to sight increase almost in exact ratio with the increase of myopia. This being granted, the importance of limiting the increase of myopia in any and every case, is at once obvious. First of all, there must be careful and expert examination of the refractive error of the eye, under full atropine mydriasis; atropine in 0.5 per cent. solution must be used for three or four days, and applied thrice daily, to paralyse completely the ciliary muscle, and bring about complete relaxation of the ciliary spasm. Then the eyes must be examined by an ophthalmic surgeon, and finally the glasses ordered.

When there is already at the time of examination a high degree of myopia, i.e., roughly, when the number of dioptres of error exceed the years of life, all reading and near work must be forbidden, and the child sent, if possible, to live in the country, where he will have little temptation to use his eyes excessively for near objects.

The proper correction must be worn constantly, and it is often useful to prevent accommodation and discourage any attempt at near vision by the constant use of atropine, dulling the glare, which is occasioned by the dilated pupils, by ordering the lenses in dark smoked glass.

This life should continue for at least a year; if at the end of that time the eyes, examined under a mydriatic, show no increase in the myopia, the limitations may be to some slight extent relaxed, but if on the other hand the myopia is still progressing, the correction must be readjusted, and the same treatment and life continued.

Even when the disease appears stayed, the use of the eyes must be sparing; lessons must be short and largely oral.

Usually under such restrictions as have been here suggested, the disease will become stationary, and, with the end of progress, disappears one of the chief dangers of myopia. It is possible that the degenerative changes which may have begun in the macular region, will diminish under the rest of the eyes; I have several times known the central visual acuity to return in large part, when it seemed to have been more or less completely lost, as a result of degeneration of the central region of the retina.

These patches of degeneration may sometimes be much improved, when other methods fail, by the injection of saline solution, or the cyanide of mercury subconjunctivally. This is considerably painful, and is not suited for use in children, therefore, when it can be avoided.

The treatment of low degrees of myopia is even more important than that of the high degrees, since it is from the low degrees that the high are recruited.

First and foremost among the methods of treatment, must be put the accurate and complete correction of all error. The more accurate the correction of the error, the greater the chance of arrest.

But besides the ordering of suitable glasses, they must be worn, and it is not always an easy matter to teach the parents the importance of this. Lastly, the place and materials of study must be regulated. The child must work in a good light, in such a place that the desire for stooping is discouraged; and finally, the print of the books used must be large and black, and the type well leaded. This last point is not sufficiently regarded.

I have dealt at some length with the question of the origin and development of myopia, not because the discomfort which it produces is greater than that of hypermetropia; this is probably not the case; but because, as I have already had occasion to say, its after effects are so much more serious to the eye.

The uncorrected hypermetrope is a prey to headaches, but the myope is living under the sword of Damocles, which may descend at any moment and leave him a helpless ruin. The hypermetrope living in the country and leading a healthy outdoor life is not troubled by his defect. The myope cannot get away from his in so easy a fashion, but must bear his burden always.

We must now turn for a few moments to the question of astigmatism. The chief sign which leads us to suspect the presence of astigmatism, apart from the general symptoms, of headache, etc., which have been already mentioned, is that vertical and horizontal lines are not seen with equal distinctness; the curvature of the refractive media is, in the astigmatic eye, so arranged that the focus of the one chief meridian does not correspond with that of the other.

The chief axes are usually symmetrical; when they are asymmetrical, it sometimes happens that the master eye is more oblique; the child then often carries the head with a constant tilt towards one or other shoulder.

It is possible to correct the astigmatism in part at least, by irregular contraction of the ciliary muscle; this involves a large exertion of nerve force and therefore soon brings about exhaustion. For this reason, astigmatism, even and perhaps especially, in low degrees, is accompanied by the nervous symptoms which we have already enumerated as signs of ametropia.

On the defects of the musculature of the

previous page next page