

## **The causes of loss of sight shortly stated and explained.**

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THE

# CAUSES OF LOSS OF SIGHT

SHORTLY STATED AND EXPLAINED.

GLASGOW:

PRINTED BY W. LANG, 72, NELSON STREET.

1832.



ms. p. 1090



# THE CAUSES OF LOSS OF SIGHT

SHORTLY STATED AND EXPLAINED.

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IN former times, small-pox proved so frequent a cause of loss of sight, that one could not pass along the streets of any populous town, without meeting persons disfigured and deprived of vision, from the effects of that disease. Though this cause has been greatly obviated, and sight saved, by the practice of inoculation, and more recently of vaccination, so that the number of blind people is now proportionably much less than fifty or a hundred years ago, there are still many injurious influences to which the eyes are exposed, and which are apt to leave these organs either destroyed, or so greatly impaired, that they can no longer serve for the active employments of life.

I. Infants, of a few days old, are liable to an inflammation of the eyes, of a very dangerous sort. It first attracts notice about the third day after birth, and is attended with a discharge of matter from between the eyelids. If the disease is neglect



ed, this discharge increases, the eyelids become very red and much swollen, in a few days the eyeballs burst, and vision is entirely destroyed. This lamentable event occurs but too frequently, especially among the poor, who are totally unaware of the dangerous nature of the disease, are afraid of having any thing done to infants so young, or content themselves with some such trifling treatment as the washing of the eyes with the mother's milk; till, at length, getting alarmed at the continued flow of matter, application is made for medical advice, and, upon examination, the eyes are too often found irretrievably injured. Yet, this is a disease completely under control, if proper means of treatment be had recourse to within the first few days.

The origin of this disease of new-born children is carelessness in washing the eyes immediately after birth, too much exposure of the child to light, and sudden transitions of temperature. The washing of the eyes ought to be carefully and gently performed, with a bit of soft clean sponge, and a little tepid water, without soap, before any thing else is done to the child; and the eyes ought to be exposed neither to the full glare of day, nor to much heat or cold.

Should the child actually be attacked by this inflammatory affection of the eyes, no time should be lost in applying for assistance. In a few days, all danger is, in general, set aside by the use of the proper remedies.



II. The disease just spoken of is termed a *purulent ophthalmia*; that is to say, an inflammation of the eyes attended with a discharge of *pus* or matter. This, however, is not the only inflammation of the eyes which claims that appellation. In adults, the same kind of disease often occurs, being excited by cold, and not unfrequently by contagion. For it is well ascertained, that the matter taken from the eyes of a new-born child affected in the manner already described, or from the eyes of an adult labouring under the same sort of disease brought on by cold, is capable of exciting a similar inflammation, if incautiously applied to the healthy eye of another person. Excited in this way, by inoculation, the disease runs in the adult, a course not less dangerous to vision, than it does in the new-born infant.

The Egyptian ophthalmia is a contagious purulent inflammation of the eyes, so destructive to vision, that in Egypt, the number of blind persons is prodigious; nearly every fifth inhabitant, it is stated, having lost an eye, and many both. Ignorance of the nature of the disease, and of the proper mode of treatment, is in a great measure, the cause of such disastrous effects.

III. By far the most common cause of impaired vision in children, is an inflammation of the membrane, which lines the eyelids, and covers the eyeball, attended by the formation of pimples or little pus-



tules on the diseased surface. This disease, often called *pustular ophthalmia*, seldom attacks infants before the period of teething. From that time, till about eight years of age, is the period of life during which it is most prevalent. It is attended with an excessive aversion to light. Even when the complaint is but commencing, the child cannot bear to open his eyes, but shuts them instantly on the light being admitted, and seeks to hide himself in some dark corner. To such an extent does this symptom sometimes go, so great is the child's dread of the light, that he will often for days, weeks, nay even months together, keep his hands over his eyes, or lie on his face, pressing his eyes against the pillow. It is in vain to ask a child affected in this way, to open his eyes, that their state may be examined. This he cannot, in general, do, how willing soever he may be. Children are frequently met with, who have for many months been affected in the manner now described, the state of their eyes never having been ascertained, and nothing attempted for their relief, except perhaps the use of some eye water, often of a nature more likely to prove injurious than beneficial. At length, on a proper examination being made, they are found to have their eyes materially, perhaps irreparably, injured, from such neglect.

The little pustules, which appear in this disease, are in many cases situated on the *cornea*, or transparent front of the eye; and,



if allowed to run their course, (as too often they are, in children whose parents are careless, or timid, or are acting under the advice of some one who tells them that the complaint is nothing,) these pustules burst, and form ulcers, which gradually grow broader and deeper, and sometimes penetrate into the eye, producing excessive pain, and allowing what is termed the *aqueous humour* to escape. This is generally followed by disfiguration of the eye, and by partial, sometimes total, loss of sight. An ulcer of the cornea never heals without leaving a speck or opacity; and if the ulcer has been deep, the speck, though it may shrink somewhat as life advances, never goes entirely away.

Parents do wrong who neglect this disease, which is apt to take such a hold of the eye as not easily to be removed, but to continue in a greater or less degree for years, so that the children's time is lost, the appearance of their eyes injured, their vision impaired, and their general health destroyed by confinement, pain, and suffering.\*

Not only is this disease in many in-

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\* "I have been all my life," says Cowper the poet, "subject to inflammations of the eye; and in my boyish days had specks on both that threatened to cover them. My father, alarmed for the consequences, sent me to a female oculist of great renown at that time, in whose house I abode two years, but to no good purpose."—*Hayley's Life of Cowper*. Vol. I. p. 7. The sufferings of these two years may well be suspected to have had their share, in laying the foundation of the ill health, both corporeal and mental, under which Cowper laboured during the rest of his life.



stances neglected; it is in other cases wofully mistreated. The constitutional remedies which are employed, are often of a weakening nature, when they should be strengthening; and the applications which non-professional advisers make to the eyes, are frequently of the most improper description. For instance, a solution of sugar of lead is often employed, in the form of drop, or eye water. Now, if there is any ulcerated spot on the surface of the eye, (a very frequent occurrence in this disease,) the lead is deposited on the ulcer and forms a white chalk-like speck, easily recognized by one at all skilled in the diseases of the eye, and which generally proves an indelible impediment to vision.

IV. The edges of the eyelids and roots of the eyelashes are subject to a peculiar inflammation, of a very tedious character. It is this disease which produces *bleared eyes* in children, and so often destroys entirely the eyelashes. If long neglected, it becomes almost incurable, and although it does not directly affect the eyeball, and never produces absolute blindness, yet it often becomes the cause of a serious degree of weakness of sight, which is apt to continue for life.

It sometimes happens, in consequence of this inflammation of the eyelids, that the eyelashes lose their natural direction, or even grow out of their natural place, and turning towards the eyeball, rub upon it,



and continually irritate it, so as to cause inflammation of the eyeball, and sometimes to bring on specks on the transparent part of the eye. In other cases, the long continuance of this disease produces a turning out of the eyelids, so that more or less of their internal surface is exposed to view. This is particularly apt to happen to the lower eyelids, and besides giving to the patient a very unseemly appearance, renders the eye watery, and unable to bear any close employment of the sight.

V. A fruitful source of loss of sight consists in *injuries* of the eyes, received in breaking stones, blasting rock, chipping iron, and the like. In many instances, complete extinction of vision, from some essential part of the eye being torn or otherwise destroyed, is the immediate effect of the injuries in question; as well as of severe blows on the eye, with sticks, the fist, &c. In other cases, the injured eye might be saved, were it not for the injudicious attempts made by ignorant persons, to remove particles of iron and the like, which have lodged on the surface of the eye. These attempts, (often rudely made, perhaps with a common penknife, by smiths, and others, totally unacquainted with the delicate and important nature of the parts on which they venture to operate, and not unfrequently made when there is actually nothing adhering to the eye, but merely the mark or stain left by the offend-



ing substance,) are generally followed by violent inflammation, both on the surface of the eyeball and within its cavities. The inflammatory action, thus excited, is extremely apt to end in the formation of matter, which going on to accumulate, produces excruciating pain, and causes the eye at last to burst—an event which generally leaves the organ in so altered a condition, that there is no hope of sight being restored.

The accidents which occur in breaking stones, and the like, might in almost all instances be prevented, by the use of wire-gauze shades for the eyes. These, in the form of spectacles, are used by fencing pupils, and are sold for two shillings and sixpence, but could be made in a plainer way for half that price. There can scarcely be a more charitable action than the presenting of a pair of these shades, to a poor man, who is beginning to break stones on the road; as without the sort of protection which such shades afford, particles of whinstone are exceedingly apt to be driven into his eyes, yet unaccustomed to shut at the instant of the stroke of the hammer.

The effects of the accidents in question might, on the other hand, be moderated, in many cases, by a cautious removal of the foreign substances adhering to the eye, and by proper medical treatment. Humanity naturally leads the by-stander to seek to relieve his fellow-creature in pain, and in many instances where particles of stone



and the like have lodged in the eye, by merely laying hold of the eyelashes of the upper eyelid, and raising the eyelid, so as to expose its internal surface, the offending cause will be detected adhering there, and may readily be removed with the point of a picktooth. Vanity, however, occasionally tempts ignorant mechanics to offer themselves as oculists, in cases of a much more serious sort; and the success attending their essays, where the particles are not imbedded in the tunics of the eye, but merely lie on its surface, or adhere to the membrane lining the eyelids, is apt to lead their fellow-workmen and others to form a false estimate of their skill, and to trust to them in injuries of the eye, which, from their difficulty and danger, these operators themselves, were they under the guidance of proper motives, would not venture to touch. The cases, in which violent inflammation arises from their rude attempts, and ultimate destruction of the eye follows from the neglect of active and appropriate treatment, are unfortunately overlooked, or are set down, not to the true cause, mismanagement, but to the supposed severity of the original injury.

There is one source of injury, to which the attention of parents, and of the police, ought to be directed. Bows and arrows never came into vogue among the children on the street, without cases of loss of sight from this cause.



VI. There is a numerous class of inflammatory diseases of the eye, affecting chiefly its internal textures, and especially the coloured membrane called the *iris*, in the centre of which is the circular aperture, called the *pupil* or vulgarly the *sight*. The causes of these internal inflammations of the eye are various, cold being one of the most frequent. Their effect, if they are neglected or mistreated, is closure of the pupil. The aperture by which light enters the eye shuts, and vision is at an end. This consequence, indeed, may be warded off by treatment. But the treatment, under such circumstances, is by no means simple, or level to the capacity of one unacquainted with the structure of the eye, and the powers of remedies. It consists in the use of means, suited to produce three distinct effects; namely, to moderate the inflammation and fever by which the disease is attended; to clear the pupil of a peculiar substance, called *lymph*, which flows into it from the diseased vessels, and blocks it up; and to oppose the closure of the pupil, and expand it to its natural size. The medical practitioner will readily acknowledge the care and the skill necessary in the use of the remedies calculated to insure these effects, and the man of plain common sense will also at once perceive that the complex means in question, are not likely to fall within the knowledge of any uneducated mechanic.



VII. Anatomy reveals to us, that there is situated within the eye, and almost immediately behind the pupil, a double-convex lens, similar in form to the glass of a pair of spectacles, only very thick in proportion to its small breadth, and in the healthy state perfectly transparent. Disease sometimes destroys the transparency of this part of the eye, and the consequence is, that the light entering the eye is stopped, confused, and scattered by the opake lens, which it encounters in its passage towards the nerve of vision. This opacity of the lens constitutes what is termed *cataract*, a disease to which old age is particularly subject, although cases are occasionally met with of children being affected with it even from birth.

Cataract is a disease curable only by surgical operations, calculated to remove the opake lens, either slowly or at once, from the eye.

VIII. A failure in the sensibility of the nerve of vision to light, is a common cause of blindness. This was the blindness of Milton. It is styled *gutta serena*, or *amaurosis*; and to the former of these appellations, the illustrious poet refers in his celebrated address to light.

But thou  
Revisit'st not these eyes, that roll in vain  
To find thy piercing ray, and find no dawn;  
So thick a *drop serene* hath quench'd their orbs."

The causes of amaurosis are very numer-



ous. One of the most frequent is over-exertion of the organs of sight. Man is not naturally meant for that constant employment of the eyes upon the same unvaried set of minute objects, which is required in many of the occupations to which he at present devotes his attention. He was not intended to sit all day, and day after day, poring over an infinity of little black lines on a white ground.\* His sight can be preserved strong and entire till the end of his natural period of existence, only by frequent intermission from the employments which fatigue the eyes, and by his enjoying from time to time the healthful exercises, free air, exhilarating verdure, and extensive prospects of the country.

Besides excessive use of the eyes in prolonged reading, writing, and the like, especially by candle or gas light, the following are frequent causes of amaurosis; namely, blows or other injuries of the head; excess of any kind; the habitual use of poisonous substances, and especially of ardent spirits and tobacco; want of sleep; depressing affections of the mind; long-continued disorders of the stomach and bowels; close confinement to employments

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\* "The master of a printing office became blind. He had corrected the press, and was otherwise engaged in reading, for eighteen hours out of the twenty-four, a practice which he continued for twelve months, notwithstanding an evident failure of his sight. At the end of this time, the amaurosis was so complete that he could not distinguish one object from another, but was merely capable of perceiving the light, so as to find his way in the streets."  
*Allan's System of Surgery.* Vol. III. p. 187.



requiring almost constant stooping, as shoe-making and the like.

In poor people, beyond the age of 45, amaurosis may sometimes be attributed to the straining of the sight resulting from the want of spectacles, or the using of bad glasses, or of those of a focus not suitable for their eyes. Hence it has repeatedly been stated by those authors who have written on the preservation of sight, that there could not be a more useful appropriation of part of the funds of charitable institutions, than that of providing proper spectacles for the poor.

Amaurosis generally comes on slowly and insidiously. The early symptoms, such as a sensation of small blackish spots, or shreds of cobwebs, flitting before the patient, are often neglected. No advice is asked till the disease is considerably advanced in its progress, and has taken a seat from whence it is hardly possible, and often quite impossible, to drive it. The darkness thickens day after day, and at length the eyes roll insensible to the

piercing ray, and find no dawn.

Milton thus pathetically laments his state of blindness:—

“ With the year  
Seasons return; but not to me returns  
Day, or the sweet approach of ev’n or morn,  
Or sight of vernal bloom or summer’s rose,  
Or flocks or herds, or human face divine;  
But clouds instead, and ever-during dark  
Surrounds me, from the cheerful ways of men



Cut off, and for the book of knowledge fair  
 Presented with a universal blank  
 Of Nature's works, to me expung'd and raz'd,  
 And Wisdom at one entrance quite shut out."

*Paradise Lost. Book III.*

Such, then, is a short enumeration of the most frequent causes of loss of sight. That many poor people suffer this misfortune, from their own carelessness and neglect, or from trusting their eyes to persons unacquainted with the principles and practice of the healing art, is a fact equally lamentable and notorious. That from some slight disorders, the eye, like other organs of the body, may occasionally recover, by means of its own inherent powers of restoration, is no reason why it should ever, even in apparently trifling diseases, be neglected; as it is impossible for the patient to know, whether what he feels in himself, or observes in another, be actually a trifling affection from which a natural recovery will take place, or the commencement of a serious disorder, which in a few days may destroy vision. On the other hand, that ignorant individuals may in some of the simpler affections, or accidents, to which the eye is liable, seem to themselves successful, or be able to persuade others equally ignorant as themselves of their success, can form no excuse for destroying at one time by their rude applications, and their total omission of fit means at other times, one of the most valuable gifts which

of all kinds, as Spleen, Vapours, Lowness of Spirits, Hypochondriacal, and Hysterical Distempers, &c.



the Creator has bestowed upon man. Those celebrated men, who, in this and other countries, have bestowed their life-time on the study of the eye, have ever been most ready to acknowledge the difficulties connected with the attainment of a thorough knowledge of the diseases of that very complicated and delicate organ. Should we trust it, then, to the hand of presuming, vapouring ignorance; or should we allow our fellow-men of any rank or situation in life, unwarned, to risk the loss of an organ of sense, upon which depend in so great a degree, both their own happiness, and the welfare of those with whom they are connected?

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*W. Lang, Printer.*