ABSTRACTS OF COMMUNICATIONS

Fourth meeting.

Western New York Branch, Clifton Springs N. Y., December 16, 1922.

89 (2049)

Vital capacity determinations in persons with normal heart and lungs above forty years of age.

By D. C. WILSON, (by invitation).

[*From the Clifton Springs Sanitarium, Clifton Springs, N. Y.*]

The first vital capacity readings were taken by Hutchinson in 1846 on 2,000 persons of all ages by means of a spirometer. His subjects were not given a physical examination. He found the vital capacity to vary with the height and weight. He also stated that the vital capacity increased 1 cu. in. yearly up to the age of 35 and after 35 it decreased 1 cu. in. yearly. Since his time the body surface has been found to measure more closely the vital capacity variations. However, all normal persons studied have been babies, students or young adults. No normal readings have been above forty when the surface area is used as the standard for variation.

The present study is an attempt by accurate physical examination, fluoroscopy of the chest and blood studies to secure patients of all ages who have no cardiac or lung disease. Next to obtain by three separate readings their true vital capacity. Then to compare this by means of a Du Bois chart with the so-called normal for their body surface area. Eighty-five such cases are reported and the results given.

Except for women overweight and between 45 and 55 years of age, the surface area reading is within 500 c.c. of the reading obtained unless there is some cardiac or lung disease. This rule does not hold above the age of 70 when there is great individual variation. There is no such regular decrease in vital capacity after 35 as Hutchinson mentions.