

Hypertension and Diabetic Eye Disease

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What is Hypertension?

Hypertension, otherwise known as high blood pressure, is defined as a sustained blood pressure of 140/90 mm Hg. Your blood pressure is a measurement of the force exerted by your circulating blood on the walls of your blood vessels. The reading on the left is known as the systolic pressure and the reading on the right is the diastolic pressure. A normal healthy reading would be 120/80 mm Hg.

What is Diabetic Eye Disease?

In patients with either Type 1 or Type 2 diabetes, complications affect both larger blood vessels (macrovascular) and smaller blood vessels (microvascular). The three main macrovascular complications are stroke, heart attack and peripheral vascular disease. For microvascular complications, the vessels in our kidneys, nerves and eyes are affected. When the blood vessels in our eyes are affected, it is known as diabetic eye disease or diabetic retinopathy. This is when the vessels become leaky and start to affect the innermost, light-sensitive layer of our eye - the retina. Damage to the retina can be extremely detrimental to our vision and a person with diabetes is 25 times more likely to go blind than someone who does not have diabetes.

Almost one third of diabetics have signs of diabetic retinopathy, among which 10% of it is vision-threatening. This is defined as severe retinopathy or macular oedema. It is estimated that around 2.5 million people worldwide are blind from diabetic retinopathy.

Hypertension & the Risk of Diabetic Eye Disease

Did you know that the presence of hypertension is associated with an increased risk of diabetic eye disease? As diabetics are already predisposed to leaky blood vessels in the eye, an increased blood pressure exacerbates this problem. Hypertension is a disease that can both co-exist with diabetes and develop in pre-existing diabetics. Around 30% of Type 1 diabetics and 80% of Type 2 diabetics develop hypertension at some stage. Thus, it is extremely important to keep both hypertension and diabetes under good control.

Fighting back the hypertension

Maintaining a healthy blood pressure will help to prevent and curb the progression of diabetic eye disease!

Fact #1

A 10mm Hg reduction in blood pressure will help reduce the risk of diabetic eye disease by 13%.

Fact #2

Studies have shown that good control of hypertension resulted in a 34% reduction in the progression of retinopathy.

Here are some practical ways to manage hypertension:

1 COMPLIANCE

Hypertension can be well controlled by medication when taken at the right time and at the right dose. If unsure, please check with your doctor prescribing the medication.

2 GO EASY ON THE SALT

A daily intake of no more than 6 grams of salt per day is recommended. That is equivalent to about one teaspoon of salt. Sodium contributes to holding in more water in your blood vessels, thus, increasing your total blood volume. This causes an increase in blood pressure.

3 WEIGHT

Blood pressure can fall by up to 2.5/1.5 mm Hg for each excess kilogram lost. Cutting down on caloric intake consistently will result in an overall loss of weight.

4 STAY ACTIVE

Exercise can lower your systolic blood pressure by an average of 4 to 9 mm Hg, and that can be as effective as some anti-hypertensive medications! Aim for aerobic activity- anything that increases your heart rate and breathing rate. The American Heart Association recommends at least 150 minutes of moderate exercise, 75 minutes of vigorous exercise or a combination of both each week. Aim for at least 30 minutes of aerobic activity most days of the week. Three 10-minute sessions of aerobic exercise are equally beneficial to a single 30-minute session.

5 KEEP MONITORING

Home monitoring on top of regular monitoring at your doctor's clinic will help ensure your blood pressure is under optimal control as hypertension is a largely symptomless condition.

Decreasing the Risk of Other Diseases

Hypertension is a risk factor for other diseases involving your blood vessels. With proper management of hypertension, the risk of heart attacks, strokes and peripheral vascular diseases will be reduced as well.

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