipes:

- ZEISS Lens Wipes are specifically developed for the gentle and effective cleaning of glass and plastic glasses/spectacles (particularly effective for high quality coated precision lenses).
- ZEISS Lens Wipes have been extensively tested by COLTS, an independent laboratory that has awarded ZEISS products the COLTS seal, which shows the lens wipes clean gently, effectively and safely.
- Easily removes smudges, dirt, germs, fingerprints, dust and oil.
- Through cleaning, the formula leaves lenses free of streaks and residue.
- Gentle formulation suitable for high quality coated lenses leaving a scratch-free finish.
- Dries in seconds for quick and effective results.
- Individually wrapped wipes are ideal for use on-the-go or at home.
- One wipe with the high quality micro-fine tissue will remove fingerprints and smudges from daily use, and won't leave any scratches, streaks or residue.
- The wipes are individually wrapped so that you can clean your glasses at home or on the go. Alcohol-based, with both ammonia and fragrance-free, the wipes safely and thoroughly clean all optical surfaces, including cameras and binoculars.

COLTS TESTING

When you recommend a product to your patients, you want to feel confident that the product claims are supported.

ZEISS partnered with COLTS laboratories, a trusted leader in the optical industry, to provide reliable and independent testing to meet the highest standards and achieve the award of the coveted COLTS performance seal.

At COLTS, ZEISS Lens Wipes went through three key tests: Oily Cleaning Test, Abrasion Testing and Soak Testing, which are summarized as follows:

Oily Cleaning Test: The Oily Cleaning test validates ZEISS' claims of "thorough cleaning" and "streak-free." In this test, a new lens is measured for a haze gain value, which is a measurement of the light that is transmitted through the lens. This measurement is then recorded. After this, the lens is covered with WD40 oil and exposed to a cycle of mechanical strokes of a lens wipe using a 10 pound weight to simulate normal cleaning. A haze gain reading is then taken to confirm that the lens has been cleaned and is now achieving a haze gain value, which is within a standard deviation range to the original reading.

Abrasion Test: Abrasion Testing ensures the wipes clean gently and are 100 percent scratch-free. This test simulates one year of lens wearing by exposing the lens to a cycle of 4,000 mechanical strokes of a lens wipe using a 10 pound weight to simulate one year of natural cleaning. Haze gain measurements are taken before and after to confirm no movement outside of a standard deviation range.

Soak Test: Soak testing ensures the wipes are safe and gentle on all lens types. This test involves a lens being submerged in the liquid solution used in the wipes for over 48 hours to monitor for any delamination effects caused by the solution. After 24 hours, the lens is evaluated under a high-intensity inspection lamp, and any signs of crazing, delamination or cloudiness are recorded. The lens is then placed into the cleaning solution for another 24 hours before being removed and evaluated again under a high-intensity inspection lamp. Three areas of visible effects are classified on a scale with A5, B5 and C5, representing no visible effects for crazing, delamination or cloudiness. ZEISS Lens Wipes are confirmed to achieve A5, B5, and C5 across all three classifications.

Tests by COLTS, an international leading quality test laboratory within the optics industry, have shown that ZEISS Lens Wipes' cleaning performance is the most effective compared to 10 alternative lens wipes—it cleans gently without causing scratches.

More gentle: The surface and coating of prescription lenses remain in sound condition even during a long-term test.

More thorough: No other tested lens cleaner removes dirt as effectively.

LENS FOGGING

Now let's talk about eliminating fogging of lenses, something we are all experiencing in

the age of facemasks and COVID-19. Lens fogging has also become a real pain point for the eyeglass wearer with the need to wear facemasks to lower the risk of spreading COVID-19. As ECPs, we need to be aware of products that mitigate this visual impairment for patients.

Why do spectacle lenses fog up? Humidity causes water to condense on the lenses. Many small droplets form a non-transparent surface across the lens. The individual droplets create a so-called contact angle on the lens. The larger the angle, the hazier your vision becomes. With ZEISS Fog Defender System spray, the water droplets encounter a flat film, ensuring that there is no contact angle. The end result when the contact angle equals 0 degree: The lens does not fog up.

How does the ZEISS Fog Defender System Kit work? Using ZEISS Fog Defender spray and cloth together on your lenses results in the application of a thin hydrophilic film—comparable to having a temporary additional coating on the lenses. This ensures that fine, condensed water droplets do not accumulate on the lens surface, causing fogging. Due to the hydrophilic coating, any moisture spreads out on the lens to form a thin, even layer that does not impair visual clarity. Thanks to the cloth, this process is quick, gentle and does not damage the lens coating. If the lenses need to be cleaned again, it is recommended that you repeat this lens care process for maximum protection against fogged-up lenses.

The cloth is impregnated with hydrophilic ingredients—why does this matter? The unique micro-fine cloth is impregnated with hydrophilic* ingredients; these are reactivated by the spray, and gentle wiping across the lens results in a micro hydrophilic layer that delivers anti-fogging properties with no impairment to lens clarity. (*A hydrophilic molecule or substance is attracted to water. A hydrophilic surface layer such as that formed by Fog Defender System ensures maximum contact between the surface and the water, forming a thin uniform optically clear layer rather than an uneven condensation layer that fogs the lens and interferes with transparency and clarity.)

ANTI-FOG TESTING

ZEISS Fog Defender System has been subjected to a number of controlled tests to ensure the product achieves maximum fog protection of up to three days.

Test 1 - Optical Clarity

In the optical clarity test, the lens is subjected to an optical clarity and compatibility test, to ensure Fog Defender System has no negative impact on optical clarity. In this test, treated lenses are held at a distance of 1 to 2 feet and observed using the room lights as a background. The tester looks for any waves, streaks, coloration, other optical imperfections, or significant differences from the untreated lens (control lens), which are then recorded. The lens is also subjected to a haze gain test, which uses light transmission to measure the haze on the lens; the lower the measurement, the better the optical clarity.

Test 2 - Huff Test

Three large exhales of air are applied directly to a lens treated with Fog Defender System to confirm ZERO fogging. This test simulates the impact of wearing a mask and glasses. A pass for this test is determined by the observation of a uniform film of water that occurs over the lens, ensuring no visual impairment. The lens fails the test if either non-uniform film appears (e.g., small water beads), which can slightly distort vision, or if observed fogging occurs (white film), which causes significant loss of vision.

Test 3 - Warm Mist Screening

A treated lens is placed and held directly into a warm mist vapor stream (35 to 40 degrees Celsius and 50 to 60 degrees Celsius), and the results are observed. For a treated lens to pass this test, it must not show any observation of a non-uniform film forming or of any observed fogging (formation of a white film). Lenses treated with ZEISS Fog Defender System are able to pass this test for over 14 minutes of direct exposure to 50 to 60 degrees Celsius warm mist vapor and over 22 minutes at 35 to 40 degrees Celsius.

Test 4 - Cold to Room Temperature (CRT) Test

A treated lens is taken from an environment of -5 degrees Celsius to an environment of room temperature (25 degrees Celsius) and confirmed to show no fogging. This represents lenses being exposed to sudden changes in temperature change, which can cause fogging on optical lenses. This test is repeated with the same lens every 24 hours and confirms that after 72 hours, the treated lens still shows no signs of non-uniform filming or observed fogging.

RETAIL TALK

The little things are the optical icing on the cake! Little things can have a big impact on the patient's visual experience and their impression of the eyecare practice. At the end of the day, ECPs provide medical and optical services and retail products. Provide your patients with products that can go with them anywhere and conveniently address key pain points: dirty lenses, dirty high-touch device surfaces and anti-fogging for lenses meet the definition of creating a better experience for the patient. Remember, they have made a substantial investment in their lenses and frames, including high-end premium coatings, all to improve their vision. Dirty and fogged lenses are equal to poor vision. These packets of wipes (lens and mobile screen) and purse size Fog Defender System kit may be small, but they are the optical icing on the cake for the patient. ■

Sources provided upon request

To earn ABO credit, please review the questions and take the test at 2020mag.com/ce.