



GLAUCOMA

It can send you blind

A guide to increase awareness, knowledge and understanding of glaucoma,
to help prevent unnecessary loss of vision

You're living in a truly democratic society where anyone who chooses to go blind is allowed to do so!

Many who don't want to lose their precious eyesight, run the risk of doing so by sheer ignorance of this preventable cause of blindness known as glaucoma

Many illnesses lead to death;
death sets you free from suffering,
with blindness the suffering just begins!

*The aim of this book is to increase awareness, knowledge
and understanding of glaucoma, to help prevent
unnecessary loss of vision.*

NOTE: This book is not designed to replace expert medical diagnosis.
If you require further information or assistance please seek appropriate
medical advice.

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ACKNOWLEDGEMENT

The International Glaucoma Association, England
glaucoma-association.com

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Introduction

My name is Rolf Kaiser and I am a glaucoma sufferer. Born in 1939 in Cologne, West Germany. I worked as an engineer in Leverkusen, was married at the age of twenty and have two daughters and a son. After immigrating to Australia in 1967 with my family I settled in Melbourne for three years, working as a Quality Control Inspector in the metal trades industry. Dissatisfied with life in the city I moved to Albury in southern New South Wales to enjoy the Australian countryside while continuing in the same line of work. My favourite pastimes were building replicas of old sailing ships, fishing, shooting and especially, getting into the Australian bush.



In 1982 I became an invalid pensioner due to a spinal injury I received at work about twenty years ago in Germany. My love for building model ships, which kept me occupied since then, has given me much publicity around the country and overseas. Over the years I have donated a number to charities.



At the end of 1985 I was preparing a holiday trip with my wife to South Australia and Western Australia. Having worn spectacles for the past 28 years of my life I was due for another routine eye inspection to get a new lens prescription. At this appointment the optometrist decided to carry out a pressure test on my eyes which had never been carried out during previous visits. The optometrist explained that it was an initial test to check for the existence of an eye condition known as Glaucoma. I had never heard of glaucoma and I was stunned to find that the test result indicated that I had a serious eye problem.

Being urged to see an Ophthalmologist, further tests revealed that I was indeed suffering from Glaucoma and that, unfortunately, some damage had already occurred to my vision. I was told by an Ophthalmologist that unless medication, laser treatment and a possible operation reduced the pressure in my eyes I would most certainly face total blindness. I was absolutely horrified and devastated upon hearing this prognosis.

Thanks to my determination I decided to go ahead with my three-month trip in an effort to come to grips with the situation. I was placed on eye-drop medication which I faithfully took as directed for the duration of my journey. While I was in Perth I donated a model ship to the annual Appealathon for local charities. The ship was auctioned and raised a considerable sum of money for the appeal. The news media picked up on this story and I was invited to appear on some television programmes and was the subject of several newspaper articles in which I brought up the subject of glaucoma.

On my journey I spoke to countless numbers of people about glaucoma and I was absolutely astounded to realise how few people knew of glaucoma. While in Western Australia I came

across an article in a West German newspaper that concerned glaucoma, and I was shocked to read that there are 30,000 people blinded, and a further 100,000 partially blinded by this disease in that country alone. On the long journey home over the Nullarbor Plain, I came to an emotional decision to rectify the ignorance of the population about the world's leading cause of preventable blindness.

Upon arriving back home I visited my ophthalmologist and was very disappointed to hear that the medication I was taking had not helped control my glaucoma. I was then sent to Melbourne for laser treatment where, with a laser beam, 67 burns were made in one of my eyes to alleviate the ocular pressure. Although this treatment is usually successful it was not so with me. The ophthalmologist then decided to operate using microsurgical techniques. It took several months before further tests revealed that my eye pressure had fallen to within acceptable levels. This could have been due to any or all of the treatments I received, but this is difficult to estimate because they were carried out fairly rapidly after one another. The important fact remains, however, that my glaucoma condition is now in remission for an indeterminate period of time,.

Since June of 1986, with the help of newspapers, television and radio, I was able to publicise the danger of glaucoma, its lack of apparent symptoms at onset, and the urgency in getting the public awareness and understanding of the disease to a level where unnecessary blindness could be prevented. With the interest my model ships created I was fortunate enough to be invited to appear on several national television programmes in which the long journey towards increased public awareness was begun in earnest.

After enquiring overseas and receiving information about the various activities of different organisations whose aim it is to raise awareness and aid research into glaucoma, I realised how far behind Australia was lagging in coming to grips with this blinding disease. I saw that the need for an Australian Glaucoma Foundation was extremely urgent and long overdue. On 23 August, 1986, I launched the National Glaucoma Foundation of Australia. Shortly afterwards I was invited to appear on the Ray Martin Midday Show at which a leading eye specialist, Dr Ivan Goldberg, was present. With the help of the doctor and other concerned people an inaugural meeting of the Foundation was held the following day at which the aims and future activities of the Foundation were discussed.

My personal aim was to make a 12 month car and caravan tour of Australia, visiting 56 cities and towns showing video films, distributing information and holding discussions about glaucoma. The main aim of this enterprise was to raise awareness of glaucoma and funds for urgently needed research.

At the time I launched the National Glaucoma Foundation of Australia I also established the Rolf Kaiser Research Fund into which all moneys donated will be placed for the sole purpose of research into glaucoma. Money raised from the sale of the first edition of this book would also go into the Research Fund as well as funding the cost of the book itself and a small amount to cover the costs involved in my travelling exhibition.

From the information I received from overseas, I estimated that 8000 people in Australia have already been blinded by Glaucoma and a further 200,000 suffer from Glaucoma in its developmental stages. Many of these people face the prospect of total blindness if the condition is not detected and treated.

Recently, I have been lobbying my local Member of Parliament to make tests for Glaucoma compulsory when people visit an optometrist. From the above statistics the urgency of the situation is obvious.

I plead for your support and assistance in the name of all Glaucoma sufferers, present and future.

Rolf Kaiser

January, 1987



POSTSCRIPT

Thirty plus years have passed since I wrote this booklet you may want to read.

New and compelling information and statistics needed updating to truly understand the dire and sad situation concerning glaucoma in Australia, and still does, 30 years on!

In 1986 the available statistics suggested about 200,000 Australians suffered from glaucoma. In 2017 medical authorities in Australia put the figure at 300,000!

New medical evidence supports that in fact 20%, or one in five, of those with a family history of glaucoma are at risk of losing their precious eyesight!

My booklet is no longer for sale. The bank account no longer exists and all monies from the sale of my booklet and donations collected have been duly accounted for and handed over to the 'National Glaucoma Foundation of Australia', now better known as 'Glaucoma Australia'.

New and better medication and surgical procedures are available today, dramatically improving a more positive outcome for anyone diagnosed with glaucoma!

But sadly, Australia still lags behind the rest of the civilised world by about 10 to 15 years in preventing blindness from glaucoma!

This booklet is now available to download free of charge from my website at myfightforsight.com

I believe an up-date on the state of my own eyesight is warranted.

As of this day I am totally blind in my right eye and have just over 50% vision left in the GOOD eye.

Rolf Kaiser
January 2018

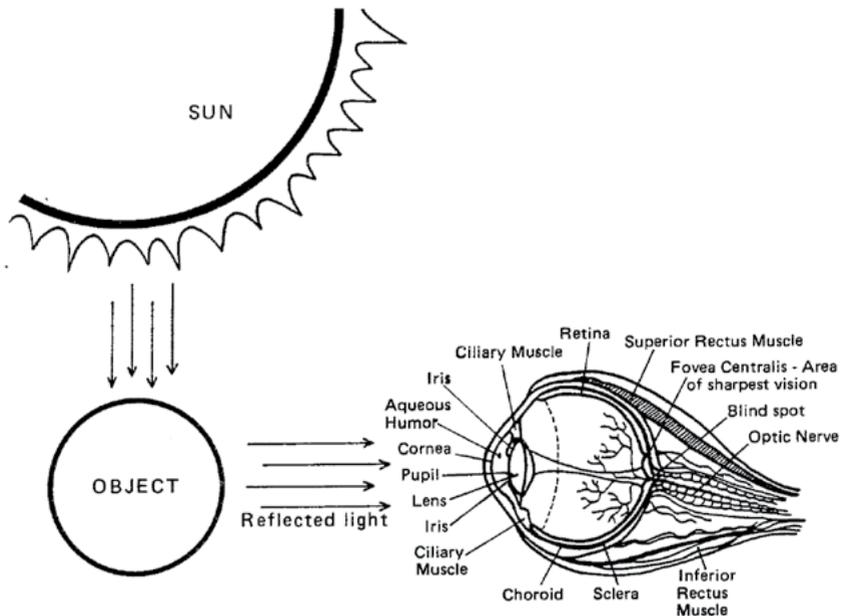


Anatomy and Function of the Eye

In order to gain an understanding of what glaucoma is and how it develops it is first necessary to have some knowledge of how the eyes function.

Diagram 1

PARTS OF THE EYE



To experience vision our eyes require light and a receptive nervous system stimulated by that light energy. When we see an object it is the light reflecting off the object's surface that we see. It is the path of this light that we will follow in order to understand the way the eye works. The light first penetrates the surface of the eye called the 'cornea'. The cornea is made up of living cells but, unlike most other cells in our body, they are not nourished by blood vessels. Instead, the cornea is fed by the liquid substance, which adjoins it, known as the 'aqueous humour'. This liquid is absorbed and secreted by the body up to six times over, every day. The pressure this process exerts on the shape of the cornea plays a major role in the condition we know as glaucoma.

After passing through the aqueous humour the light rays then encounter the pupil. The pupil, together with the iris, controls the amount of light that enters the eye. The iris muscles both contract and expand in a circular direction and open or close the pupil to adjust to the intensity of the light source. The light that passes through the pupil then encounters the lens, which adjusts the focus of the light for near or far distance viewing. The lens is suspended in place by a transparent membrane, which is controlled by the ciliary muscles.

To view objects close to us the curvature of the lens is increased by the action of the ciliary muscles, and this function is known as 'accommodation'. When the ciliary muscles relax the lens flattens and allows us to see distant objects. This is known as the 'relaxation of accommodation'. The lens, like the cornea, is also fed by the aqueous humour.



After passing through the lens, the light incurs another fluid called the 'vitreous humour', which fills the eye behind the lens. The vitreous humour maintains the shape of the eyeball against the eye muscles. Unlike the aqueous humour, the vitreous humour is not replaced by the body. After passing through the vitreous humour the light rays fall upon the rear surface of the eye known as the retina. It is at this point where light images are recorded and sent to the brain via the 'optic nerve'.

The retina is made up of photosensitive brain cells known as rods and cones. The rods record black and white images and gross shapes and play a key role in peripheral vision, while the cones enable us to see colours and small objects. The cones are concentrated in a tiny area near the centre of the retina known as the 'fovea centralis'. If the eye is functioning effectively most of the light rays converge on this point, thanks to the curvature of the cornea and the lens. When this is the case we have clear vision. Long sightedness and short sightedness are conditions where, due to the incorrect curvature of the cornea, most of the light rays do not fall upon the fovea centralis, hence a less accurate image is sent to the brain. This, in simple terms, is how we see.

What is Glaucoma?

In order to understand what glaucoma is we must study the aqueous humour further.

Diagram 2

FLOW OF THE AQUEOUS HUMOUR

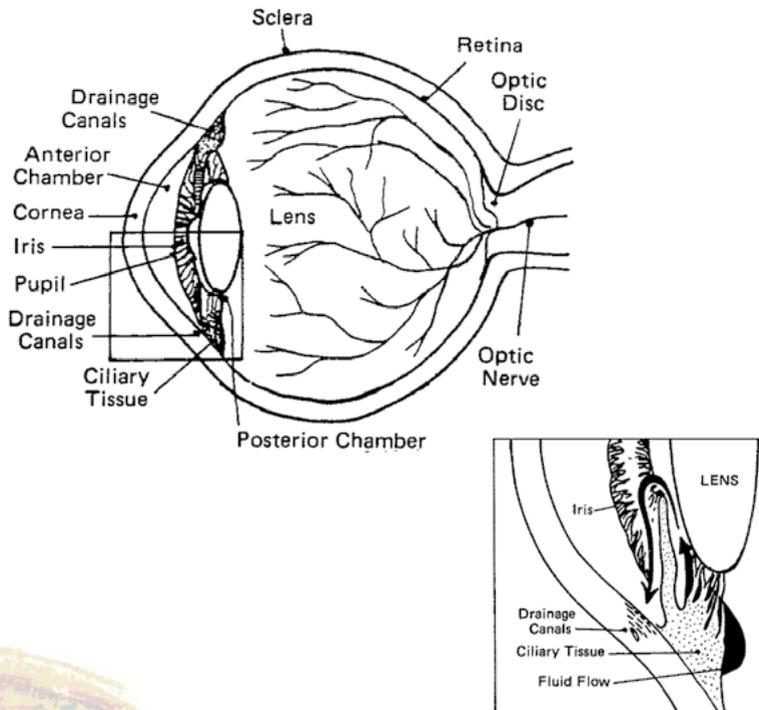


Diagram 2 illustrates the flow of the aqueous humour out of the ciliary tissue, where it is being constantly produced into the ‘posterior chamber’, which is located between the iris and the lens. It then flows through the pupil into the ‘anterior chamber’. In the angle between the cornea and the iris, both at the top and bottom of each eye, there exists a small mesh of tissue known as the ‘trabecula’. These are sieve-like drainage canals that allow the aqueous humour to leave the anterior chamber to return to the bloodstream. This flow of aqueous humour through the front chambers of the eye is vital for the health of the eye.

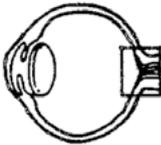
The pressure this flow of aqueous fluid creates within the eye is known as the ‘intraocular pressure’ and it maintains the spherical shape of the cornea. If this fluid system is functioning correctly the aqueous is continually pumped into the eye and drained out to maintain a steady intraocular pressure, although it does vary depending on the time of day and the activity of the eyes.

Glaucoma occurs when the drainage of the aqueous fluid is impeded. Aqueous humour is still being pumped into the eye however, and the intraocular pressure increases to the extent that the extra fluid is pressed against the optic nerve at the back of the eye. The optic nerve is pushed into a concave or cup shape and if this situation continues for an extended period of time the increased pressure damages parts of the optic nerve and vision begins to deteriorate (see Diagram 3). This situation can occur in several ways and each is known as a different type of glaucoma.

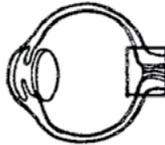
Diagram 3

CUPPING OF OPTIC NERVE

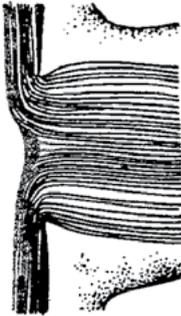
Normal eye pressure



Increased eye pressure



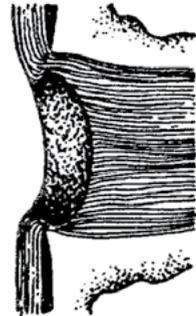
Continued high pressure



Normal optic nerve



Destroys nerve fibres hollowing out nerve



Further destroys nerve fibres



Types of Glaucoma

There are five main types of glaucoma:

- 1 Chronic Open Angle Glaucoma
- 2 Acute Angle-Closure Glaucoma
- 3 Secondary Glaucoma
- 4 Primary Infantile Glaucoma (Congenital Glaucoma or Hydrophthalmia)
- 5 Low-Tension Glaucoma

Chronic Open Angle Glaucoma

This is the most common form of glaucoma with millions of people around the world suffering from it to some extent. The term chronic means the condition persists for a long time or is constantly recurring. The aqueous humour passes through the trabecula or drainage canals in order to return to the bloodstream. In the course of time the trabecula can increase resistance to the flow of aqueous humour with a subsequent rise in intraocular pressure, and hence, damage the optic nerve.

The condition is difficult to detect in its early stages because there are only mild symptoms, which can easily go unnoticed for a long period of time. It is more common among people aged over 35; however it may occur at any stage in a person's life, especially if they have a family history of the disease. In this case the chances of contracting the disease are one out of ten.

People suffering from Chronic Open Angle Glaucoma may only feel a slight discomfort in the eyes in the early stages. As the condition continues a gradual loss of vision is occurring. This is not usually noticeable until the condition worsens; however, small patches of peripheral vision will have already been lost. Both eyes are usually affected but one is often more seriously damaged than the other. If it remains untreated the condition will continue on its course towards total blindness as the increased intraocular pressure damages more and more of the optic nerve. People suffering from Chronic Open Angle Glaucoma may only feel a slight discomfort in the eyes in the early stages. As the condition continues a gradual loss of vision is occurring. This is not usually noticeable until the condition worsens; however, small patches of peripheral vision will have already been lost. Both eyes are usually affected but one is often more

Diagram 4

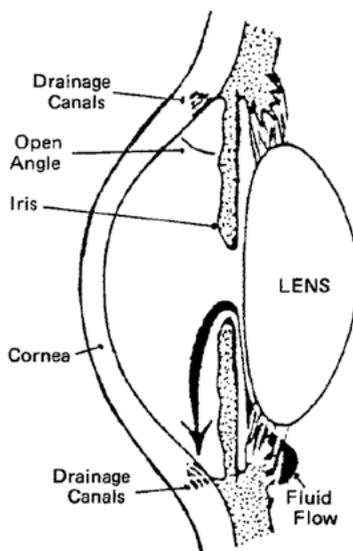
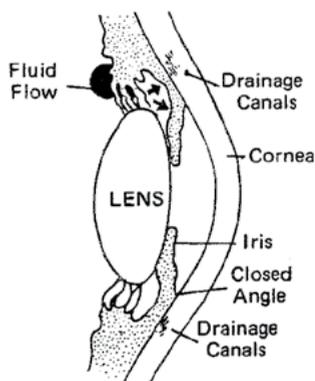


Diagram 5



seriously damaged than the other. If it remains untreated the condition will continue on its course towards total blindness as the increased intraocular pressure damages more and more of the optic nerve.

It is most important that people in a high risk category that is, those with a family history of the disease, people aged over 35 and those with Diabetes, Arteriosclerosis or Anaemia have their eyes checked by either an optometrist or an ophthalmologist on a regular basis to determine whether the intra-ocular pressure is above normal. Early detection is the only way in which loss of vision can be prevented because once the optic nerve has been damaged the resulting visual loss can never be regained.

Acute Angle-Closure Glaucoma

In this type of glaucoma the drainage canals are suddenly blocked or covered over causing a significant and rapid increase in intraocular pressure. The iris causes this blockage when the angle between the iris and the cornea is not very wide. If you compare Diagram 5 with Diagram 4 you will notice that the iris actually closes over the drainage canals. This is a relatively rare structural problem and, hence, Acute Angle-Closure Glaucoma occurs only in a small percentage of cases.

With this type of glaucoma the symptoms are felt immediately and tend to be quite severe. The eye becomes red and pain is felt around the affected eye and sometimes more widely so that it is also felt as a toothache. This may also be accompanied by nausea and vomiting. The sudden rise in pressure within the eye often causes fluid droplets to accumulate under the surface layer of the cornea causing blurred vision and the appearance of rainbow-like halos around lights. The eye will appear frosted or glazed in this situation.

If these symptoms occur it is important to get immediate medical treatment to avoid serious damage to the optic nerve. Urgent admission to hospital is the best course of action. Sometimes mild attacks can occur, which last for a short period of time and seem to spontaneously disappear, especially after a night's sleep. Urgent treatment is still necessary in these circumstances to avoid a highly probable recurrence of the attack after a variable interval. Once a full-scale attack occurs permanent damage is incurred to the eye almost immediately

Secondary Glaucoma

Secondary Glaucoma simply means that increased intra-ocular pressure is caused by some other disorder of the eyes. This disorder is the primary cause of the condition and the resulting secondary condition may be either acute or chronic glaucoma. The primary conditions that can cause Secondary Glaucoma include eye injuries, inflammation, tumours, cataracts and advanced cases of Diabetes. This type of glaucoma is fairly uncommon and treatment depends on the nature of the primary illness and whether the resultant glaucoma is acute or chronic in nature. Of course, if there is an acute attack the same emergency measures must be taken as described earlier.

Primary Infantile Glaucoma

(Congenital Glaucoma or Hydrophthalmia)

Glaucoma can sometimes occur in infants due to an incorrect or incomplete development of the trabecula or drainage canals. The most obvious symptoms for the parent to recognise are a cloudy appearance of the eye and an enlargement of the eyeball. One or both eyes may be affected. These symptoms persist as the condition develops and grey areas develop which cloud the

eye as aqueous fluid enters the cornea through splits, which occur in the inner lining of the cornea itself due to the increased pressure. If an infant's eyes seem abnormally large, parents must have the child's eyes checked immediately. This condition may be present at birth or develop in the early years of the child's life

Low-Tension Glaucoma

This is a form of the disease about which doctors know even less than the other types described here. It is a rare condition in which damage is sustained to some especially delicate optic nerves even though the intraocular pressure may be relatively low.

It is obvious from this discussion of the types of glaucoma that much research needs to be carried out so that doctors can determine the underlying causes of the disease.

Diagnosis

The diagnosis of glaucoma is of the utmost importance because the longer the condition remains undetected, the greater the irreparable damage that is done to the visual field. Glaucoma rarely occurs before the age of 35 but occurrence of the disease increases steadily as people age. People with current eye disorders, especially short-sightedness, and those with a family history of glaucoma, are in a high risk category, along with the elderly and diabetics. It is essential that if you are in any of these categories that you undergo a thorough examination of the eyes includes measurements of intraocular pressure, inspection of the optic nerves and visual field testing. These examinations are painless and quick.

An optometrist can detect abnormally high levels of intraocular pressure but it is not a routine part of an eye examination in which spectacle prescriptions are formulated. It is essential that a test for intraocular pressure be asked for. For a more thorough and complete examination an Ophthalmologist must be consulted. An Ophthalmologist is a qualified medical doctor who is trained in providing total care of the eyes, including all diagnostic techniques for detecting Glaucoma, and providing any treatment necessary. An Ophthalmic examination at least every two years is necessary for those people at risk even when no symptoms are present. The only effective way to preserve your eyesight is to detect the disease as early as possible in its development.

Treatment

Glaucoma cannot be cured. Once it has been diagnosed it requires continual observation and treatment for the rest of your life in order to prevent further deterioration of eyesight. The best that can be hoped for is a reduction and subsequent control of the intraocular pressure at safe levels. Regular ophthalmic examinations are necessary even after medication or surgery has successfully reduced and controlled the intraocular pressure.

There is no single best method of controlling intraocular pressure. Each individual case is different and the Ophthalmologist uses his knowledge and skills to formulate a treatment programme that will be the most effective. Furthermore, this programme of treatment is inherently revisable as changes in the patient's condition, along with the nature of some of the medications, often call for different treatments in order to successfully control the intraocular pressure for an extended period of time. Therefore, many of the treatments outlined here may be used singularly or in combination at various times during the course of the disease.

There are three main methods of treatment, prescription medications (usually in the form of eye drops), laser beam treatments and or microsurgery.

Prescription Medications

These are the primary form of treatment for Chronic Open Angle Glaucoma. They are designed to either increase the drainage of aqueous humour from the eye or to decrease the input of the same substance into the eye, or both. In this way the intraocular pressure is kept in check. Medications are most commonly in the form of eye drops but tablets and ointments may also be used.

The eye drops known collectively as Miotic come in many forms with varying strengths and chemical compositions. Some of the more common are Pilocarpine, Carbachol Eserine (Physostigmine) and DUOTrav. The Ophthalmologist decides which particular eye drops to use depending on the response in the patient's intraocular pressure, also taking into consideration any side effects, which may occur from their use.

SIDE EFFECTS

Most medications used to control glaucoma have some side effects; however, these tend to become less noticeable with continued use. Stronger medication causes greater side effects. These include blurred vision, reduced night vision, difficulty in focussing, eye or headaches and redness of the eyes. Sometimes medication can cause discomfort in other parts of the body other than the eyes, such as loss of mental clarity, upset stomach, tingling sensations in the hands and feet, altered heart rate and drowsiness.

It is up to the patient and the Ophthalmologist to choose the most effective drops with the least side effects. Obviously, it would be preferable to have medications without such uncomfortable side effects and this is another area where increased research and development is necessary.

One of the most frequently used eye drops is called Pilocarpine. These eye drops are only effective in aiding the escape of aqueous fluid from the eye for about six hours. Therefore, during the course of the day they are usually taken upon arising in the morning and prior to going to bed at night and twice during the middle part of the day. Pilocarpine may also be applied in the form of an ointment. This has the advantage of being effective for longer periods, however, the side effects, especially the blurring of vision, can make this an undesirable form of treatment. If Pilocarpine is ineffective, one of the other Miotics mentioned previously may be used.

The other most frequently used is Timolol, a relatively new formulation that reduces the amount of aqueous fluid entering the eye, rather than increasing the outflow of aqueous, as the Miotics do. It has a much longer duration of effectiveness than Pilocarpine and need only be taken twice a day to assure safe levels of intraocular pressure. Once again, the Ophthalmologist must determine whether the patient is suited for these eye drops, however, those who do use them tend to suffer less side-effects than those encountered with the Miotics already described.

An Ophthalmologist may also prescribe adrenaline eye-drop preparations, which can be used effectively with only two applications per day. These preparations reduce the inflow and increase the outflow of aqueous fluid. However, they do cause a significant dilation of the pupil and are, therefore, not suitable for people with narrow anterior chamber angles (see Diagram 5) as they could lead to angle closure and a subsequent attack of Acute Angle-Closure Glaucoma.

The most common medication that is prescribed in tablet form is Diamox. These tablets reduce the rate of aqueous production for approximately six hours and are very effective in reducing the intraocular pressure rapidly. They are often used when operations for glaucoma must be postponed. If the intraocular pressure cannot be controlled effectively with any of these medications the next alternative is some form of surgery to assist the outflow of aqueous fluid from the eye. This can involve laser beam treatment, microsurgical techniques, or both.

Laser Beam Treatment

Laser beams can be used to carry out both these types of operation and hence, is appropriate for both acute and chronic forms of glaucoma. Unlike microsurgery, laser treatment is quick and may be carried out at the doctor's office if he/she has the necessary equipment. The eye is anesthetised using eye drops and then a microscopic beam of light burns small holes only at the points at which it is focussed. The laser can make an opening in the iris and also unclog some of the drainage canals. It takes up to several weeks after the treatment to determine the results and so eye pressure must be checked regularly after the operation and, in some cases, if laser treatment fails to provide relief, medication must be continued.

Laser treatment does not seem to be developed to its full potential yet, as the treatment often needs to be repeated. It does have the advantage of reduced recuperation time and a minimal risk of eye infection or other complications.



Microsurgery

Microsurgery is most often carried out in cases of Acute Angle-Closure Glaucoma where the sudden rise of intraocular pressure to extremely high levels needs immediate treatment to unblock the drainage canals. It may also be used for those who have Chronic Open Angle Glaucoma if medications fail to alleviate the problem or if the side effects are too severe. Once again, the Ophthalmologist must consider each individual case before deciding whether surgery will be performed.

Modern surgical techniques are very successful, with up to 70% of Chronic Open Angle cases having successful results in normalising the intraocular pressure and a further 20% of these cases achieving a similar result with the addition of medication after the operation.

As with medication treatments, the best possible result is the normalising of intraocular pressure to prevent further loss of visual field. Some disadvantages must also be taken into consideration. Medical opinion is that after surgery the possibility of developing a cataract increases. (A cataract is another disease of the eye characterised by a cloudy or opaque state of the liquid contained in the lens of the eye.) Furthermore, because the eyes are so precious and sensitive, a great deal of psychological distress can occur in some individuals. It should be remembered, however, that the operation is a very safe procedure and sight is normally unaffected. Surgery always carries some risk of complications and is only used when other measures have failed to achieve results.

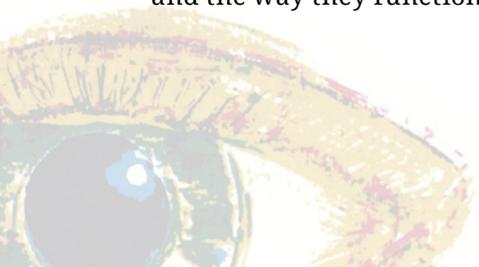
Chronic Open Angle and Acute Angle-Closure Glaucoma require different operation techniques. In Chronic Glaucoma, a small

opening is made in the 'Sclera' (see Diagram 1), through which the aqueous fluid can pass, thereby avoiding the blocked drainage canals. This is called a 'Trabeculectomy'. The surgeon may also choose to remove a small piece of the iris in order to avoid an attack of acute glaucoma in the future. This is called an 'iridotomy' and is the surgical technique employed for Acute Glaucoma cases. A small wedge-shaped piece of the iris is removed to expose some of the blocked drainage canals. Aqueous fluid can then flow more easily through the canals and the eye pressure falls. Occasionally the new drainage canal constructed in microsurgery begins to close and the intraocular pressure reaches dangerous levels again. In such cases it presents no difficulty to repeat the operation and no complications come into play.

Microsurgery usually involves a short visit to the hospital and some recuperation time. Except in mitigating circumstances, patients are usually fully active and need only wear an eye-patch for a short while after the operation. Patients should be sensible however, and try to relax as much as possible to foster a healing environment in mind and body.

Alternative Treatments

Apart from traditional methods of medical treatment, some experiments have been carried out using a variety of self-healing techniques to control intraocular pressure in cases of Chronic Open Angle Glaucoma. Some of these techniques include Biofeedback Therapy and Guided Visualisation in which the individual is made more aware of his or her body and mind and the way they function.



Basically, the person learns to work with the natural healing and regulatory forces already existent in the body to achieve a desired state of being, in this case, a reduction and control of intraocular pressure. It has been shown that if a broader holistic perspective is used in treating illnesses, many chronic conditions may be cured.

The basic tenet of this holistic approach is that both illness and healing are not merely mechanical processes but also involve many non-physical factors, such as emotions, motivation and attitude. Health promoting factors can be brought into play through the deliberate use of one's powers of thought in a positive, healthful way and the illness itself is seen as a message to change and redirect one's lifestyle.

The most important aspect of these types of alternative approaches is faith in your own potential ability to come to grips with your condition as well as faith in the persons instructing you on how to bring out the potential. Many people suffering from Chronic Open Angle Glaucoma have been able to successfully control their intraocular pressure with such methods and have gained the advantages of increased confidence in their own abilities, and have freed themselves of the need for constant medication.

Although not all people will be interested in pursuing this type of treatment, it is definitely an alternative worth pursuing if you are concerned about maintaining, correcting and enhancing both your physical and psychological health. It is most important to remember that such methods do not necessarily preclude more orthodox treatments and, as common sense suggests, a person should pursue every course available to them in their efforts to regain a healthy condition.

Your General Health

Your general health must be considered whether or not you suffer from an illness. It seems in this day and age people tend to disregard their own health until an illness provokes them into considering their way of life. The importance of taking care of your body is so obvious it is often forgotten or taken for granted.

Three facts stand out above all in the acquisition and maintenance of perfect health. Firstly, we must keep the bloodstream pure by eating whole foods that are unrefined, drinking clean, unpolluted water and breathing fresh air. The purer your bloodstream the better for the cells that make up the human body.

Secondly, we must maintain a high standard of personal hygiene. And thirdly, we should have a positive and cheerful attitude of mind, as the mind and its states of consciousness govern the body and its functions.

What this means in practical terms, for those who wish to become and remain healthy, can be gathered from the following suggestions:

- **Eat three meals a day, including breakfast**
- **Avoid sugar, refined flour, processed foods and excessive salt**
- **Do not smoke and avoid drinking coffee**
- **Drink little or no alcohol**
- **Keep your weight within 10% of the ideal**



- **Exercise regularly, eg: aerobics, stretches, yoga, swimming, walking**
- **Relax regularly**
- **Have at least seven to eight hours sleep every day**

It is clear that good health must be worked for, but once achieved; the benefits gained will make it easy for the individual to maintain it. Because good health has such an important bearing on your physical and psychological health it should not be overlooked when trying to come to grips with any illness, including glaucoma.

Some Common Questions

Is it possible to have glaucoma in one eye only?

Yes. This does occur occasionally; however, glaucoma normally affects both eyes. Quite often one eye is affected to a greater extent than the other.

Can glaucoma cause any other eye disease?

Once glaucoma is under control, that is, when the intraocular pressure is normalised, no other diseases are caused. It is only when the eye pressure is abnormally high that other complications can arise.

If Chronic Open Angle Glaucoma has no obvious warning signs, how do I know if I have it?

There is only one way to be sure, and that is to see an Ophthalmologist and undergo a thorough eye examination including eye pressure measurements, inspection of the optic nerve and also a visual field test. If you are aged over 35 or have some family history of the disease or for any other reason suspect you may have glaucoma, it is essential that you have these tests carried out immediately.



Is glaucoma associated with any other common disease?

Yes. Glaucoma is known to have a fairly strong connection to Diabetes. Diabetics are in a high-risk category and should have regular eye examinations.

Does high blood pressure affect glaucoma?

High blood pressure is a common ailment usually associated with anxiety, tension and incorrect diet. It is essential that if you have glaucoma and are being treated for high blood pressure that you inform the doctor immediately. Medications designed to reduce blood pressure can lead to serious damage of the optic nerve as the delicate blood vessels, which nourish it carry less oxygen to the eye.

Could I go blind if I have glaucoma?

If glaucoma is left undetected it runs on a course toward total blindness. However, eyesight can be saved if the condition is detected and regular treatment carried out accordingly. The longer the condition is left undetected the greater the possible loss of vision.

Should I wear spectacles or contact lenses?

Spectacles do not directly affect the glaucoma condition but they are still necessary if you already wore them or if they are considered necessary by the Ophthalmologist. Contact lenses may still be worn, however the 'soft' type of contact lens may not be suitable and this matter should be discussed with your doctor.

Do other medicines affect glaucoma?

Yes. It is essential that you make your doctor aware of your glaucoma condition and the medication you are taking prior to the prescription of any other medicines. Some types of tranquilisers, asthma and indigestion medicines, as well as Cortisone-type (steroid) medicines can have dangerous results for the glaucoma sufferer.

Should I tell my Ophthalmologist if I become pregnant?

Yes. Pregnancy may affect the course of treatment and the medications you may be taking.

What happens if I forget to put my eye drops in at the right time?

Because eye drops need to be taken on a regular basis throughout the day, it is important that you have them available at the right times of the day. It is obviously better to keep to the correct times but if circumstances make this difficult it is best not to be too worried and to put them in at the earliest opportunity.

Can I still watch television?

Yes. Research has shown that the intraocular pressure is not affected by watching television. It is good advice to leave a light on in the room and not to forget taking your medication.



Does alcohol affect intraocular pressure?

A small amount of alcohol does marginally reduce intraocular pressure for a short period of time and there is no reason why it cannot be consumed. It is not a case of the more the better, however, as the total benefits to be gained is achieved with only one or two drinks. It is not desirable to drink a great deal of fluids, including alcohol, in a short period of time as this can increase the eye pressure quite significantly. Never consume more than one pint (600ml) of liquid in less than five minutes.

How often do I need to see my Ophthalmologist?

There is no standard interval for glaucoma check-ups because each individual case is different. If the Ophthalmologist considers your treatment to be effective in controlling your intraocular pressure then the intervals between check-ups may be increased. Of course, if you notice anything unusual in your own condition then it will be necessary to arrange another check-up immediately. The most important thing about eye check-ups is that they are carried out on a regular basis, whether you have glaucoma or not.

Should I carry special identification papers to indicate I have glaucoma?

Yes. This is a sensible suggestion. A small card informing people of your condition and the medication you are using will help avoid any complications in cases of emergency where incompatible drugs may possibly be used.

Living with Glaucoma

Diagnosis of glaucoma, like any other illness, often comes as a shock to the person involved.

Probably the most important point to keep in mind is that once the condition has been diagnosed it is possible with current medical knowledge to control the progress of the disease to avoid further detrimental effects. A person should avoid dwelling on the emotionally upsetting factors involved. This does not mean that you should suppress your emotions, rather it is better to get them out into the open by discussing the situation with friends and relatives and your doctor. Everybody comes to grips with the news in a different fashion, but no one can deny that a problem shared is a problem halved.

As far as possible you should continue your life activities and carry out any plans you have or begin new ventures, because the more you let glaucoma limit your life the more it will tend to dominate your thoughts and activities, as any chronic condition could.

Examples of chronically ill people who have succeeded in overcoming the problems associated with their condition abound, and more often than not, they gain a more positive and healthy outlook on life as a result.



Obviously, it is very sensible to learn all you can about your condition so that you gain a greater understanding of what is happening to your eyes. Your Ophthalmologist is your greatest resource of information and can explain your medication programme and answer any other queries you might have. This knowledge can be used to great advantage because there are thousands of people in Australia alone who have glaucoma and do not know it. By discussing the disease and being aware of the symptoms you can help save somebody else's eyesight, especially your relatives, as they are a high-risk if you have the disease yourself.

It is also important that you try to reduce any stress and anxiety in your life. Couple this with a healthy lifestyle (See 'Your General Health', page 33) and you will find that it may have positive effects on your eye pressure and will definitely be good for your mind and body. Everybody reacts differently to these conditions but a calmer daily routine often produces favourable results. In a relatively short period you will become accustomed to your programme of medication and the idea of possible surgery. Understanding and acceptance of your condition is just a matter of time and you will learn to make glaucoma a manageable problem, rather than an overwhelming worry.

Conclusion

What Can Be Done?

This booklet is an attempt to increase the general public's understanding of Glaucoma. There is an inadequate level of knowledge about this disease that affects 2% of the entire population, 10% of all those aged over 35 and 20% of those with it in their family history. Ignorance perpetuates itself until somebody is inspired to rectify the situation they see as intolerable. In the case of glaucoma the situation is most definitely intolerable. Millions of people around the world have lost some of their effective eyesight ranging from slight impairment to total blindness. It does not befit a modern civilisation to allow this situation to continue.

Sine 1986 I have dedicated my life to improving a situation I see as unnecessary and quite sad. However, I cannot do it without your help.

If you believe, as I do, that urgent steps must be taken to educate the general public about glaucoma, please take the opportunity to discuss glaucoma and the need for Ophthalmologic examination with your family and friends. Your assistance could help avoid the possible loss of such a precious ability as eyesight.

**You can walk with a wooden leg,
but you can't see with a glass eye!**