



## Endurance Profile of Fik Students of Class Ikor-E 22 with Bleep Test

**Mawardinur, Indah Swira Sitanggang, Intan Kartika F Zalukhu, Cindy Vini Rosen Sipayung, Alpina Damayanti Siregar, Jonatan Gultom**

Department of Sport Science, Faculty of Sport Science, State University of Medan, Jl. William Iskandar Ps, V, Kenangan Baru, Kec. Percut Sei Tuan, Kab. Deli Serdang, North Sumatra, 20221, Medan

e-mail: [bmw@unimed.ac.id](mailto:bmw@unimed.ac.id), [indahswiras@gmail.com](mailto:indahswiras@gmail.com), [intanzalukhu7@gmail.com](mailto:intanzalukhu7@gmail.com), [cindyvinirosensipayung@gmail.com](mailto:cindyvinirosensipayung@gmail.com), [alpinadamayantisiregar@gmail.com](mailto:alpinadamayantisiregar@gmail.com), [jonatangultom06@gmail.com](mailto:jonatangultom06@gmail.com)

### Abstract

Endurance is closely related to daily human activities or work in doing work or moving. The purpose of this study was to determine the results of physical fitness measurements of endurance of students of the sports science program, class Ikor E 2022 using the Bleep Test. To determine the level of cardiorespiratory endurance or VO<sub>2</sub>max using the Bleep test. The research method used is descriptive quantitative (percentage). The population in this study were UNIMED Sports Science students of IKor E class 2022 totaling 26 people where 19 were male and 7 were female. The results showed that of the 26 Sports Science students there were 1 person or 2.6% of the physical fitness level in the very poor category, 3 people or 8% of the physical fitness level in the very poor category, 13 people or 50% of the physical fitness level in the sufficient category, 8 people or 36.8% of the physical fitness level in the good category, 1 person or 2.6% of the physical fitness level in the very good category. Based on the results of this study, it can be concluded that the level of physical fitness, especially cardiorespiratory endurance, of UNIMED's athletic science study program students in Ikor E Class 2022 is in the sufficient category.

**Keywords:** Measurement results; Physical fitness; Endurance.

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#### Corresponding Author

email: [bmw@unimed.ac.id](mailto:bmw@unimed.ac.id)

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## **A. Introduction**

Endurance is the body's ability to perform physical activity or work for a long period of time without experiencing excessive fatigue. Endurance is closely related to the ability to use the heart, lungs and circulatory system. Endurance is related to the duration and intensity of work. The longer the exercise time and the higher the intensity of the activity, the better the endurance. To achieve good endurance, one needs a lot of time, effort, and consistent practice. Sports such as running and cycling can be classified as cardiovascular endurance training.

In addition, endurance can also be interpreted as the ability to withstand all external influences that can be detrimental, such as disease, enemy attacks, and temptation. Sukadiyanto (2011): Endurance is the ability of muscle work using a certain duration of time using the aerobic endurance system to utilize energy during exercise or activity. Harsono (1988): Endurance is the state or condition of the body that is able to work or train for a long time, without experiencing excessive fatigue after completing the work. Rustiawan & Rohendi (2021): Endurance is the body's ability to carry out sports activities for a long time without heavy fatigue. Endurance activities are a type of physical exercise designed for the body's ability to perform physical activities for a long period of time without getting tired easily. Sports and health experts

generally agree that endurance activities are essential for maintaining a healthy heart, lungs and overall physical condition.

According to Muhajir (2007: 57) physical fitness is the ability and ability of the body to make adjustments (adaptation) to the physical loading given to it (from the work done daily) without causing excessive fatigue. Physical fitness

A person is influenced by several factors, namely: genetics, gender, age, body composition, activity, and exercise. Therefore, physical fitness is used as a health parameter and a measuring tool for a person's maximum aerobic power and cardiorespiratory fitness (Gumantan & Fahrizqi, 2020; Mahfud et al., 2020). Physical activities that are carried out regularly will affect a person's physical fitness (Dewi, 2016; Nuryadi et al., 2018). Muhajir (2007) physical fitness is the ability and ability of a person's body to make adjustments (adaptations) to the physical loading given to him (from work and tasks carried out daily) effectively and efficiently without experiencing excessive fatigue.

Quoting from the book *Physical Capacity and Nutrition of Student-Athletes in Special Sports Schools*, Setiyo Hartoto, Awang Firmansyah, and Bayu Budi Prakoso (2023: 24), the definition of the bleep test is a test conducted by running a distance of 20 meters back and forth starting from slowly gradually, until later it will get faster. In general, the

purpose of this test is to determine aerobic endurance through running tests by following beeps or taps as a cue. In addition, this test is also conducted to measure the ability of the heart and lungs to work optimally through the prediction of Maximum Oxygen Volume (VO2Max) in children, adolescents, and adults. According to experts Leger and Lambert, the bleep test involves running back and forth between two points of a certain distance, following an accelerating beep.

## B. Methods

This research is descriptive research, data collection using survey methods with test and measurement techniques. The instrument used to measure the level of Vo2max using the Bleep test. The data analysis technique used in this research is quantitative

descriptive analysis which is outlined in percentage form. This research variable intends to determine the profile between the level of Cardiorespiratory endurance (Vo2max) of UNIMED Sports Science students in Class IKor E class 2022.

## C. Results and Discussion

### Results

The results of the research conducted can be obtained by knowing the level of VO2max capacity of UNIMED's university students in the Ikor E class of 2022. The data collection for this study was carried out on September 5, 2024 the results of the research data were obtained using the bleep test. In determining the category can be described as follows:

Table 1. Frequency data and percentage of endurance with bleep test (Vo2max)

Category	frequency	Percentage
Very Poor	3	8%
Less than Once	1	2,6%
Simply	13	50%
Good	8	36,8%
Excellent	1	2,6%

From data The data listed illustrates that the VO2max level of UNIMED sports science study program students in class Ikor E Class 2022 totals 26 students consisting of 19 men and 7 women. The results showed that of the 26 Sports Science students there were 1 person or 2.6% of the physical fitness level in the very poor category, 3 people or 8% of the

physical fitness level in the very poor category, 13 people or 50% of the physical fitness level in the sufficient category, 8 people or 36.8% of the physical fitness level in the good category, 1 person or 2.6% of the physical fitness level in the very good category. Based on the results of this study, it can be concluded that the level of physical fitness, especially cardiorespiratory

endurance, of UNIMED's athletic science study program students in Ikor E Class 2022 is in the sufficient category.

#### **D. Conclusion**

Based on the results of research conducted on students of the UNIMED Sports Science Study Program Class Ikor E Class of 2022 using the Bleep Test to measure cardiorespiratory endurance (VO<sub>2</sub>max), it can be concluded that the students' physical fitness level is mostly in the sufficient category. Of the 26 students tested, 50% (13 people) were in the moderate physical fitness category, while 36.8% (8 people) were in the good category. Only 2.6% (1 person) was in the very good category, and another 2.6% (1 person) was in the very poor category. Overall, the majority of students showed a fairly good level of cardiorespiratory endurance, although there were still a small number who showed a lower level of fitness. This indicates the importance of efforts to improve physical fitness, especially cardiorespiratory endurance, through more regular and intensive physical exercise.

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