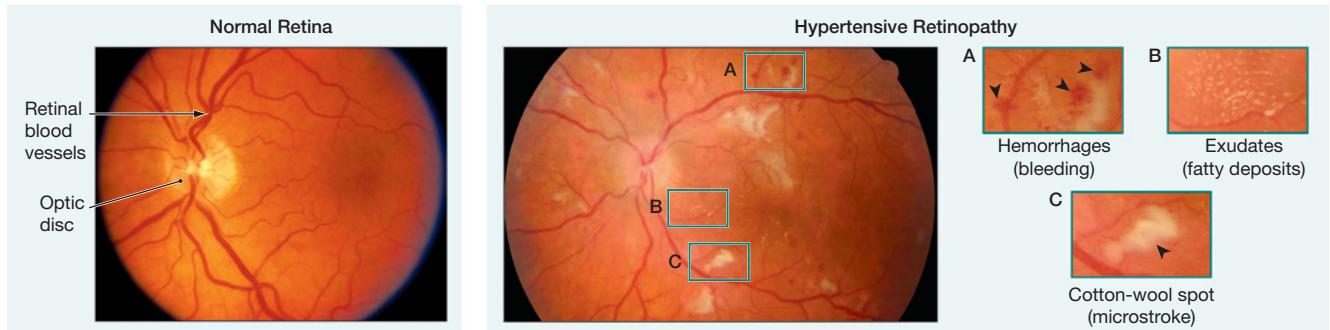


# Retinopathy

The **retina** lines the back two-thirds of the eye and is responsible for receiving visual images. **Retinopathy** means disease of the retina. There are several types of retinopathy but all involve disease of the small retinal blood vessels. Signs of retinopathy (see photograph) can be seen when the retina is viewed through the pupil with an ophthalmoscope. The August 22/29, 2007, issue of *JAMA* includes an article about management of diabetic retinopathy. This Patient Page is based on one previously published in the January 5, 2005, issue of *JAMA*.



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## HYPERTENSIVE RETINOPATHY

**Hypertension** (high blood pressure) and **vascular** (blood vessel) diseases can affect the small blood vessels of the retina just as they can affect other blood vessels. Retinopathy may therefore be an indicator of vascular damage elsewhere in the body. Visual changes sometimes develop because of advanced retinopathy and may be a sign of undiagnosed or poorly controlled hypertension. Although rare, blindness may occur.

## DIABETIC RETINOPATHY

The most common type of retinopathy is related to diabetes. Diabetic retinopathy can be **proliferative** (growing) or **nonproliferative** (not growing), referring to the growth of abnormal blood vessels in the retina. **Nonproliferative retinopathy** is much more common and may not require treatment. In **proliferative retinopathy**, abnormal blood vessels start to grow when the existing blood vessels close off. The proliferative type of retinopathy can lead to impaired vision. Regular eye examinations are important to check for progression of retinopathy from nonproliferative to proliferative stages.

## PREVENTION AND TREATMENT

Preventing retinopathy starts with early diagnosis and treatment of conditions that cause retinopathy. For persons with diabetes, good control of blood glucose levels, proper control of high blood pressure, and regular medical examinations are crucial to preventing retinopathy. Persons with diabetes should have an annual eye examination including pupil dilation for the best possible view of the retina. Good blood pressure control is essential for anyone with hypertension. Individuals with eye disorders or other health problems that put them at risk for visual impairment should see an **ophthalmologist** (a doctor with specialized education for diagnosis and treatment of eye diseases). Once retinopathy is detected, early treatment is essential to prevent blindness. Several forms of treatment are available for persons with proliferative retinopathy.

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## SIGNS AND SYMPTOMS

- Blurry vision
- Double vision
- "Floaters" or spots in vision
- Eye pain and redness that does not resolve
- Decreased peripheral vision

## FOR MORE INFORMATION

- American Diabetes Association  
[www.diabetes.org](http://www.diabetes.org)
- National Eye Institute  
[www.nei.nih.gov](http://www.nei.nih.gov)

## INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at [www.jama.com](http://www.jama.com). A Patient Page on causes of visual impairment was published in the October 15, 2003, issue.

Sources: American Diabetes Association; National Eye Institute; National Heart, Lung, and Blood Institute; National Diabetes Education Program; American Heart Association

