

## FITNESS CHARACTERISTICS OF FINNISH ELITE FEMALE SOCCER PLAYERS

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### Introduction

A number of field and laboratory tests are used in elite female soccer to evaluate training status of the players, predict match performance, determine the effect of training. The aims of the present study were to measure selected anthropometric, speed, leg strength and endurance characteristics of Finnish female National team players and compare the results according to their player positions (PP).

### Methods

Twenty five elite Finnish female soccer players: goalkeepers, GOA (n=3), defenders, DEF (n=7), midfield players, MID (n=10) and attackers, ATT (n=5) took part in this study. Their over all age, height, body mass, body mass index and body fat % were 22.4±3.2 yr, 1.69±0.6 m, 64.7±7.1 kg, 22.5±1.7 and 18.1±3.5, respectively. The specific tests were as follows: 30 m sprint test (T<sub>30m</sub>) with intermediate time of 10 m (T<sub>10m</sub>), counter movement jump test (CMJ) on the resistive contact mat, agility running test (T<sub>AGI</sub>) in a modified figure 8 shaped track, speed endurance test (T<sub>SEND</sub>) of 10 x 20 m shuttle run and Yo-Yo endurance level 1 test (T<sub>END</sub>) until exhausted and maximal heart rate (HR<sub>MAX</sub>) obtained. A one-way ANOVA with Tukey's post hoc test was applied to detect differences between the player positions. Pearson's correlation coefficients were calculated between each variable. The level of significance was set at P<0.05.

### Results & Discussion

Table 1. Test results (Mean ± SD) for each player position (GOA, DEF, MID and ATT).

PP	T <sub>10m</sub> , s	T <sub>30m</sub> , s	CMJ, m	T <sub>AGI</sub> , s	T <sub>SEND</sub> , s	T <sub>END</sub> , min	HR <sub>MAX</sub>
GOA	1.92±0.05	4.72±0.18	34.0±3.7	6.96±0.13	50.9±0.8	8.92±1.00	194±6
DEF	1.87±0.05	4.58±0.13	30.5±1.8	6.85±0.25	47.9±1.0	11.24±1.20	191±5
MID	1.91±0.06	4.67±0.14	28.6±3.1	6.91±0.16	48.7±1.4	11.60±1.27	191±7
ATT	1.80±0.05	4.41±0.14	34.6±1.5	6.60±0.18	46.9±1.5	11.78±0.81	194±6

The attackers were best in all tests. Significant differences (P<0.05) between attackers and midfield players were found in T<sub>10m</sub>, T<sub>30m</sub>, CMJ, and T<sub>AGI</sub>. All correlation coefficients in any combination between T<sub>10m</sub>, T<sub>30m</sub>, CMJ, and T<sub>AGI</sub> were significant (P<0.05).

### Conclusion

The results indicated that the attackers were best in all performance tests. It can be concluded that the Finnish elite attackers were in line with international level female elite players in the athletic speed, agility and strength characteristics (1).

### References

1. Todd, M. et al (2002). *Science and Football IV*, pp. 374-381.