30. NUTRITION

P-074 Lifestyles and nutritional habits of footballers from North Cyprus Football League

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OBJECTIVE Due to high energy expenditure in competitive sports activities proper nutrition and lifestyle preferences are expected to be important for football players. Lack of information on this matter regarding local footballers in North Cyprus allowed us to analyze food and some behavioral preferences of mentioned athletes from Turkish Cypriot Football Leagues. Total amount of 232 footballers from 14 local teams of North Cyprus were included in this research.

METHODS All 232 football players were questioned about their eating, drinking and smoking habits along with strategies to cope with stress.

RESULTS The results shown that 55.2 % (128 footballers) of participants were regular smokers and 52.4% (n=119) consumed alcohol. Besides, 8.2% of participants accepted drinking as the best way to solve their problems. In cases with eating habits 26.7% of respondents avoided fatty foods and only 29% (n=68) avoided salty foods.

DISCUSSION This study indicated that one out of two local footballers, participated in this survey smoked or consumed alcohol but was careful about eating habits. The study also revealed that only 30.6 % of the subjects could cope with stress without unhealthy habits and 24.2% of all participants took precautions against things that could cause stress.

KEY WORDS Nutrition, lifestyle, football.

P-075 Effects of nutrition patterns in soccer players

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OBJECTIVE Soccer is one of the performance sports that needs the power and endurance for more than 90 minutes. Each successful player needs an individual eating plan, which should, as far as possible, take into account his personal requirements, the intensity of training sessions, the season and his level of football or soccer. Soccer players should have a balanced, varied diet that ensures they consume sufficient quantities of iron, copper, manganese, magnesium, sodium, zinc and vitamin A, C, E, B6 and B12, which are particularly important for health and performance. The most important point in nutrition for soccer players is the sufficient amount of calories consumed. That is why this study investigated the way of storage and maintenance of energy for players in the literature.

METHODS One study showed that 24 hours after a soccer match players had still not recovered their glycogen levels. Even world class players was found to take in only 47% of their calories as carbohydrate, far less than their recommended level of 60% plus. Based on the new researches, muscular and skeletal systems needs of players must be carefully considered.

RESULTS The study showed that 1.5 gram carbohydrate per kg of body mass must be used 4 hours before the match. 1.4 to 1.7 gram protein per Kg of mass body must be used in the diet. It is better to be from high quality resources like the white eggs, milk product, lean meat, drinking the water during the match. Extra fluids should be used with day match breakfast, lunch and 10 to 15 minutes before the match.

DISCUSSION This study indicated that soccer players who ate or drunk carbohydrate soon after exercise sustained maximum restoration. Besides, the need for restoring the fluids consumed during the match was very important, and adequate fluid intake, especially water before, during and after soccer games could help to avoid the negative effects of dehydration.

KEY WORDS Nutrition, soccer, eating plan.

P-076 Nutrition before, during and after soccer

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OBJECTIVE Nutritional strategies before, during and after competition may help to delay or reduce the factors that cause fatigue and loss of performance including dehydration, depletion of fuel store, hypoglycemia, electrolyte imbalance and gastrointestinal disturbances.

Nutrition before soccer: One of the biggest concerns among soccer players relates to when and what they should eat pre-exercise. Players, pre-match food intake should include easily digested high-carbohydrate foods that are familiar and psychological satisfying. Athletes should be advised to experiment eating and drinking strategies on training days to avoid any possible negative consequences

Nutrition during soccer: The main aims of nutritional strategies during exercise are to provide a source of carbohydrate to supplement the body's limited stores, and to provide fluid to delay dehydration. For quick energy during soccer, players should be advised to consume a moderate amount of sugar to maintain their blood glucose level. Dehydration hurts performance so players must drink at every possible opportunity, limited and often. Electrolyte replacement during soccer is not generally necessary but may become important when sweat losses is very high.

Nutrition after soccer: The most immediate nutritional priority after exercise is rehydration closely followed by repletion of body's carbohydrate stores. Fluid replacement after soccer is an essential part of recovery. Athletes should be encouraged to consume carbohydrate rich foods as soon as play stops and to maintain consumption over the next two hours.

KEY WORDS Soccer, nutrition, competition.

P-077 Fluid and electrolyte requirements of soccer players

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OBJECTIVE Dehydration impairs exercise capacity and prevents the soccer players from making the best use of their skills. Exercise in the dehydrated status leads to the rapid elevation of body temperature and offset of the heat illness. Thus, drinking fluids before, during and after playing soccer is essential for top athletic performance and can help to avoid the negative effects of dehydration.

Unfortunately, soccer players tend to underestimate of fluid replacement as an integral part of their sport diet. Opportunity for fluid intake during the game is limited so it is essential to ensure adequate hydration before the game begins, especially in hot and humid conditions, extra fluid should be taken with breakfast and lunch on match days and 10-15 minutes before the game begin.

Players should experiment during training to find out the type, amount, and frequency of drinks that best meet their needs. In hot and humid weather, fluid intake should be increased.

There is probably little need to try to replace the electrolytes lost in sweat during a soccer match but fluid replacement after the game is an essential part of recovery. Measurement of body weight before and after training and competition allow an estimate of fluid loss and hence of fluid replacement.

Adequate electrolyte intake is necessary to replace losses but this can usually be met from the normal food intake.

KEY WORDS Fluid, soccer, electrolyte.

P-078 Soccer and nutrition

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OBJECTIVE Soccer is a high intensity, intermittent activity that requires both strength and endurance over a period of 90 minutes. Soccer training and competition result in an increased energy demand so nutritional strategies designed for soccer players should include adequate calories to support training and competition. Recommendations for energy intake should be based on the needs of each player.

Soccer is a glycogen-depleting activity. The level of muscle glycogen prior to a match will influence performance towards the end of a game. Glycogen depletion, a potential factor contributing to fatigue, may seriously limit player's ability to maintain high-intensity work output, particularly during the late stages of the game.

The specific energy demands of soccer make carbohydrate the predominant and most important source of fuel in the player's diet.

A training diet aimed at maximizing muscle glycogen and glucose availability needs to contain between 8 to 10 g cho/kg body weight or 60% to 70% of total energy. Good sources of carbohydrate are rice, bread, potatoes, pasta, breakfast cereals, confectionary, cakes and sport drinks.

Soccer players would be likely to benefit from protein intakes above current recommendations not only because of their potential to enhance strength, but also to provide energy during training and competition. It appeared that intake of 1.4 to 1.7 g/kg body weight per day should be adequate for soccer players. Good sources of protein are meat, poultry, fish, milk and dairy products and eggs.

KEY WORDS Soccer, nutrition, training.

P-079 Yo-Yo intermittent recovery test in a young soccer team of Brazil before and after protein supplementation plus carbohydrate

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OBJECTIVE Some authors has described the importance of the anaerobic capacity for the performance of the soccer athletes. The Yo-Yo intermittent recovery test has been widely proposed to follow the anaerobic capacity of soccer athlete, during the season. The physical activity can increase dietary protein needs. The objective of the present study was to verify the performance of young athletes in Yo-Yo intermittent recovery test before and after different forms of protein supplementation with carbohydrate.

METHODS The subjects (n=24) 16,4 years old aged from Brazil championship, were keeping in lodging of team, with daily training. The subjects were supplemented with isolated (WPI) or hidrolisated whey protein (WPH) or casein during 8 weeks, 1 g/kg-1/dia-1 of protein plus 0.4 g/kg-1/dia-1 of de carbohydrate -sucrose. The Yo-Yo intermittent recovery test was performed before and after the supplementation.

RESULTS Yo-Yo intermittent recovery performance test of the Brazilian young soccer players before and after protein supplementation with whey protein isolated (WPI) or hidrolisated (WPH) or casein (CAS), $1 \text{ g/kg}^{-1}/\text{dia}^{-1}$ of protein plus 0.4 g/kg⁻¹/dia⁻¹ of de carbohydrate (sucrose) are presented in Table 1.

Table 1	.Yo-Yo	intermitant	recverv	performance	test results	before and	after	protein si	apple	mentation.
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	WPH	WPI	CAS	WPH	WPI	CAS
Mean	382,86	445,71	434,29	413,33	440	510
SEM	31,3	37,47	28,19	13,33	21,38	25,17
Maximum	480	600	480	440	520	560
Minimum	280	280	280	360	360	440
n	7	7	7	6	7	4

DISCUSSION The performance was sustained during the season with protein supplementation. This could be considered to be a positive outcome, as the players participated in a lot of matches in a season that would have resulted in the reduction of physical training.

KEY WORDS Whey protein, casein, protein, sucrose, carbohydrate, soccer, supplementation, Yo-Yo intermittent recovery.

P-080 Relationship of pre-match hydration status to match performance, injury and body mass changes in elite Australian Rules Football

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OBJECTIVE Hypohydration has been shown to reduce athletic performance (Shirreffs, 2005). To minimize deleterious effects of hypohydration on performance, many top Australian Rules Football (ARF) teams now monitor hydration status with urine specific gravity (USG) and changes in body mass (Δ BM) during a match. To date, no study has examined the practical usefulness of these measures in an elite football team environment. The objective of this study was to determine if relationships existed between pre-game urinary measures of hydration status and match performance indicators, match Δ BM and match-related injuries in elite ARF.

METHODS 34 elite ARF players participated in this study (age: 22.8 \pm 3.7 years; BM: 89.4 \pm 8.6 kg; height: 188 \pm 6 cm). USG (N=415) was measured prior to 22 matches during an entire season. Performance statistics (work rate and efficiency), injuries and match Δ BM were also recorded. Pearson's correlations were used to assess the relationships between these variables. Alpha was set at 0.05.

RESULTS Pre-game USG were 1.005±0.004mg/L. The match Δ BM was 1.13±0.68%, with wide individual player variability (range: 0.0-3.62%). There was no relationship between pre-game hydration status and injuries when the USG was <1.020mg/L. Further, there were only significant relationships between match Δ BM and performance measures when Δ BM was >3%. There were only relatively few cases (2%) of high Δ BM (>3%).

DISCUSSION USG results demonstrated that all players were well-hydrated prior to each game and that most commonly, only mild levels of Δ BM occurred. However, the high variability in match Δ BM in this study suggested that monitoring of Δ BM and USG should be done on an individual basis. These results could be used to guide future hydration monitoring strategies for elite ARF players.

REFERENCES

Shirreffs (2005) Nutrition Reviews 63, 14-21.

KEY WORDS Australian Rules Football, elite level, hydration, urine specific gravity.

P-081 Effects of creatine supplementation on speed in soccer

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OBJECTIVE The aim of this study is to investigate the effect of creatine supplementation on performance of speed and speed continuity.

METHODS The research groups of our study are consisted of 14 soccer players called creatine group and still playing soccer in 1st Amateur League of Erzurum City (age = 24.64 ± 3.97 years, length = 1.77 ± 4.40 meters, body weight = 73.28 ± 4.93 kg) and 14 male persons called control group (age = 23.07 ± 2.89 years, length = 1.76 ± 6.19 meters, body weight = 69.32 ± 5.99 kg). Before loading and after loading, to define the performance of speed and speed continuity, the both of groups are performed the speed test of seven repetitions (sprint distance: 34.2 meters).

RESULTS According to data acquired from both groups during before loading and after loading, body weights are that in creatine group $(73.28 \pm 4.93 \text{ kg} - 74.79 \pm 4.97)$ and in control group $(69.32 \pm 5.99 \text{ kg} - 68.98 5,82)$. Also, according to both groups, period of sprints are that in creatine group $(6.43 \pm 4.93 - 6.32 \pm 3.76)$ and in control group $(6.78 \pm 7.15 - 6.32 \pm 3.76)$ and $(6.78 \pm 7.15 + 6.32 \pm 3.76)$ and $(6.78 \pm 7.15 - 6.32 \pm 3.76)$ and $(6.78 \pm 7.15 + 6.32 \pm 3.76)$ and $(6.78 \pm 7.15 \pm 3.76)$ and $(6.78 \pm$

 6.77 ± 8.05). Nevertheless, leg power is that in creatine group ($127.14 \pm 4.46 - 143.92 \pm 4.60$) and in control group ($132.50 \pm 5.46 - 135.71 \pm 6.01$). There is significance (p<0.001 and p<0.05). However, ratios of heart rates are that in creatine group ($162.10 \pm 8.96 - 162.55 \pm 9.02$) and in control group ($172.21 \pm 8.66 - 172.18 \pm 7.93$). There isn't a significance (p>0.001).

DISCUSSION Results found in our study are shown a similarity with the results of other researcher previously performing on this subject. The results found in both our study and the other studies, are shown that using creatine in long period has influence on speed performance and muscles strengths of soccer players.

KEY WORDS Creatine, speed, soccer.