A New Test-Type

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«ποτm cttwu«ii)

R

ERE

BHHS

H K E R

The drawback of most test-types is that some of the letters are easy and others are difficult, and the letters used often belong to groups, in which the individual letters may be confused, which is not the case with letters outside the group. The best known of these groups is the F, the P, and the lower case r. Therefore optotypes with only one object with a variable direction are preferable. Landolt's ring is the classic example of this. Because Landolt's ring is not reliable in the case of astigmatic patients, I devised the clock-chart¹. However the drawback of all these devices is that they are more difficult to name than letters. I have therefore tried to compose the best possible sequence of letters. To this end I chose the members of the largest group of letters, the full letters, viz, B, E, H, K, N, R, and S. The G, Y, and Z, which belong partly to the group, were rejected. The letters were drawn in such a manner that the following two requirements were both satisfied: (1) all of them had to be equally difficult. For this purpose the easy letters were made more difficult while retaining their typical shape. (2) All of them had to be equally confusable. It was found, indeed, that at the limit of visibility all kind of errors were made. Because of this the amount of black used in each letter is almost equal.

On account of these requirements the letters have become more difficult than other optotypes. Therefore, the visual

¹ Klin. Monatsbl. fur Aug. 99, 213, 1937, and Ophthalmologica 99, 402, 1940.

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acuity of 100 persons was tested by a preliminary chart and by Kostefs chart, which were made equally black and shining by a photographic method. It appeared from this experiment that the letters had to be enlarged by 10 %.

The chart shows a geometrical succession in size, as is shown in the clock-chart. It can therefore be used directly at many distances, which may be valuable in cases of deficient vision. Long rows are avoided; starting from vision 0.5 (at 5 m. distance) the chart is doubled. Red and green plasters applied by many ophthalmologists are built in the unit, which consequently has a lively appearance. The charts are covered with plastic so that they can be washed and do not fade.

How Can Administration of Oxygen Give Rise to Anoxaemia ?

By M. C. COLENBRANDER (Leyden).

It is an established fact that oxygen has something to do with retrolental fibroplasia. It is also generally assumed that the phenomena are brought about by anoxaemia. But how is it possible that administration of oxygen should lead to anoxaemia? By vasoconstriction? Is it not to be expected that anoxaemia is a stimulus to vasodilatation, so that the equilibrium is soon restored? Or is, perhaps, oxygen toxic to the retina? This is not very probable, since the normal oxygen saturation of the blood is so high that an increase by a few more percents, moreover as a therapy for a distinct deficiency, could hardly be imagined to exert a toxic influence.

Or are the phenomena brought about by the oxygen deficiency occurring when the administration is discontinued too abruptly? This theory is supported by Szewczyk's experience and those of many other investigators after him. However if this were the only factor

re-institution of oxygen administration would be helpful in all initial cases and this seems not to be true.