For Your Health

HEALTH INFORMATION BROUGHT TO YOU BY KAISER PERMANENTE

DIABETES AND THE EYE

A very common disease in the United States, Diabetes is the leading cause of blindness in adults under the age of 65. There are five main potential **complications** with diabetes:

1. KIDNEY DISEASE, because of degenerated blood vessels.
2. PERIPHERAL NEUROPATHY, with numb spots or shooting pains most often in the legs, but elsewhere as well.
3. INFECTION, with increased frequency and increased difficulty in recovery.
4. Accelerated rate of ARTERIOSCLEROSIS, with increased risk of developing heart disease or stroke.
5. DIABETIC RETINOPATHY.

Diabetic Retinopathy can affect patients with both **Type 1** (juvenile onset) and **Type 2** (adult onset) diabetes. Younger diabetics are usually free of retinopathy for at least the first 5 years after onset of the diabetic condition. Adults may acquire the retinopathy at any time after diagnosis is made.

In short, diabetic retinopathy is a disease of the blood vessels in the delicate tissue called the retina. (The retina acts like film in a camera and does the actual sensing of light within the eye.) With Diabetic retinopathy, retinal vessels become incompetent and leak fluid and blood, thus failing to supply the nutrients necessary for good health in the retina.

Basically, retinopathy is divided into two forms: **(1) NON-PROLIFERATIVE** (NPDR) or **BACKGROUND RETINOPATHY;** and **(2) PROLIFERATIVE RETINOPATHY** (PDR). NPDR consists of hemorrhages, leaky spots and small dilations in the vessel walls. PDR is all of that plus NEW BLOOD VESSELS. These new vessels are always abnormal and will leak and bleed if left untreated. About 40% of all diabetics will develop PDR over a 15-year span.

The most common cause of decreased vision with diabetes is NPDR, with swelling in the retina from leaky blood vessels. This is very difficult to treat, but with focal applications of **LASER** light to seal these leaks, vision may be preserved and occasionally improved. PDR poses a very serious threat to vision as well. Large hemorrhages may obscure vision for months at a time. When found, these new abnormal vessels should be treated with a LASER therapy. Retinal detachments can also occur because of traction created by these new vessels.

Other factors contribute to the progression of diabetic retinopathy. This list includes HIGH BLOOD PRESSURE, LEVELS OF CHOLESTEROL and TRIGLYCERIDES in the blood stream, and the other previously-mentioned complications of diabetes. Each of these factors must be controlled as best as possible to assist in the treatment of retinopathy. Regulation examinations are critical for early diagnosis and therapy. We now have more to offer diabetics than ever before. Most do well, and vision can be preserved in the majority of patients, but cooperation via regular eye examinations is needed to control the disease.

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