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Digital Eye Strain: What Are the Long Term Health Implications?

Brian McDonough:
Digital eye strain is considered a very serious health problem, but whether it's considered serious or not, it's certainly annoying if you're someone who has to deal with it. Hi, I'm Dr. Brian McDonough and welcome to Primary Care Today on ReachMD. Today my guest is Dora Adamopolous. She is an optometrist from Alexandria, Virginia. She's joining me right now from Las Vegas where you're at an electronic show. Tell me a little bit about the show and then we'll get a little more importantly into the whole concept of digital eye strain and what's it's all about.

Dora Adamopolous:
Sure. Hi. So, we've been attending the Division Council here at the Computer Electronic Show in Las Vegas and it's amazing the plethora of new devices, you know for your health and using it in your daily lives. And one of the things that we're there doing is discussing digital eye strain and the symptoms of it, make consumers more aware and things they can do to try to prevent and decrease some of those symptoms.

Brian McDonough:
You know, it's interesting some of the literature that I've seen and some that's been provided, say on average we look at our mobile devices more than 100 times a day and that there are many people who actually have so-called digital addiction and nomophobia, that's the fear of being without your mobile device, also seem to be a big issue. I mean this is all a relatively new phenomenon.

Dora Adamopolous:
It is and you know 70 percent of adults don't even know that their devices that they're looking at are emitting high energy light, the blue light that you hear about and a lot of the studies as we seen already blue light's damaging and the fact where it decreases your melatonin, you can't unwind at the end of the day. There's new emerging research showing blue light affecting patients that have macular degeneration and cataracts. The latest trend now will be is what happens to those healthy individuals and how much blue light ends up damaging their eyes.

Brian McDonough:
So, what research has been done thus far? I mean, it does sound very frightening and we have obviously a physician audience, many health care providers listening, they want to be obviously advising their patients about the best things. Tell me a little bit about, from your perspective, what research has been done and what it's been telling us?

Dora Adamopolous:
The research, first, on the patients that already have macular degeneration is that those retinal pigmented epithelial cells in the back of the eye, they're already damaged and that's why they have AMD. So blue light actually triggers those to become more pronounced and it sometimes progressed the disease a little more. So, what's more important is that children under the age of 18, the lens behind their eye, does not filter UV and doesn't filter blue light as well, so, they are very susceptible to it. In addition to the regular folks, people over 18, who are looking at these devices all day, they're getting blurry vision, red eyes, itchy, their posture is affected.

So, it's this whole ergonomics, you know how their eyes feel, and they end up feeling that they have symptoms of headaches or strain, when really it's from digital use all day.

Brian McDonough:
And obviously, as an optometrist, you're wired into this, you see people and you worry about their vision and what's going on. I mean it seems like there are certainly things we could cut back on. Many people are obsessed with their mobile phones, they look at them all

time, but also a lot of people need to use them, they're addicted for a reason. They're consistently getting messages, their children text, so that's the way they're communicating with each other. What can we do? Do you try to reverse the trend? Are there ways to protect you, devices you could put on your mobile phone that help? What is there out there?

Dora Adamopolous:
Yeah. It's really hard to stop using the device, as we all know, and you're right about that. So, some simple things we can do is just you know holding things further out, I know with a mobile device in your arms you tend to bring it really close, so you want a good arm's length from the screen. You want to adjust your devices so that contrast is reduced a little bit. Make sure your computer monitor's at eye level and kind of take a break from the computer. If you can remember 20, 20, 20, every 20 minutes take a 20 second break by looking 20 feet away and that causes you to blink and kind of give your eyes a visual break from the computer screen.

Additionally, there's lenses that have been developed to help block out some of the blue light. So, when you go in to see your regular eye care practitioner you can have your patient recommend or mention that they're getting these symptoms from digital eye strain and there are solutions for lenses, for prescriptions and without so that blue light can be blocked out.

Brian McDonough:
So, there are steps you can take. I'm amazed, I was actually talking with a couple people of my age group, not my kid's age group, and when you really think about it the concept that people would prefer to be is typing messages to each other than just talking seems very bizarre when you really think about how difficult it is to type those quick messages.

Dora Adamopolous:
Sure. And that's why it's important for parents to become educated, but as well as the physician, pediatrician, so we can mention this to our patients and say you know how often are you on a device? One out of four kids is actually on a device more than three hours a day and it's gone up quite a bit from years before. Again, what I mentioned before, we don't know the long-term effects for children yet. So, the more we can do with the research about blocking out the blue light, the more important that will be for their overall health.

Blue light is also from just natural lighting around the house, around school buildings, the LED lights, the compact fluorescent lamps that we have that we upgraded to instead of the incandescent lamps. Now, those are actually more blue light emitters, so we have to also be careful of that.

Brian McDonough:
So, are we hurting ourselves making the progressive steps we are, things we think are positive. Are we actually leading to more problems?

Dora Adamopolous:
Well, this is not a disease and it's not permanent, but it's causing enough discomfort and it affects a person's productivity at work or school. So, that's why by having these eyegonomic solutions that we talked about or getting computer eye wear specifically for the distance that you're working at, will help relieve some of the strain and let you be more productive.

Brian McDonough:
I think many of us in practice have seen exactly what you're talking about though, people coming in with neck pain, shoulder pain, back pain, and you find out where they work and the setup of where they work, and how bad it is for so many hours that ergonomically it doesn't make any sense. That is problematic. At the show you're at, are they addressing any of these issues? Are you seeing more attention being paid to it?

Dora Adamopolous:
Yes. More attention to each person monitoring their own health biometrics, but also the work setup. So, a lot of standing desks. We actually saw somebody today who was on a treadmill with a desk on top, so they could actually walk while their typing. You know, the big balls can sit on to relieve their back strain. So, they are addressing how you sit during the day and what you can do to make yourself more mobile and making yourself more mobile, will also cause you to look away from the screen and give your eyes a break as well.

Brian McDonough:
If you're just tuning in, you're listening to Primary Care Today on ReachMD. I'm your host Dr. Brian McDonough. My guest today is Dr. Dora Adamopolous. She's a medical advisor to Division Council. She's an optometrist from Virginia who's actually joining us from Las Vegas now at an electronic show where many of the things we're talking about are being discussed and looking at different options. Is this a health related show or is it all sorts of electronics?

Dora Adamopolous:
Oh, it's all sorts electronics. They actually have divided it up into two sections. So, the one that we're in primarily, lots of health devices,

from measuring your blood pressure, your BMI, all the way to holograms and 3-D printing. And then the other section of the show is all the cool car things that people love to look at.

Brian McDonough:
Well, getting on the health side, which I'm sure you're paying attention to, even outside of the vision area, what are some things that you've seen that could potentially be impacting patient care and having a positive affect?

Dora Adamopolous:
A lot of virtual reality, meaning a way to log in and speak to doctors without having to actually visit an office. So, instead of people Googling answers to their questions, there's different companies that provide you services or apps where people can actually reach a practitioner. But I think that's kind of the new thing that a lot of these developers that are working on.

Brian McDonough:
It's funny you mention that, and this is totally unrelated and people listen to this show know I still work in clinical care and I'm involved in my hospital, and one of the things that we were talking about today was in the town where I practice, the city where I practice, there isn't that great access to psychiatry and dermatology. They are two of the areas where the offices seem to be filled, it's limited. It's hard to get appointments for our patients, and one of the things that came up in just a casual conversation was the use of electronics to basically allow people to have a derm visit electronically through a camera. A psych visit, you know you could skype or use some sort of technology. I guess that's what you're getting at?

Dora Adamopolous:
Correct. And they have actually secure web conferencing, basically, so it's still HIPAA compliant and that way patients are more apted to visit the doctor virtually versus having to sit in a waiting room especially if it's for a psychiatric matter. So, these developers felt that was something that is going to work well in the future.

Brian McDonough:
And of course we're talking today about digital eye strain and issues surrounding it and basically 61 percent of people admit that they experience digital eye strain at some point and that is a condition that includes dry irritated eyes, blurred visions, headaches as well as back and neck pain. What are some of the steps you can take clinically if those things are happening? Obviously what you want to do is limit the exposure, as you're saying, to the irritants, but as far as patients when you see them, what are some of the things you suggest for them once they're already in the grips of it? Is it just staying away from the offending agent or are there medications, drops, things they should do?

Dora Adamopolous:
Sure. A non-preservative or preservative-free, artificial tears are helpful because those you can use a little more frequently during the day when you're on your computer and it helps relieve some of the dryness and burning and actually causes you to stop typing and take a break and put the drops in. Most patients though just don't find time during the day to do that. So, we tell our patients, you know, at least try to get two drops in, one in the morning and one in the afternoon, and at least you get that lubrication in the eye and really recommending those eye breaks during the day.

Brian McDonough:
You obviously have an opportunity to deal with people and train and talk with them about vision. For young children now, and we're talking about issues surrounding digital eye strain, if you had to give three or four tips for physicians and other healthcare providers to talk to their patients about, parents with young kids, the best ways to avoid eye strain and eye problems, what would three or four of the things be that you would tell kids to do?

Dora Adamopolous:
Sure. One would be limit the usage of the device, depending on the age, and that would be a parent decision as to what they feel is important, but when they're young, they need to be outside and they need to be doing other things other than being on devices. The other thing is to limit the exposure to these devices, you know one to two hours before bedtime, because that affects their melatonin levels. They're unable to unwind and then go to bed. Those are my top two really, limiting exposure and end of the day.

Brian McDonough:
There's been a lot of talk, in fact a number of different studies that have come out in recent weeks and I know Division Council is probably on top of this as well, about using the different devices, electronic devices as opposed to the old paperback novel and the challenges there. Clearly, if somebody is reading before they go to bed and you're saying you're getting that stimulation, you're impacting melatonin, is that problematic?

Dora Adamopolous:

Yes, it is. And that affects adults and children equally. So, honestly at the end of the day, a good paperback book is the best to read for adults or children. You can definitely have nonprescription or prescription blue blocking lenses because they will really help decrease that blue light going in, but no, those good old paper books are still the best.

Brian McDonough:
And are there times of the day you suggest you use these things for reading or is it better just to use the paper books all the time?

Dora Adamopolous:
All the time is difficult just due to the nature of everyone's lifestyle. So, the paper books by that nightstand at the end of the day would just definitely alleviate not having any blue light coming out at you and it will help you sleep better.

Brian McDonough:
We only have about three minutes left in the program. We've talked about a lot of things, are there any areas that I did not touch on that you think are important for our audience?

Dora Adamopolous:
No. I think we covered on a lot of important statistics. You know 60 percent of people experiencing digital eye strain and not realizing that, five or more hours a day in front of a device, that's a lot and most of the times it's up to eight and nine. You know, 70 percent of adults don't know that electronics emit blue light. That's an important statistic. And people just need to be aware of it, what the symptoms are, and then go to their eye care practitioner and find out more about it. They can also visit the visioncouncil.org and there's a lot of information about the report they released and also more about the symptoms and treatment plan.

Brian McDonough:
Have you been hearing issues with healthcare providers talking about the challenges of using now the electronic medical record, the fact that the patient after patient, day after day, they may be typing on a computer screen whereas at one time they were writing on a paper chart, has that been an area of concern with healthcare providers?

Dora Adamopolous:
Sure. Definitely. I hear all kinds of complaints like that. You know, I miss the good old paper chart days myself, and most doctors wear some sort of eye wear, typically, so they when they go to their eye checkups, they can ask for a blue blocking anti-reflective treatment on their lenses to help reduce some of that blue light and again, remembering to blink and just do the best they can to get through those charts.

Brian McDonough:
So, if you're looking for the blue blocking anti-reflective, does that have any negative affect as far as vision for you know people if they're out in the sun or they're driving their car, that sort of a thing or is it all positive?

Dora Adamopolous:
Oh, all positive. All those will help reduce glare especially in the elderly, especially in patients who have cataracts. So, the blue blocking anti-reflective is very good with that and it helps you have more clarity, more contrast in the world around you.

Brian McDonough:
Is that something that would be expensive for patients if you said I want you to do this, when you get your glasses, I want you to ask for blue blocking anti-reflective, is that an expense of addition to us?

Dora Adamopolous:
No. That's a good question. No. Expense, it varies and you can look at different optical places, different eye care practitioners, their optical department can have it and there's different forms of that and different companies can provide different choices for the patients, but just like we don't have one pair of shoes for everything, we can't really rely on one pair of glasses to carry us through the day.

Brian McDonough:
So, you might want to have that option, you want to work on those things.

Dora Adamopolous:
Right.

Brian McDonough:
We're talking with Dr. Dora Adamopolous. We're talking about digital eye strain, about 30 seconds, 35 seconds left in the program. The one last question I wanted to ask you is, I don't think a lot of kids, as you said, are going to stop texting. A lot of adults aren't going to stop texting. Hour limits that you would say on the day, if you ideally could do this or is it more important to break periodically?

Dora Adamopolous:
Break periodically is more important than hour limit.

Brian McDonough:
Okay. So, that's good as an overall. Dr. Adamopolous, I want to thank you so much for taking the time to join us, I really appreciate you spending the time.

Dora Adamopolous:
Well, I appreciate you having me on today.

Brian McDonough:
You're listening to Primary Care today on ReachMD, I'm Dr. Brian McDonough. If you missed any or part of this discussion, please visit www.reachMD.com/primarycaretoday to download the podcast and learn more on this series. Thank you so much for listening.