

Katie Johnson: Good morning and welcome to Apple a Day, Lake Region Healthcare's health and wellness segment where we feature news and information you can use to live a healthier life. I'm Katie Johnson, your host, and my guest today is Dr Steve Thom, one of our Ophthalmologists at Lake Region Healthcare's Eye Clinic. Good morning Dr Thom.

Dr. Steve Thom: Good morning to you.

Katie Johnson: We have been talking a lot this month about Diabetes Awareness Month, and we've mentioned that it impacts so many different parts of your health, and it is a serious chronic disease problem in our country. And I want to talk to you today specifically about the connection to diabetes and eye health. And it's definitely shown that this chronic high glucose level, high blood sugar level, does impact eye health. Tell us what you know about that.

Dr. Steve Thom: Yeah. Yeah. Diabetes and the eyes are very intimately related. In fact, there are numerous occasions each year we will actually be looking into a patient's eyes and notice some changes to the retina, either a little bit of hemorrhaging, or some areas where there's a lack of blood flow to the retina. And we'll actually order blood sugar testing to see if they are diabetic and actually make the diagnosis before they even have symptoms. So the eyes are a very good way to see early changes related to diabetes.

In patients that have sugar swings, where their blood sugars get too high or even too low if they're already on insulin, it will change the elasticity or the shape of the lens of the eye. And patients can actually notice blurry vision that comes on in a matter of minutes or hours, and it can be related to a big swing in their blood sugars. So they can actually be tipped off that there's a problem with their blood sugar, check, do a finger stick or something, and adjust their sugars accordingly.

But we actually see people that come in with changes in vision and sometimes they've gone elsewhere and they've gotten fit for a pair of glasses and then a month later they have to go back and get the glasses changed again. And they go two or three times and they can't figure why their prescription keeps changing so fast. Well, it turns out it was because the lens kept changing shape because of their blood sugars.

So, needless to say if you're diabetic it's important to see an eye doctor, and we recommend annual visits for that. And if we ... The diabetes can actually cause some changes to the retinas that can become very serious, to the point where you can lose vision permanently. Some diabetes can lead to legal blindness in patients, even at a very young age. I've seen it in people in their late teens unfortunately. And most of the diabetic changes that occur can be controlled, if not improved, in the eye by good blood sugar, good blood pressure control, and

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by frequent eye examinations, possibly some laser treatments or some eye surgery to control the complications of diabetes.

But we can't help people if we don't see them. So the bottom line is get in for your eye exam on a regular basis. And if you are a diabetic and you're noticing changes in vision, even things like new onset floaters which many people in middle to late age notice, in a diabetic that can be a much more serious thing because it could actually indicate that they're actually are bleeding, and there's blood floating in the back of the eye. So, diabetics need to be very cognizant of their eyes and their vision.

Katie Johnson: Absolutely. And what I heard you say earlier, and we've mentioned, that one in three people are actually pre-diabetic and have no clue that they are pre-diabetic. But what I hadn't realized was that an annual eye exam is potentially one way that you can actually make that diagnosis. So another reason to have that annual eye exam.

You mentioned there are some really serious complications that can result. What are some of the eye diseases that can result from diabetes, or from not managing diabetes correctly as it relates to your eye?

Dr. Steve Thom: Sure. Well, I think the most common one would be cataracts, which is a clouding of the lens of the eye. And because the lens is, shape is constantly changing when your blood sugars are swinging high and low, it stresses the lens of the eye, which is actually made up of hundreds of thousands of cells. And those cells swell and shrink, and swell and shrink, and they ended up starting to cloud up over time, and that causes blurriness of vision that results in a cataract. And I've had to take cataracts out in kids under 10 years of age who were diabetic because they had such poor blood sugar control. So cataracts hand down would be the number one thing. And in fact I think people get cataracts 10 to 15 years earlier if they're diabetic than if they don't have diabetes.

Another complication would be swelling of the central part of the retina, called the macula edema. And macular edema affects the very central focusing part of the retina, which is the same area of the retina where macular degeneration occurs in the elderly people. So many diabetics they get a little bit of leakage of blood in the back of the eye from some damaged blood vessels, end up needing to be treated either with some injections of a medication into the eye, or with laser to the eye to seal up the leaky blood vessels.

Some diabetics get what we called proliferative diabetic retinopathy, where the eye is so starved for oxygen and nutrients that the body tries to grow a bunch of new blood vessels into the back of the eye. And these are very abnormal blood vessels and they break and they bleed and they form scars. And patients can develop detached retinas. And some of these are so severe that they can't even be repaired.

Most of these things can be controlled if not treated, by catching them early on. And that's the thing with the diabetics is, you really need to get in every year. And some people have to come in two or three times a year depending on how many changes we're seeing in the back of their eyes.

Katie Johnson: You mentioned cataracts. Cataracts are another pretty common procedure. You have any idea how many cataract surgeries you do in a year?

Dr. Steve Thom: Many, many hundreds.

Katie Johnson: Hundreds.

Dr. Steve Thom: I mean they're very common. In fact by the time somebody hits 65 or 70 years of age, everybody has the start of cataracts. And it's just a question of is there enough clouding of the lens that it's affecting your quality of life? Is your vision affecting what you do? Are you having trouble reading? Are you having trouble driving at night, reading road signs? Is there glare problems from oncoming cars, headlights, street lights, things like that? Are you having trouble seeing in dimly lit conditions, you know around the house? Do you need brighter light bulbs, and that kind of thing?

So very common, and it's a very straight forward procedure to take care of. Again I would encourage people, you know when you hit age 65 to get a yearly eye exam because cataracts, glaucoma, macular degeneration are all so common at that age. And again most things are treatable when we can catch 'em at an earlier time.

Cataract surgery is a fairly straight forward, short, 15, 20 minute procedure as an outpatient. And I think the thing I would encourage people in this community is I think people wait too long to have cataract surgery. There used to be a saying that you had to wait for cataracts to get ripe. And that saying went out probably 30 years ago, but I still hear it every week in this community from patients that said, "Well I wanted to wait until my cataracts were ripe." Well, that's used ... That thinking has gone now because they used to have to let cataracts get so bad that they actually started to get loose within the eye and they were easier to remove cause we took the lens out in one piece. Now we take the lens out, we fracture it and take it out in microscopic pieces. And so we do it through a real small incision, there's no stitches typically, and people return to real good vision within a day or two instead of three or four weeks. So it's a fun procedure, very rewarding for the patients too. They get a lot of improvement in a big hurry.

Katie Johnson: And there's been a lot of advancements. There's some different options today for cataract surgery too.

Dr. Steve Thom: Yes, when cataract surgery lens implants first came out 40, 50 years ago, basically you just put a lens in that replaced some of the power of the original lens of the eye, but people still needed glasses for everything. Well now technology has evolved to the point where we can put lenses inside the eye that

correct near sighted and far sightedness. They can also correct astigmatism, which is where the front window on the front of the eye, the cornea, is actually a little bit warped. And instead of operating on the cornea which is the type of ... The tissue that is normally operated on in people who have LASIK, they reshape the cornea, we can now actually stick a lens implant inside the eye that is warped opposite the shape of the cornea. So it's like having that warpage put into your eye instead of in your glasses or in your contacts.

Along with that technology now there's been some development of bifocal and multifocal lens implants that can help you see far away and at intermediate, and sometimes even up close, like you did when you were in your 30s and early 40s, rather than just getting good distance vision. So that's an option as well.

There's also ... The eye drop regimen has changed. And we used to have to treat people with three different eye medications on a daily basis for a number of weeks. And we've got that down now where, depending on what the patient's their insurance plans are and what they're willing to pay, they can actually get by with an eye drop just once a day, every day, after cataract surgery for a few weeks. So the routine for post-operative care has gotten much, much easier. They can get back to work within a couple of days and it's a neat deal.

Katie Johnson: All kinds of great eye health information as we talk about Diabetes Awareness Month and the occurrences of different diseases, including cataracts, that result with that. You're always such a great wealth of information on eye health. Can you give us just one last tip as we close up the show today, for either preventing, managing diabetes, or generally preventing and preserving your eye health in general?

Dr. Steve Thom: Sure. I guess my take home message would be that people should take care of their bodies in general. You should have good nutrition, you should exercise, you should avoid smoking at all costs because it ages every cell in your body. And again, smokers get cataracts 15 years earlier than non-smokers because it just ages your whole body, it makes you older quicker. So I would just encourage people to just maintain good health and good nutrition, and avoid doing things to their body that probably aren't good for them.

Katie Johnson: Because it will affect your eyes in the long run.

Dr. Steve Thom: Absolutely.

Katie Johnson: Absolutely. Dr Steve Thom, Ophthalmologist at Lake Region Healthcare, our guest on Apple a Day today. Thanks for sharing your tips on diabetes prevention and how it affects our eyes, during National Diabetes Awareness Month, here in November. Great information about the latest advancements in cataracts as well. Dr Steve Thom and Katie Johnson on Apple a Day today, reminding you there is so much to do here, stay healthy for it. Have a great day.

