

# A study of endurance time in males and females

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## Abstract

Endurance in soccer is characterized as high-intensity intermittent running performance **Aims and Objectives:** To study endurance time in Males and Females. **Methodology:** The present study was carried out in 60 normal healthy males and 60 normal healthy females between the age group of 19 and 20 years. The normal subjects were selected among the students of nursing college of S.R.T.R. medical college, Ambajogai and T.B.G. college of polytechnic, Ambajogai. The statistical analysis done by unpaired t-test. **Result:** The mean age of all the selected males is 19.5 years and of the females subjects is also 19.5 years. The mean height of all the selected males is 165.57 cms and mean height of all the selected females is 151.4cms. the mean body weight of all the selected males is 55.11 kg and the selected female subjects is 44.08 kg. statistically very highly significant endurance time (ET) in females as compared to males **Conclusion :**It can be concluded from our study that high endurance time (ET) found in females as compared to males.

**Key Words:** Endurance time (ET), high-intensity running, Hand grip exercises.

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## MATERIAL AND METHODS

The present study was carried out in 60 normal healthy males and 60 normal healthy females between the age group of 19 and 20 years. The normal subjects were selected among the students of nursing college of S.R.T.R. medical college, ambajogai and T.B.G. college of polytechnic, ambajogai, with no special reference to their physical training. Three minutes following the second determination of maximum voluntary contraction, (maximum contraction of the two contraction made on the maximum contraction strength (the pointer on the handgrip dynamometes is fixed on specific number by calculating 40% of maximum strength) and held it up to fatigues. As a result each subject worked at the same relative workload. The endurance time of the fatiguing contraction was measured to the nearest second. Before and during the endurance contraction, the subject was instructed on the importance of maintaining a steady tension and was continuously exhorted to maintain the tension to the point of fatigue. And the duration up to which the subject holds is called as endurance time. The statistical analysis done by unpaired t-test.

## INTRODUCTION

Endurance in soccer is characterized as high-intensity intermittent running performance<sup>1,2</sup> and is represented by the physical amount of work carried out throughout a match<sup>3</sup>. During matches, female and male soccer players cover a similar total running distance but differ regarding their performed high-intensity running activities<sup>4,5,6</sup>. Various field endurance tests such as incremental exercise tests and intermittent shuttle run tests are currently used to evaluate training status and training adaptations, as well as to predict running performance during matches in soccer players<sup>7,8,9</sup>

## RESULT

**Table 1:** Distribution of the patients as per the baseline characters

Baseline characters	Mean
Mean age	
Males	19.5 years
Females	19.5 years
Mean Height	
Males	165.57 cms
Females	151.4cms
Mean body weight	
Males	55.11 kg
Females	44.08 kg.

The mean age of all the selected males is 19.5 years and of the females subjects is also 19.5 years. The mean height of all the selected males is 165.57 cms and mean height of all the selected females is 151.4cms. the mean body weight of all the selected males is 55.11 kg and the selected female subjects is 44.08 kg.

**Table 2:** Comparison of Endurance time (ET) in males and females

	ET (Sec)	't' value	'p' value
Male (n=60)	151.61	6.20	P<0.001
Female (n=60)	227.85		

Show statistically very highly significant endurance time (ET) in females as compared to males.

## DISCUSSION

The present study showed that there is a very highly significant difference in endurance time in females as compared to males between males and females where females values are much higher than the male values. Our finding matches with Jerrold S. petrofsky et al (1975)<sup>11</sup>, maughan R.J. et al (1986), Miller A.E.j. et al (1993), west w., et al (1995), Johanne Desrosiers et al (1996), Hicks et al(2001) and Sandra K. Hunter et al (2004). Generally, absolute differences in endurance performance between females and males are explainable by higher body fat (as well as less muscle mass) and maximum oxygen uptake as well as lower levels of haemoglobin in females . Also, a lower training status in female soccer players as a result of a worse infrastructure (e.g., staff, pitches, equipment), as well as less experience and lower quality and quantity of training, may additionally explain our observed gender differences. The gender differences contributing to the three intensity zones may be explainable by different energy metabolisms, higher fat as well as less carbohydrate and amino acid oxidation in females<sup>10,13,14</sup>.

## CONCLUSION

It can be concluded from our study that high endurance time (ET) found in females as compared to males.

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