

## **AMD & Drusen**

Do you remember when the milkman was part of the family?

Making regular rounds, empty containers would be removed and replaced with clean new glass bottles filled with fresh dairy products.

Like the neighborhood milkman, the transportation system in the retina brings fresh oxygen and nutrients to the photoreceptor cells, and removes waste product. It doesn't require a second thought if the system is working properly.

What happens when the milkman forgets to take away the empty bottles? Soon debris starts to build up: your front porch is overflowing with empty bottles and there is no space for new deliveries. The system breaks down. The retina's photoreceptor cells (rods and especially cones) are responsible for color vision, central vision and detailed vision. They need nutrients to stay healthy and productive. Lack of oxygen and nutrients can lead to cell degeneration or cell death.

Drusen are waste products in the retina: small yellow deposits of fatty lipids, proteins and calcium.

Drusen do not cause AMD, but they are an indicator of retinal health. When drusen appear, it is like a porch filled with empty milk bottles. If the retina is unable to flush away waste products, it is also unlikely that adequate nutrients are finding their way to the cells.

Not all drusen lead to vision loss and AMD. When a doctor conducting an eye exam sees evidence of drusen, he or she will track the size and number which are indicators that there is some degeneration underway. Most people over the age of 40 will have evidence of a few small, round, well-defined 'hard drusen'. These are less concerning to eye doctors. 'Soft drusen' vary in size and shape, and have ill-defined borders.

Several small soft drusen and a few medium-sized soft drusen are a sign of early AMD. Many medium-sized drusen and one or more large drusen indicate intermediate AMD. Advanced AMD is defined by the presence of several medium-to-large sized drusen. Advanced AMD is often associated with geographic atrophy (dry AMD) or the wet form of AMD.

Drusen will not cause AMD, but gives your doctor an indication about how healthy your retina is. When you have an eye exam, ask your doctor to describe the size and number of drusen and if their appearance has changed over the last few visits. Whether or not you have evidence of drusen, you should still eat a healthy diet, avoid smoking and exercise regularly to stay healthy and preserve your vision.