If you have diabetes, taking care of your eyes is especially important. People with both type 1 and type 2 diabetes are at risk for damage to their eyes. Diabetes is the leading cause of blindness in adults. In fact, 40 to 45 percent of Americans diagnosed with diabetes have some eye damage.
People with poorly controlled diabetes may have complications that affect their vision. For instance, people with diabetes are 40% more likely to develop glaucoma and 60% more likely to develop cataracts than people who don't have diabetes.

Eye Disease 101 Newsletter

These complications may cause severe vision loss or blindness:

1. Proliferative retinopathy (damage to the blood vessels in the retina) -- The retina is the lining of the interior of the eye where light is sensed. High blood glucose may weaken the small blood vessels within the retina, causing them to leak blood. Other changes in these vessels lead to a decreased delivery of oxygen to the retina. In an effort to increase the delivery of oxygen, new blood vessels are formed (proliferative retinopathy). These new blood vessels are prone to bleeding that causes scarring and permanent damage to the retina and loss of vision.
2. Cataracts (clouding of the eye's lens) -- Cataracts are cloudy scars that develop within the lens of your eye. The change in the lens causes your vision to be blurred and distorted.
3. Glaucoma (increase in fluid pressure inside the eye) -- Glaucoma is an abnormal increase of the pressure within your eye. The increased pressure damages the optic nerve that carries signals from your eye to your brain. In your brain these signals are perceived as vision. If you have glaucoma your vision will be impaired as a result.

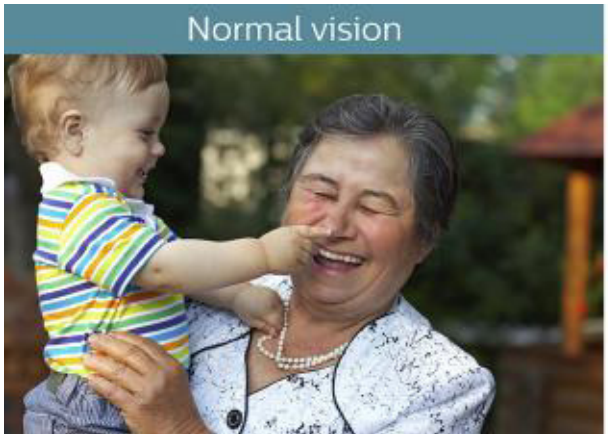
How to decrease your risk for eye disease?

Keeping your blood sugar and blood pressure at your goal levels are key to preventing or delaying eye problems. Also, it's very important to get a comprehensive dilated eye exam at least once a year. That way changes can be detected at an early stage and treatment can be started.
A large study called the Diabetes Control and Complications Trial (DCCT) showed that we can slow the onset and progression of retinopathy caused by diabetes by controlling blood sugar levels. Keeping blood pressure and cholesterol at healthy levels can also reduce the risk of vision loss and eye damage. For additional information, go to National Eye Health Education Program http://www.nei.nih.gov/nehep

Having diabetes puts you at a higher risk for developing other health problems. However, if you understand the risks, you can take steps now to lower your chance of diabetes-related complications. Understanding the potential complications associated with diabetes allows you to better prevent them. Make an effort to learn about complications and consistently track your overall health. Caught early, many diabetes-related complications can be effectively managed. Don't ignore symptoms or rely solely on your doctor to identify areas of concern.

You can reduce your risks for several complications by taking these precautions:

- Increase your level of physical activity.
- Know your health numbers, including blood pressure, A1C, cholesterol, and ideal weight.
- Stop smoking.
- Eat a diet that promotes health and wellness, like an anti-inflammatory diet. *
- Schedule regular medical checkups and take your medication as prescribed.
- See an eye doctor for a dilated eye exam at least once a year.
- Keep your feet clean and dry. Look out for redness or sores, and report these to your doctor as soon as you find them. If you have trouble checking your feet, ask a family member or friend to help you.
- Check your blood glucose regularly.

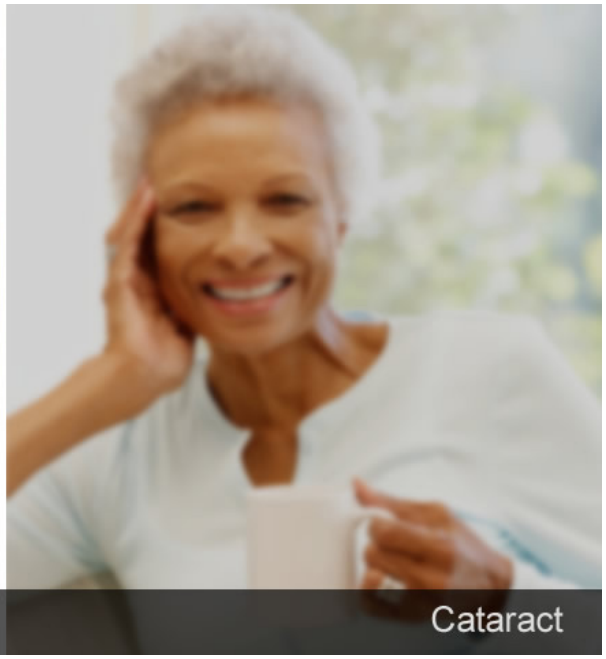

Normal vision

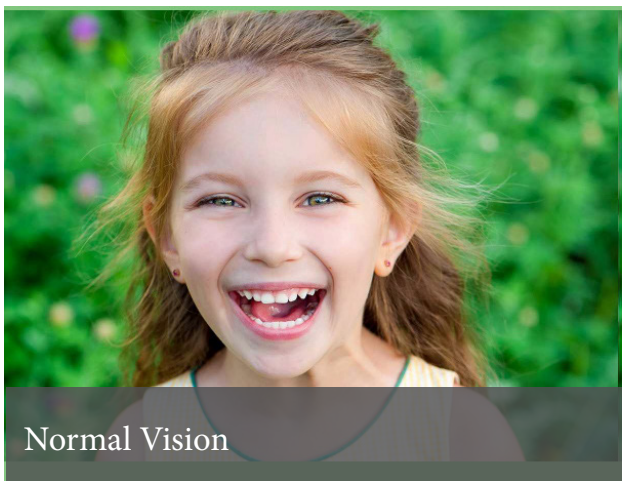

Vision with diabetic retinopathy

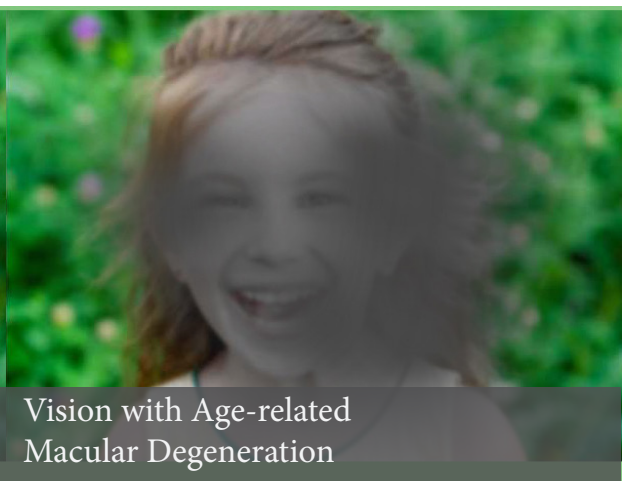

Normal Vision


Vision with Glaucoma


Normal Vision


Cataract


Normal Vision


Vision with Age-related
Macular Degeneration

* An anti-inflammatory diet includes foods in the appropriate proportions to discourage the inflammatory process. It also restricts those that may intensify it. There is no formal anti-inflammatory diet, (they vary depending on who is promoting), but generally, an anti-inflammatory diet is along the lines of a Mediterranean diet: rich in non-starchy vegetables and fruit, legumes, nuts and seeds, fish, whole grains, and moderate amounts of fermented dairy products, such as yogurt and cheese. Compounding what basically boils down to: eat more plants, less animal proteins, processed foods, fried foods, etc., there are a few relatively consistent elements to an anti-inflammatory diet. These include:

Vitamins, minerals, and phytochemicals:

Eating a rich variety of plant foods – fruit, vegetables, legumes, nuts, seeds, etc., and making these the base of the diet is the cornerstone of all anti-inflammatory models, as plants provide us with important nutrients that promote a healthier inflammatory response. Phytochemicals are the chemicals in plants that provide them with color, odor, and flavor and play a role in a number of health processes. Polyphenols, (found in green tea, grapes and berries), carotenoids, (found in sweet potatoes, apricots, and leafy greens), and flavonoids, (found in apples, citrus, soy, and coffee), are three major categories of phytochemicals that inhibit inflammation. Plants are also excellent sources of anti-inflammatory vitamins and minerals. Having low levels of magnesium, vitamin B6, vitamin C, vitamin E, or vitamin D has been associated with inflammation and inflammatory diseases. Of these nutrients, all but the vitamin D are primarily found in plant foods, including nuts, leafy greens, citrus, and legumes.

Limiting refined carbohydrates:

Sugars and other refined carbohydrates, which are 'high glycemic index foods', cause rapid increases in blood sugar that may be characterized as 'high blood sugar' or 'hyperglycemia'. Hyperglycemia is linked with inflammation and inflammatory diseases by triggering the release of inflammatory molecules called cytokines. Carbohydrates that contain natural fibers and fat (i.e. whole grains and legumes) have a less rapid effect on blood glucose levels, resulting in fewer of these pro-inflammatory agents. Therefore, the Mediterranean diet and other anti-inflammatory diet styles typically promote a reduction or elimination of added sugars and refined flours and grains.

Optimizing fat:

Perhaps the most characteristic aspect of anti-inflammatory diets is the promotion of anti-inflammatory fats. A typical Western diet, high in saturated and trans fats, has been associated with higher biomarkers of inflammation and chronic disease. Conversely, diets high in monounsaturated fats (e.g. nuts, olive oil, avocado) and omega-3 polyunsaturated fats (e.g. fish, flaxseeds, walnuts) are associated with decreased biomarkers of inflammation. It is thought that the ratio of omega-6 to omega-3 fatty acids in the Western diet is about 15:1, but a diet associated with an improvement in inflammatory state is about 3:1.

Fermented foods:

Probiotics are the beneficial bacteria found in fermented foods such as yogurt, kefir, and sauerkraut, which are the latest superstars of the medical world. In addition to playing a role in a variety of systems – from gut health to mental health, there is some evidence that probiotics can reduce systemic inflammation. High intakes of dairy products may promote inflammation, so explore some non-dairy options (i.e. miso and fermented vegetables) when increasing probiotics in the diet.

RECIPE COURTESY OF FOOD NETWORK KITCHEN

Mustard-Parmesan Whole Roasted Cauliflower

Level: Easy | Total: 1 hr 15 min | Active: 10 min | Yield: 4 servings

Ingredients

2 large heads cauliflower

1 clove garlic, halved

1/4 cup olive oil

4 tablespoons Dijon mustard

Kosher salt and freshly ground black pepper

1/2 cup fresh parsley leaves, roughly chopped

1/4 cup grated Parmesan

Lemon wedges, for serving

Directions

1. Position an oven rack in the bottom of the oven and pre heat to 450 degrees F. Line a baking sheet with foil.

2. Remove the leaves from the cauliflower, then trim the stem flush with the bottom of the head so the cauliflower sits flat on the prepared baking sheet. Rub the outside of each head with the cut garlic.

3. Whisk together the oil, 3 tablespoons mustard, 1/2 teaspoon salt and a few grinds of black pepper in a small bowl.

4. Put the cauliflower on the prepared baking sheet and brush the entire outside and inside with the mustard-oil mixture. Roast the cauliflower until nicely charred and tender (a long skewer inserted in the center of the cauliflower should pass through easily), 50 minutes to 1 hour. Let rest for a few minutes.

5. Meanwhile, combine the parsley and Parmesan in a small bowl. Brush the outside of the roasted cauliflower heads all over with the remaining 1 tablespoon mustard and generously sprinkle with the Parmesan mixture.

6. Cut the cauliflower into thick wedges and serve on plates with a sprinkle of salt, lemon wedges and any extra Parmesan mixture.

https://www.foodnetwork.com/recipes/food-network-kitchen/mustard-parmesan-whole-roasted-cauliflower-3348142