*Frequency.*—How frequent are these murmurs in normal individuals? Basic systolic murmurs are, as is known, extremely common. It would be interesting to know how often it might be possible to produce these murmurs by forced expiration in a given number of individuals. The writer, however, has no figures to offer based on any large number of observations.

*Cardio-Respiratory Murmurs.*—Cardio-respiratory murmurs, of the kind of which we have spoken, are not rare, but by no means as frequent as the last-mentioned class.

A point of particular interest and importance is the frequency with which systolic apical murmurs of undoubtedly functional character are audible in practically normal individuals.

Last year the writer had occasion to examine a large number of healthy young people in connection with studies on the third heart sound. In all these individuals, special note was made as to the presence of systolic murmurs disappearing in the erect posture. Of 218 cases in the first four decades of life, 73, or about one-third, showed systolic murmurs at the apex in the recumbent posture, murmurs which disappeared in the erect attitude. As a rule, these murmurs were heard all over the cardiac area, but loudest at the base in the pulmonary area.

The following table illustrates their frequency by decades:

TABLE SHOWING THE FREQUENCY OF APICAL SYSTOLIC MURMURS IN HEALTHY INDIVIDUALS.

| Decades | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| Cases | 39* | 98 | 55 | 26 |
| Murmurs present | 22 | 35 | 12 | 5 |

It will be seen that in the first decade, 56 per cent. of these individuals showed systolic apical murmurs in the recumbent position; 35 per cent. in the second decade; 21 per cent. in the third; 19 per cent. in the fourth. These murmurs were, of course, usually associated with the common basic systolic murmur, of the presence of which no special note was made.

Especially interesting are the statistics of the examination of thirty robust boys, who were studied at one of the best-conducted of schools situated in the country just outside of Baltimore. These boys were all in the second decade and in apparently excellent physical condition. In none of them was there elicited the slightest evidence of cardiac involvement from subjective systems, from the size and action of the heart under ordinary tests, from the blood pressure or from other auscultatory signs.

*There were no cases under three years of age.