ing habits, as presented at the 1967 investigation.
It is concluded that none of these factors seemed to influence the future development of CHD in twins apparently tainted with a heredity for this disease.

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METABOLIC RESEARCH IN MZ TWINS WITH DIABETES MELLITUS

Progress Report

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An intravenous and oral glucose-tolerance test and an intravenous tolbutamid-test have been carried out in a sample of 12 MZ twin pairs discordant for diabetes mellitus. Blood sugar, insulin, and free fatty acids were determined. The research aimed at finding out whether prediabetic subjects may show any characteristic feature in the metabolism of sugars and fats, that may reveal a diabetic ground. Preliminary results show that, in MZ twins with discordant juvenile diabetes mellitus, metabolic values may remain discordant for quite a number of years.

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A GENETIC STUDY ON DEAF TWINS

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A study was carried out on 33 cases of twins with early total deafness from the Japanese young population. Complete physical and otological signs of all subjects were examined by otolaryngologists. Twenty-five cases were accepted as index cases for genetic analysis. They had no evidence of the known exogenous causes of deafness. Family and developmental history were taken. The sample included 17 MZ and 8 DZ pairs. Cousin-mating rate was 32%, i.e., five times the average population rate in Japan.
Audiometric tests were analysed. Nonsignificant differences were found between right and left ear in zygosity group, but intrapair differences of the hearing impairment were larger in DZ than MZ pairs. The deafness concordance rates for DZ and MZ pairs were respectively assessed as 63 and 88%. Penetrance was established as 0.94. The average intrapair difference of the hearing loss was 8 dB in the MZ and 30 dB in the DZ group, and a dissolution indicated remarkable small value in the MZ group.
It is suggested that the degree of hearing impairment is strongly influenced by heredity.

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GENETIC FACTORS IN MYOPIA

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The present study is concerned primarily with the nature of the well documented relationship between nearsightedness and enhanced performance on scholastic or intelligence tests. Myopia is established to be a familial disorder, and there are great variations in its frequency between different ethnic or national groups. In some populations, such as those of Jewish, Japanese, or West-European origin, the rate of myopia is in the order of 25%, while primitive societies are almost free of myopia.
Many eye specialists favor the view that nearsightedness may result from excessive close work, often referring to the condition arising during the period of education as "school myopia". Recent surveys which indicate that an increase may be occurring in myopia in Eskimos and North-Canadian Indians have also been interpreted in terms of external factors. Some centers are engaged in experimental work with monkeys,

attempting to demonstrate environmental causes of myopia.

To give further scientific support to genetic influences, data have been gathered on myopia in twins, comparing the concordance rates in MZ and DZ pairs. The new data deal with a sample of twins located in a school population, and the world literature has been surveyed for nearsighted twins described in sufficient detail to be properly classified as to zygosity and refractive condition. Among a total of 106 MZ pairs identified by the index twin having a myopia of at least one diopter, 100 are concordant for the disorder. Of 41 pairs of DZ twins, 12 are concordant.

These data are interpreted as further evidence for a very significant contribution by genetic factors. Studies of the children of two myopes are planned for the future, as there is strong support for recessive transmission. The postulated myopia gene appears to have a primary effect on the brain, resulting in enhanced intelligence, the influence on the eye then being viewed as a secondary complication.

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A FEW REMARKS ON AN OCULISTIC AND ORTHOPTIC SCREENING OF SIXTY MZ TWIN PAIRS

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An oculistic and orthoptic screening has been carried out on a sample of 120 twins aged 6 to 10 years (30 MZ male and 30 MZ female pairs). A few remarks could be made, concerning both twins as such and the heritability of the traits under examination.

The twins appear to differ from the general population of singletons of the same age on account of a lower frequency of ametropia and strabismus as well as of a high frequency of epicanthus.

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