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Diabetic retinopathy through the eyes of a technician

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Background: This talk will cover how as a technician in an ophthalmology practice, one can help screen the patients and gather information to help reach the diagnosis of Diabetic Retinopathy. It will also cover the technician's roles in treating and documenting results of treatments. There are different stages of diabetic retinopathy (1) Non-proliferative that ranges from mild, moderate and severe (2) Proliferative which is an advanced stage (3) Diabetic Macular Edema (which is not really a stage). This dissertation will break down the differences between all of the stages also explaining the testing needed to be done to identify which stage the patient is in at the time of treatment Optical Coherence Tomography, Fundus Photography and Fluorescein Angiography.

Diabetic Retinopathy: Diabetic Retinopathy is an eye disease which diabetics can face as a complication of diabetes. Vision loss or blindness can occur as a result of untreated retinopathy. Blood vessels inside the retina can become damaged, and need to be treated immediately before the problem becomes progressively worse.

Patient Compliance: Patient compliance plays a very important part in the treatment of such a disease. This disease can become progressively worse if untreated, that's why it is important for diabetics to have a comprehensive dilated eye exam every year.

Knowing Symptoms of this Disease: Often times, there are no symptoms of early stages of diabetic retinopathy which is why yearly exams are key. In later stages blurry vision, floating spots or even specks of blood can occur in your vision causing decreased visual acuity.

Treatment: People with non-proliferative diabetic retinopathy should simply control their levels of blood sugar, blood pressure and cholesterol. Proliferative diabetic retinopathy can be treated with laser surgery to help shrink abnormal blood vessels. Diabetic Macular edema can be treated through injections into the globe to reduce fluid leakage and interfere with the growth of new vessles.

Conclusion: Diabetic Retinopathy can be managed by not only medical personal but patient compliance is key.

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A theory of visual psychology

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Part of our success as a species of hunter-gatherers is due to our evolutionary dependence on vision to survive. Of all the integrated systems within the body vision is arguably the most complex. It is not just the connection between the sensory input from a single eye to almost every other part of the brain, but the fact that the two eyes work together to provide a cyclopean view of the world which we largely take for granted. Research is showing that the ability to judge depth and the position of objects is related to eye dominance. The role of the dominant eye is to judge the position of an object in space. The role of the non-dominant eye is to judge depth to be able to anticipate the arrival of an event, be it a car crash or a baseball. As a result of it, role in survival the visual system makes a disproportionately large energy demand on the brain. In recent times information technology has pushed vision well beyond its design capability and the brain is desperately trying to resist this anomaly. This is creating dietary distortions, associated autoimmune processes and immune deficiencies. As a result we are seeing an epidemic of ametropias including myopia, and acquired conditions like obesity, Type II diabetes and psychological morbidity. In this talk, the presenter will describe the path from Cro-Magnonman at the peak of human physiological development totoday's relatively sick society, from a visual point of view.

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