Variations in Eyeball Diameters of the Healthy Adults

Inessa Bekerman,1 Paul Gottlieb,1 and Michael Vaiman2

1Department of Roentgenology, Assaf Harofeh Medical Center, Affiliated to Sackler Faculty of Medicine, Tel Aviv University, 70300 Zerifin, Israel
2Department of Otolaryngology-Head and Neck Surgery, Assaf Harofeh Medical Center, Affiliated to Sackler Faculty of Medicine, Tel Aviv University, 33 Shapiro Street, 70300 Zerifin, Israel

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Abstract

The purpose of the current research was to reevaluate the normative data on the eyeball diameters. Methods. In a prospective cohort study, the CT data of consecutive 250 adults with healthy eyes were collected and analyzed, and sagittal, transverse, and axial diameters of both eyeballs were measured. The data obtained from the left eye and from the right eye were compared. The correlation analysis was performed with the following variables: orbit size, gender, age, and ethnic background. Results. We did not find statistically significant differences correlated with gender of the patients and their age. The right eyeball was slightly smaller than the left one but this difference was statistically insignificant ($P = 0.17$). We did not find statistically significant differences of the eyeball sizes among the ethnicities we dealt with. Strong correlation was found between the transverse diameter and the width of the orbit ($r = 0.88$). Conclusion. The size of a human adult eye is approximately $24.2\text{ mm (transverse)} \times 23.7\text{ mm (sagittal)} \times 22.0-24.8\text{ mm (axial)}$ with no significant difference between sexes and age groups. In the transverse diameter, the eyeball size may vary from $21\text{ mm}$ to $27\text{ mm}$. These data might be useful in ophthalmological, oculoplastic, and neurological practice.
Eyeball transverse diameter (ETD), optic nerve diameter (OND), and ONSD were measured by ultrasound examination in healthy adult volunteers. The OND and ONSD were assessed 3 mm behind the globe. The section showing maximal transverse diameter of the eyeball was frozen and the diameter was measured. Each ETD, OND and ONSD was examined twice and the mean value was calculated. A total of 519 healthy volunteers were included in the study. The objective of the study was to determine the normal range of ONSD in healthy Chinese adults.

Bumps on the eyeball are typically growths of the conjunctiva, a clear ocular membrane that covers the white part of the eye. Depending on the color of the bump, its shape, and where it is on the eye, there are a number of conditions that may cause bumps on the eyeball. 4 causes of bumps on the eye. 1. Pinguecula. Pingueculae are small yellow-white bumps on the eyeball. They’re deposits of fat, calcium, or protein. These bumps are fairly common in middle-aged and older adults. According to the research, men are more likely to get these bumps than women. Research indicates that these are the most common characteristics of metabolically healthy obesity. These include a high BMI with a waist size of no more than 40 inches for a man or 35 inches for a woman. I was actually just reading this morning through the various stats in each state about the % of their population that is obese. As scary as some of those statistics are (over 35% in Mississippi!), I still find it amazing how low of a threshold there is to be considered obese. I am 195 lbs and 5’ 9” I and I am just on the boarder of being obese.