THE OPTICAL DEFECTS OF THE EYE.

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ce, the "near" point normal for all point t is 12 inches distant te accommodation is ting $\frac{1}{12}$ frem $\frac{1}{5}$ give $\frac{1}{12}$ frem $\frac{1}{5}$ give $\frac{1}{2}$. The degree eis fraction $\frac{1}{24}$ also no correct the presewe would probably aswer better, as the s the one that should at be at 16 inches, he he convex lens would

ility and necessity les. They should b the slightest degre Some medical me out spectacles as los an early period, gett e. This is, howeve vork without glasse reases.''*

re the "near" point from the eye, it w myopia and hype thes from the eyel point recedes to b L.

point also recedes!

as to render the person hypermetropic; this form of hypermetropia seldom exceeds $\frac{1}{24}$. When a person has both hypermetropia and prebyopia, it is necessary for him to use a stronger pair of glasses for reading, &c., than for ordinary use. If a person for instance, wears a pair of 18 inch convex spectacles to correct a hypermetropia of $\frac{1}{16}$, and as age advances his "near" point recedes to 12 inches, even with the addition of his glasses, it will be necessary for him to wear, for reading, a pair of glasses having a focus of about $10\frac{1}{2}$ inches. Thus $\frac{1}{6} - \frac{1}{12} = \frac{1}{24} =$ presbyopia, this added to the lens to correct his hypermetropia, $(\frac{1}{16} + \frac{1}{24} = \frac{1}{104}$ nearly) equals $10\frac{1}{2}$ nearly.

In the very aged, it is necessary to prescribe glasses, that will enable them to read at 5 or 7 inches from the eye, as their vision is usually somewhat impaired.

The following table constructed by Dr. Kitchener may give a general idea of the glasses required at different periods of life when the presbyopia is unaccompanied by hypermetropia or amblyopia.

At	40	years,	36	inch	focus.	At	70	vears.	12	inch	focus.	
1 20 66	45	"	30	**	61		75		10		"	
100	50	"	24	"	**		80	**	9	"	"	
	55	0	20	"	"	1			•	"	**	
	58	"	18		"		90		•	"	**	
1000			16	**	"			"	6	**	"	
6 C	65	"	14	"	"				v			

Prof. Donders thinks that when there is no hypermetropia present we should generally advise those glasses to be worn that will enable the person to read distinctly No. I (smallest) test type at a distance of 12 inches.

There is an optical defect of the eye that is occasionally met with called astigmatism (from a and $\sigma \tau i \gamma \mu a$) in which horizontal and vertical lines are not brought to a focus at the same distance behind the crystaline lens. It is relieved by glasses specially ground for each case, these glasses are cylindrical. I have seen but one case of astigmatism.

A very comprehensive article on this subject appears in the Medical Times and Gazette, Nov., 1864, from the pen of J. Zachariab Laurence, M.B., of London.

The paralysis of the accommodation of the eye I have already referred to in a case on page 14.