



## True Blue Checklist

### Did You...

-  **Help the patient realize the amount of his/her own digital device use?**
-  **Explain the potential dangers of harmful Blue-Violet light and where it comes from?**
-  **Review the benefits of Crizal® Previncia® lenses?**
-  **Reiterate that the purple hue from the lens is the reflection of Blue-Violet light and shows it is working?**
-  **Arm the patient with the verbiage and confidence to explain the benefits of lenses to their friends and family?**

### End Notes / References

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# Crizal® PREVENCIA®

For more information, contact your local Essilor Sales Consultant or visit [Crizal.com](http://Crizal.com).



Applies to the Crizal lens process

## Crizal®



# Crizal® PREVENCIA®

Revolutionary Protection for Eyes

# Blue Light is Everywhere, Exposure is Increasing

From the moment we're born, our eyes are exposed to blue light. This cumulative exposure comes through both outdoor and indoor environments. Add to this the escalation of modern digital device use,<sup>1</sup> and direct exposure to blue light over our lifetimes is more than ever before.<sup>2</sup>

Sunlight is one source of blue light. The amount of blue light exposure from sunlight varies depending on a person's geographic location, the time of day and the weather. Blue light from sunlight also reaches indoors through windows.

Another significant source of blue light exposure is indoor artificial lighting, so being indoors and away from the sun doesn't eliminate blue light exposure.

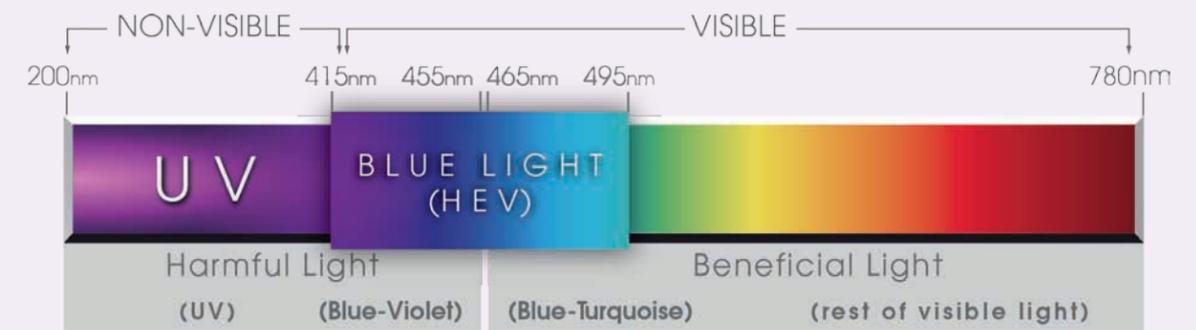
As the U.S. moves toward more energy-efficient lighting sources, such as compact fluorescent bulbs (CFLs) and light-emitting diodes (LEDs), blue light surrounds us even more.<sup>3</sup> CFLs contain 25 percent blue light and LEDs have 35 percent blue light.<sup>4</sup> In fact, the cooler the white LED the higher the proportion of blue light. LED lighting is expected to reach 84 percent market penetration worldwide by 2020.<sup>5</sup>

Another source of blue light is the technology we use. Digital devices of all kinds emit blue light from their screens. Smartphones, tablets and e-readers, desktop and laptop computers, video games, televisions and other electronic devices are all sources. People of all ages use digital devices and, according to The Vision Council, digital device use has increased each year since the organization first conducted a survey about the topic in 2012.<sup>6</sup>

The "digital age" harkens efficiency, accessibility and connectivity ... but also a lifetime of exposure to potentially damaging Blue-Violet light, a component of the blue light spectrum.

## The Good and the Bad of Blue

Make no mistake, not all blue light is bad light. There are many blues on the electromagnetic spectrum, from Blue-Turquoise light to Blue-Violet light, all of which are high-energy visible (HEV) light.<sup>11</sup>



## Blue-Turquoise Light

What is now believed to be "beneficial blue light," sometimes referred to as "healthy blue," is the Blue-Turquoise light located on the electromagnetic spectrum at the 465nm-495nm ranges. It is believed to have positive effects on the body, such as regulating a person's sleep/wake cycle, contributing to memory and cognitive performance, regulating body temperature, and enhancing mood. Blue-Turquoise light is also essential for color perception and visual acuity.<sup>12</sup>

"We must allow the good blue light to come through," explains Dr. Kirk Smick, chief of optometry services at Clayton Eye Center in Morrow, GA. "It is so important to know the differences in blue light, to identify the healthy blue and the harmful blue. That's the only way we can protect our patients' eyes now for the future."

## Facts About Today's Digital Lifestyle

1 in 4

Number of kids who spend more than 3 hours each day on digital devices.<sup>7</sup>



72%

Percentage of adults unaware of the dangers of blue light.<sup>9</sup>



100+

Average times each day people look at their mobile devices.<sup>10</sup>



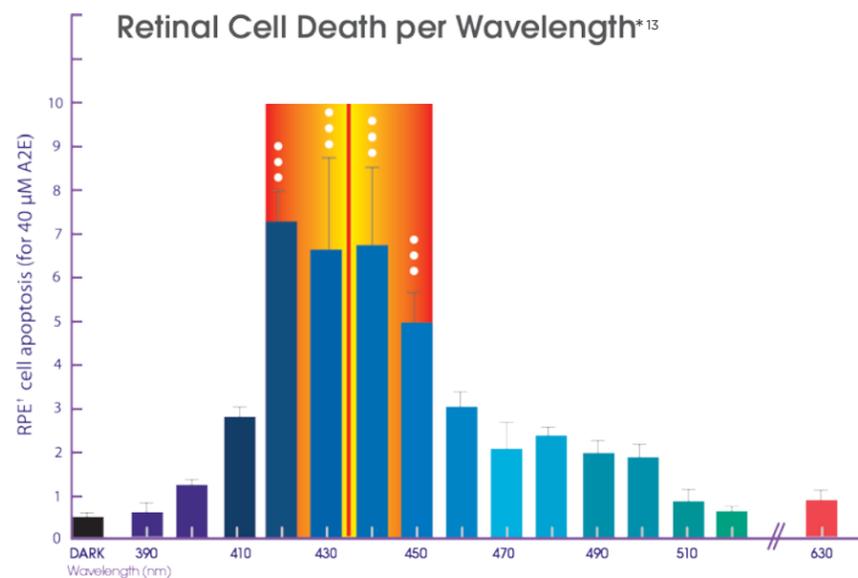
9+ HOURS

Amount of time 30% of adults spend on digital devices each day.<sup>8</sup>



## Blue-Violet Light

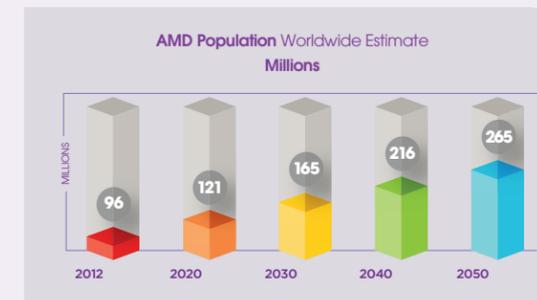
On the flipside, what is now believed to be “harmful blue light” is identified as Blue-Violet light, which is located at the 415nm-455nm range on the visible light portion of the electromagnetic spectrum. In 2012, Essilor partnered with the Paris Vision Institute to conduct a study that resulted in a breakthrough discovery of those precise bands of Blue-Violet light that are likely to be most harmful to retinal cells. Scientists from the Paris Vision Institute developed “a unique illumination system that allowed cultured porcine [swine] retinal cells to be exposed to narrow (10nm) bands of light.”<sup>12</sup> Using this experimental laboratory test system, the scientists found that most retinal cell death occurred when exposed to Blue-Violet bands between 415nm-455nm, with a peak at 435nm.<sup>13</sup>



\*Based on in vitro test on porcine (pig) cells (2013)

Harmful blue light, the Blue-Violet light, has been linked to retinal disorders such as age-related macular degeneration (AMD),<sup>13</sup> which is a leading cause of vision loss in adults over the age of 50.<sup>14</sup>

“Optometrists and dispensers must educate themselves and become knowledgeable about the potential impact of different wavelengths of blue light. Once I started to learn the science behind harmful Blue-Violet light and started to survey patients about their digital device use, I realized the seriousness,” states Dr. Matthew Geller of Complete Family Vision Care in San Diego. “I almost felt bad for not recommending the right protective lens for my patients earlier.”



With an aging global population, the occurrence of AMD is expected to reach 265 million cases by 2050.<sup>15</sup> This statistic does not, however, take into account any increased risk factors that could impact these numbers.

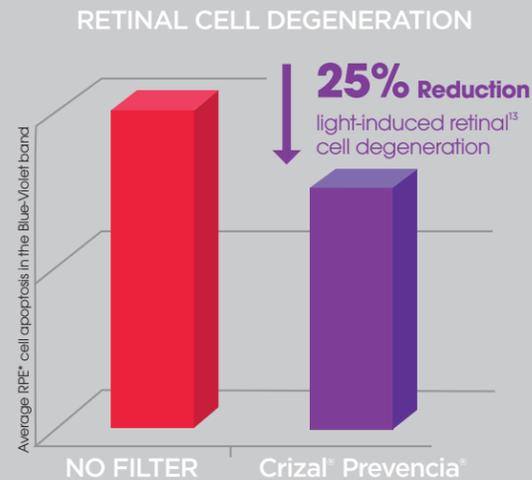
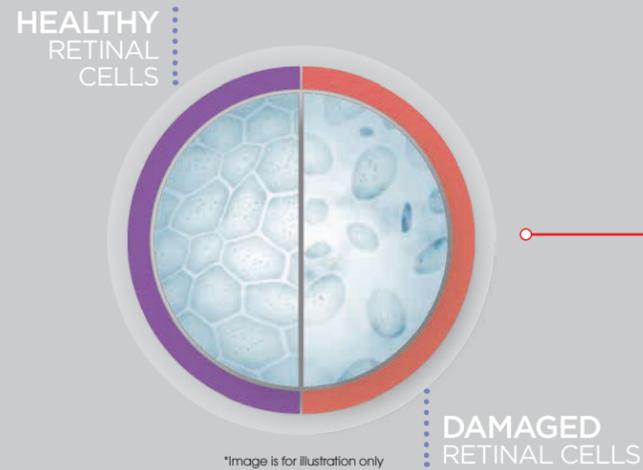
“The likelihood for macular degeneration increases with age. Our eyes and vision just change as we get older,” says Dr. Linda Bennett of Bennett Family Eye Care in Belmont, Mass. “As eyecare professionals, we want to help patients try to reduce their risk factors that can lead to the premature onset of vision problems and eye diseases.”

Nearly three in four adults (72 percent) don't know that digital devices emit blue light.<sup>16</sup> Patients who may need additional protection from harmful Blue-Violet light exposure span across all ages, including:

- Those with a family history or exhibiting signs of AMD
- Heavy digital device users such as
  - Working professionals
  - Children and teens
  - Gamers

“Every person using any digital device for an extended period of time needs to reduce their exposure and consider getting protection from harmful Blue-Violet light. But especially those with a family history of AMD and those who are heavy users of digital technology,” says Dr. Bridgitte Shen Lee, co-founder of Vision Optique in Houston.

# Crizal® PREVENCIA®



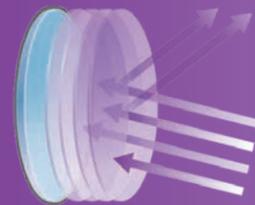
Remember, it's not about blocking blue light; it's about reducing exposure to harmful Blue-Violet light while letting beneficial Blue-Turquoise light through.

Crizal® Previncia® lenses feature Light Scan™ technology, which enables the lenses to deflect up to 20 percent of harmful Blue-Violet light hitting the front of the lens. In the laboratory test by the Paris Vision Institute, the specially coated lenses reduced retinal cell death by up to 25 percent.<sup>13</sup>

- Selectively filters out up to 20 percent of harmful Blue-Violet light.
- Allows beneficial light, including Blue-Turquoise light, to pass through.
- Maintains excellent transparency with a clear, No-Glare lens for optimal vision at all times.

## The Crizal® Previncia® Difference

The Crizal Previncia proprietary formulation of anti-reflective treatments deflects Blue-Violet light while allowing beneficial light to pass through.



## Doctor-Directed Dispensing

At Dr. Shen Lee's practice, they place a high priority on asking patients the right questions to determine their estimated level of exposure to harmful Blue-Violet light and to help determine the best lens recommendation.<sup>17</sup> The conversation starts with the doctor in the exam room and continues with the dispenser during dispensing.

The mindset wherein the doctor recommends lens prescriptions with protective lens coatings is called Doctor-Directed Dispensing. Dr. Smick believes the only way to really take charge of a patient's visual

needs is to note all prescriptions, including lens coating recommendations, in the patient's file and to discuss the reasons for these recommendations before the patient even leaves the exam room. This allows for a smooth handoff to a dispenser who can dispense to the patient according to the doctor's prescription and recommendation.

To do this effectively, the doctors and dispensers need to know which lenses provide some protection from exposure to harmful Blue-Violet light without blocking the good blue light.

"Every member of our office wears Crizal® Previncia®," explained Dr. Bennett. "That's how much we believe in the protection it provides."

"Our patients love Crizal® Previncia®," said Dr. Geller. "Once they understand the WHY—why they need it, why the lens has a slight purple hue, why it's so important for their eye health—they love the lens."

A recent survey of eyecare professionals familiar with Crizal® Previncia® lenses reinforces this sentiment.<sup>18</sup> Eyecare professionals dispensing Crizal® Previncia® believe the product provides the wearers with the best lenses for the health of their eyes (94 percent) and intend to continue selling the lenses (96 percent).

**Eyecare professionals surveyed also report high satisfaction.**

- 96%** Believe the lenses are innovative
- 96%** Are satisfied with the lenses
- 95%** Say their patients wearing the lenses are satisfied

**Patient research shows high patient satisfaction and intent to repurchase.<sup>19</sup>**

- 90%** Overall satisfaction
- 90%** Repurchase intent
- 81%** Satisfaction with cosmetic



# Have the Blue Conversation: Exam Room

Optometrists explain how they start the Blue-Violet light conversation and make lens protection recommendations to their patients.



**Linda Bennett, O.D.**  
*Bennett Family Eye Care  
Belmont, MA*

When learning about something new, everyone needs an “aha” moment before they really will change their minds and actions. For me, it was witnessing how much time my four-year-old granddaughter spends on her tablet computer. For my staff and practice, it was realizing how much time we spend on computers and tablets throughout the day ourselves. Then when we replaced all of the lights in our office to LEDs, it really hit home that we’re not looking through the same light anymore.

Now, everyone in the office wears Crizal® Previncia® lenses that provide some protection from the harmful Blue-Violet light. This demonstrates to patients how concerned we are about the possible long-term effects of Blue-Violet light, and it makes it easy to talk to them about it. We can say to patients, we are wearing this protective lens right now. In fact, we actually have purple “I’m Wearing Previncia®” pins that all our staff members wear on their lapels.



**Matthew Geller, O.D.**  
*Complete Family Vision Care  
San Diego, CA*

Eyestrain is the biggest complaint from my patients. Most patients will do anything to feel better at the computer, except to stop using the computer.

Once I’ve identified a patient at risk for AMD (family history, digital device use, sunlight exposure, smoker), I explain that new technology is available for their lenses that will block some of the damaging wavelengths of light. I show the patient the electromagnetic spectrum, point out ultraviolet (UV) light and that Blue-Violet light is adjacent to it. Then, I explain that Blue-Violet light is believed to be harmful to the retina.

Most patients know that UV light is bad, so visually showing them where Blue-Violet light is in relation to UV really makes an impact. Also, patients want options to improve their daily comfort and reduce eyestrain so prescription lenses with an exceptional anti-reflective coating will address this need. Therefore, the conversation is an easy one to have.



**Bridgitte Shen Lee, O.D.**  
*Vision Optique  
Houston, TX*

In the exam room, we talk to every patient about their digital device use. We added three areas of questions to the electronic record template our practice uses to help us with this:

- 1) Computers—How many monitors? How many hours a day at home and work? Average of 2-4 hours, 4-6 hours, 6-8 hours, more?
- 2) Smart phone / tablet—including social media, games, Internet, texting, watching movies, reading—asking how many hours a day do you spend looking at your smart phone and tablet combined? Average of 2-4 hours, 4-6 hours, 6-8 hours, more?
- 3) Print—What percentage of your reading is in actual print? Average estimate of 5%, 10%, 20%, more?

Answering these specific questions really puts into perspective for patients how much they depend on digital devices, especially when we reveal the total

hours. This opens the door for our doctors to share with patients the concepts of harmful Blue-Violet light and its potential impact on the risk factors affecting the eyes over the long term.

As we recommend Crizal® Previncia® lenses in the exam room, we show patients glasses with a Crizal® Previncia® lens on the right and a Crizal Avancé UV™ lens on the left, because most of our patients already have the No-Glare lenses. We point out that they can see the lens’ additional protection against harmful Blue-Violet light because of the slight purple hue being reflected. We tell patients, “This is what your new lenses will look like. It’s reducing the bad Blue-Violet light by deflecting 20 percent of it.”

The doctors and opticians reinforce to patients that the lenses are being recommended for a specific reason.



**Kirk Smick, O.D.**  
*Clayton Eye Center  
Morrow, GA*

A few years ago, I visited the Paris Vision Institute for three days. I spent time with some of the scientists and studied the methods behind the discovery of harmful Blue-Violet light. As a doctor, it was important for me to comprehend the nuances of the research and Blue-Violet light’s potential impact on the eyes. Once I learned about it, it became our duty to share the information with our patients.

When talking about the prevalence of exposure to harmful Blue-Violet light with patients, we relate it to their everyday lives. Most people understand that when they visit the local home improvement store to buy new light bulbs, they cannot purchase 60-watt or 100-watt incandescent bulbs because those bulbs are no longer made. There are new forms of indoor lighting we have to use. Couple this with how much time we spend on devices—especially how much time our children spend watching television, texting, playing games, reading, researching on

the Internet, etc.—and patients start to sense that change is in the air.

At the end of eye exams, we talk to patients about what we are prescribing and the reasons why. This prescription includes the recommended lens coatings that will help protect from harmful Blue-Violet light. The doctors escort patients to the optical dispensary, and in front of the patients we repeat to the optician what we are prescribing and why. Then, the optician reviews with patients what the lenses will be like.

At least three times during the office visit, each patient hears the lens coating recommendation and how it protects from harmful Blue-Violet light. Our doctors and opticians are in sync and we provide patients with all the information needed up front. This nearly eliminates any questions patients may have during the dispensary process.



# Have the Blue Conversation: Optical Dispensary

Having a needs-based conversation with your patients will help you successfully recommend Crizal® Previncia®. The following steps can be used by dispensers to identify and address their patients' needs.

## Step 1:

### Uncover Patients' Needs

- Ask open-ended questions about patients' activities and visual needs:
  - "What is a typical day like for you?"
  - "After all that time on your digital devices, how do your eyes feel at the end of the day?"
- Use open-ended questions to identify patients who may benefit from added protection:
  - Family history or early signs of AMD
  - Frequent digital device users

## Step 2:

### Connect Lens Benefits to Patients' Needs

- Take time to educate patients on Blue-Violet light, its potentially harmful effects and the importance of reducing exposure to Blue-Violet light
- Use language patients can easily understand
- Tie lens features to their uncovered needs and reinforce the importance of protecting their eyes

## Step 3:

### Address Patients' Needs

- Make a product recommendation, referring back to the conversation you just had with the patients and tying it back to how it may benefit them

## Bettina Pierre

*Optical Manager, Bennett Family Eye Care  
Belmont, MA*

All of our doctors discuss harmful Blue-Violet light with patients, but we still review it with them when discussing lens options. We review the importance of blocking only harmful Blue-Violet light not all blue light, reinforcing to patients that buying generic "blue blocker" lenses are not the same.

The most common concern from patients is the purple-reflected hue. This is why having the opticians

wear the lenses is important. Most of the time when we tell patients we're wearing Crizal® Previncia®, they react, "Oh, I couldn't tell."

Then, we hand patients a demo lens. When patients can see that the purple-hue reflection is only at certain angles and they can look through the lens, their concerns about the reflected light are diminished.

## Drew Dunlap

*Practice Administrator, Dunlap Vision  
Bourbonnais, IL*

## Shannon Price

*Dispensing Optician, Dunlap Vision  
Bourbonnais, IL*

Our optician group is actively changing the way we approach patients and lens recommendations.

First, we're changing our mindset. We should not feel bad about recommending the best lens possible to patients. Glasses are a medical device, not a fashion accessory. Patients use glasses for their vision on a daily basis for up to two years before getting updated prescriptions. It's important for us to make sure they understand the lens functionality.

Second, when patients come out of the exam rooms they are in "medical mode." Therefore, we talk to them about the lenses, the Blue-Violet light selective deflection properties and the potential benefits of reducing exposure to harmful Blue-Violet light while they are still in this mode of thinking. We discuss the lens first.

Once they've selected the lens and proper lens coatings for their eyes, we start looking at frames. The patients'

modes of thinking and priorities switch to retail, aesthetics and fashion when selecting frame styles, and it is very difficult to get them to change back.

Third, we wear Crizal® Previncia® ourselves. Opticians are constantly under LED indoor lighting and are using computers and tablets; we are the perfect candidates for these lenses. Patients often ask, "Well, do you use them?" We confidently can reply that we do.

Finally, patients need to know why Crizal® Previncia® lenses are the best and they need to be equipped with how to explain them to others. If patients' friends or family members ask them about the iridescence of their glasses, patients shouldn't second-guess their purchase because they don't know what to say. Instead, we want to empower patients to be proud that they're wearing the latest technology to decrease exposure to harmful Blue-Violet light. We want to empower patients to articulate this to their peers.