

# The Impact of Lifestyle and Diet on Cataract Development and Prevention.

Crino Murray\*

Department of Visual Sciences, University of Michigan, United States

## Introduction

Cataracts, the clouding of the eye's natural lens, are a leading cause of vision impairment worldwide. While they are often associated with aging, numerous lifestyle and dietary factors can influence their development and progression. Understanding these factors can help individuals adopt habits that may reduce the risk of cataracts and promote better eye health. This article explores how lifestyle choices and diet impact cataract formation and offers practical recommendations for prevention [1].

Cataracts occur when proteins in the lens of the eye clump together, causing the lens to become cloudy. This clouding can impair vision and, if left untreated, can lead to blindness. The development of cataracts is multifactorial, with aging being the primary risk factor. However, lifestyle and dietary choices also play significant roles [2].

Smoking is a well-documented risk factor for cataracts. The oxidative stress caused by smoking can damage the proteins and fibers in the lens, leading to clouding. Studies have shown that smokers are significantly more likely to develop cataracts than non-smokers. Excessive alcohol consumption is associated with an increased risk of cataracts. Alcohol can induce oxidative stress and deplete antioxidants in the body, contributing to lens damage. Prolonged exposure to UV radiation from sunlight can increase the risk of cataracts. UV rays can damage the proteins in the lens and promote oxidative stress. Wearing sunglasses that block 100% of UV rays and a wide-brimmed hat can help protect the eyes [3,4].

Obesity is linked to a higher risk of cataracts, possibly due to its association with other risk factors like diabetes and hypertension. Maintaining a healthy weight through diet and exercise can reduce this risk. Regular physical activity is beneficial for overall health and may help reduce the risk of cataracts. Exercise improves circulation, reduces oxidative stress, and helps maintain a healthy weight, all of which are protective factors against cataracts [5].

Oxidative stress plays a crucial role in cataract formation. Antioxidants help neutralize free radicals, reducing oxidative damage to the lens. A diet rich in antioxidants, such as vitamins C and E, beta-carotene, and selenium, can help protect against cataracts. Vitamin C: Found in citrus fruits, strawberries, bell peppers, and broccoli, vitamin C is a powerful antioxidant that can help protect the lens from oxidative damage. Vitamin E:

Present in nuts, seeds, spinach, and broccoli, vitamin E helps protect cell membranes from oxidative stress [6].

Beta-Carotene: Found in carrots, sweet potatoes, and dark leafy greens, beta-carotene is converted to vitamin A in the body, essential for eye health. Selenium: Found in Brazil nuts, seafood, and whole grains, selenium works synergistically with antioxidants to protect the eyes. Omega-3 fatty acids, found in fatty fish (like salmon, mackerel, and sardines), flaxseeds, and walnuts, have anti-inflammatory properties and can help maintain eye health. Research suggests that omega-3s may reduce the risk of cataracts by improving lens transparency [7].

Lutein and zeaxanthin are carotenoids found in high concentrations in the lens and retina of the eye. These compounds, present in kale, spinach, corn, and eggs, help filter harmful blue light and protect against oxidative damage. Studies indicate that higher dietary intake of lutein and zeaxanthin is associated with a lower risk of cataracts. High sugar intake is linked to an increased risk of cataracts, particularly in individuals with diabetes. Elevated blood sugar levels can lead to the accumulation of sorbitol in the lens, causing it to swell and become cloudy. Maintaining a balanced diet with limited sugar can help prevent this risk [8].

Smoking cessation is one of the most effective ways to reduce the risk of cataracts. Resources such as counseling, support groups, and nicotine replacement therapies can assist in quitting smoking. Limiting alcohol intake to moderate levels can help reduce the risk of cataracts. This generally means up to one drink per day for women and up to two drinks per day for men. Wearing sunglasses that provide 100% UV protection and a wide-brimmed hat when outdoors can shield your eyes from harmful UV radiation [9].

Adopting a balanced diet and regular exercise routine can help maintain a healthy weight, reducing the risk of obesity-related cataracts. Incorporate a variety of antioxidant-rich fruits and vegetables, omega-3 fatty acids, and foods high in lutein and zeaxanthin into your diet. Aim for at least five servings of fruits and vegetables daily. Regular eye check-ups can help detect cataracts early and monitor other eye conditions. Early detection allows for timely intervention, which can prevent further vision loss [10].

## Conclusion

While aging remains the most significant risk factor for cataracts, lifestyle and dietary choices also play crucial roles in

---

\*Correspondence to: Crino Murray, Department of Visual Sciences, University of Michigan, United States, E-mail: [murray00@umich.edu](mailto:murray00@umich.edu)

Received: 03-Jun-2024, Manuscript No. OER-24-137959; Editor assigned: 04-Jun-2024, Pre QC No. OER-24-137959 (PQ); Reviewed: 18-Jun-2024, QC No. OER-24-137959;

Revised: 24-Jun-2024, Manuscript No. OER-24-137959 (R); Published: 29-Jun-2024, DOI: [10.35841/oe-8.3.216](https://doi.org/10.35841/oe-8.3.216)

their development and prevention. By adopting healthy habits such as quitting smoking, moderating alcohol consumption, protecting the eyes from UV light, maintaining a healthy weight, and consuming a nutrient-rich diet, individuals can significantly reduce their risk of cataracts. Regular eye examinations are also essential for early detection and management. Taking proactive steps to safeguard eye health can lead to a clearer vision and a better quality of life.

## References

1. Kirby TJ, Achor RW, Perry HO. Cataract formation after triparanol therapy. *Arch Ophthalmol*. 1962;68(4):486-9.
2. Golozar A, Chen Y, Lindsley K, et al. Identification and description of reliable evidence for 2016 American academy of ophthalmology preferred practice pattern guidelines for cataract in the adult eye. *JAMA Ophthalmol*. 2018;136(5):514-23.
3. Chiang MF. The 2021 National Eye Institute Strategic Plan—relating vision to health and quality of life. *JAMA Ophthalmol*. 2021;139(12):1263-5.
4. Alshehri MG, Joury AU. Quality, readability, and understandability of internet-based information on cataract. *Health and Technology*. 2019 Nov;9(5):791-5.
5. Mangione CM, Phillips RS, Lawrence MG. Improved visual function and attenuation of declines in health-related quality of life after cataract extraction. *Arch Ophthalmol*. 1994;112(11):1419-25.
6. Seddon JM, Rosner B, Sperduto RD, et al. Dietary fat and risk for advanced age-related macular degeneration. *Arch Ophthalmol*. 2001;119(8):1191-9.
7. Shatnawei A, Parekh NR, Rhoda KM, et al. Intestinal failure management at the Cleveland Clinic. *Arch Surg*. 2010;145(6):521-7.
8. Cicinelli MV, Buchan JC, Nicholson M. Cataracts. *Lancet*. 2023;401(10374):377-89.
9. Heruye SH, Maffofou Nkenyi LN, Singh NU, et al. Current trends in the pharmacotherapy of cataracts. *Pharmaceuticals*. 2020;13(1):15.
10. Murkey SP, Agarwal A, Pandit P, et al. Unveiling the Spectrum of Ophthalmic Manifestations in Nutritional Deficiencies: A Comprehensive Review. *Cureus*. 2023;15(12).