

## Information From Your Eye M.D.

---

### USE OF MARIJUANA TO TREAT GLAUCOMA

#### Background

Glaucoma is an eye condition in which the optic nerve becomes damaged over time, reducing side vision. It sometimes leads to blindness. One cause of optic nerve damage in glaucoma is higher-than-normal pressure within the eye (intraocular pressure or "IOP"). Currently, the only to control glaucoma and prevent vision loss is to lower the patient's IOP to levels that are unlikely to cause optic nerve damage.

Doctors can lower IOP to prevent optic nerve damage by prescribing medication or performing surgery.

Either drug or surgical procedure must:

- Reduce intraocular pressure enough to prevent optic nerve damage
- Not cause bothersome side effects to the eye or other parts of the body

#### Marijuana and IOP

Studies have demonstrated that some substances derived from marijuana can lower intraocular pressure when taken by mouth, intravenously (injected into a vein) or by smoking, but not when applied directly to the eye. However, the studies found that the pressure-lowering effects only lasted for three to four hours. This means a person would have to smoke a marijuana cigarette eight to ten times a day in order to control IOP more than 24 hours.

#### Risks

The dose of marijuana necessary to lower IOP enough to prevent optic nerve damage appears to produce an unacceptable level of side effects such as:

- Impaired motor coordination
- Impaired memory of recent events
- Difficulty concentrating
- Increased heart rate

- Low blood pressure
- Dry eye
- Red eye

No data has been published on marijuana's long-term effects on the eyes or other body systems of glaucoma patients. However, scientists think that the side effects from the use of marijuana would be comparable to those reported in short-term studies of people without glaucoma.

### **Should I Use Marijuana to Treat Glaucoma?**

Based on a lack of scientific evidence, the American Academy of Ophthalmology does not endorse the use of marijuana to treat glaucoma.

The Academy believes there is no evidence to date that shows that marijuana is safer or more effective than the drugs currently available to lower IOP to prevent optic nerve damage from glaucoma. This conclusion is based on reviews from the National Eye Institute (NEI) and the Institute of Medicine, as well as on available scientific evidence.

Glaucoma is a chronic disease, requiring ongoing therapy and if not treated effectively, can lead to irreversible vision loss. You should speak with your Eye M.D. whenever considering any medication or other treatment for glaucoma.

### **Where Can I Get More Information?**

Your Eye M.D. is the best source of information on glaucoma, as well as eye health and safety.

If you would like more information on glaucoma, please visit the American Academy of Ophthalmology's public information Web site at [www.medem.com.eyemd](http://www.medem.com.eyemd).

Approved by: The Eye Health and Public Information Task Force

April 2002

Revised November 2003

American Academy of Ophthalmology ®