

## **ABSTRACT**

**Title:** Body composition and methods for its determination

**Objectives:** Perform a literature search and then describe the human body composition and compare different methods to determine body composition in humans.

**Methods:** Review and comparison of domestic and foreign literature that deals with body composition and its measurements.

### **Results:**

Research summarized the literature on the topic of physical body composition and methods for its determination. Another result is a summarization of indirect methods, describe their advantages and disadvantages, practical use and calculation examples of predictive equations for specific methods. Indirect methods of determining body composition may be once or twice indirect. Among once belong mainly indirect laboratory methods such as DEXA, APD, NIR or nuclear magnetic resonance. The gold standard of laboratory methods are considered DEXA method. These methods are indirect in comparison with twice more accurate but more time-consuming and equipment. The two indirect methods belong field methods such as BIA, BMI, skinfold thickness measurements with calipers or hydrostatic weighing method. These methods are indeed more practical and affordable measured but with less precision. For the most used and practical field method is considered BIA. All indirect methods use a predictive equation that contain parameters such as age, sex, race, level of physical activity or physical parameters such as resistance and reactance eclectic. No prediction equation is not ideal. It is important to maintain a single method throughout the research, in order to avoid inaccurate results. The results may not be valid. Error by using multiple methods in the same research can be up to 50%.

**Keywords:** fat mass, lean body mass, methods of determining body composition