101 - HYDRATION AND ALIMENTARY HABITS IN PRÉ-, DURING AND POST-TRAINING OF A MEN'S TEAM HANDBALL UNIVERSITY, RIO DE JANEIRO

THATIANA FERREIRA VIEIRA[1]
ADRIANA BACELO COSTA[1]
RITA DE LOURDES RAMOS MOREIRA CADIZ[2]
JANE DE CARLOS SANTANA CAPELLI[3]
[1]CENTRO UNIVERSITÁRIO AUGUSTO MOTTA, RIO DE JANEIRO, RJ, BRASIL
[2]UNIVERSIDADE ESTÁCIO DE SÁ, RIO DE JANEIRO, RJ, BRASIL
[3]UNIVERSIDADE FEDERAL DO RIO DE JANEIRO – Campus Macaé, RJ, BRASIL
thatyrj@hotmail.com

INTRODUCTION

The origin of the handball is not very defined however countless researchers of the area believe that they were the Germans the main spreaders in the world of this sport. In agreement with Vieira & Freitas (2007), the handball was created in 1924, in Sweden, in function of the cold end corresponding to the rigorous European winter, where it was not possible yours practices outdoors.

In Brazil, the old model of the handball appeared in the thirties, with the implementation of the "Handball of Field" for German foreigners and Israelis. Already the handball, even without registrations, it is considered that appeared in the decade of 50, taking the place of the field handball, and being, in the days today, the predominant form of the practice of the handball. Though, that sport only won a prominence place after the conquest of the medal of gold in the Pan-American games of Winnipeg for the feminine team as well as the silver medal conquered by the masculine handball (TENROLLE & MERINO, 2006).

As it comes to body movement, the handball can be classified as a complete sport, once several motive abilities are used as running, to jump, to fling, among other (MARTINI, 1980).

During the dispute handball, there is the alternation between the aerobic and anaerobic activity occurring short periods of maximum intensity, interspersed with periods of low intensity and moments of rest. Its performance directly influences levels of VO2 max, lactate metabolism and lipoproteins, hormonal changes and, in accordance with the practice time and intensity, produce physiological changes that activate the oxidative energy system (DIAS et al., 2008).

Due to the motor requirements, adequate food intake during periods of training and competition after competition, provides the necessary substrates for the practice of sport through the provision of macro and micronutrients that will operate in the supply, repair and rebuilding of body tissues, control and adjustment of body weight, body composition and maintenance of functional and structural integrity of the organism (VIEBIG & NACIF, 2007).

Another important component is hydration. The water, they are repositories electrolyte or energy, whether before, during or after training, especially in a sport that requires a lot of cardio portion, is of great importance to optimize the functioning of homeostatic processes required for the activity (GOMES & RODRIGUES, 2001).

According to Melvin (2002), an adult needs an average of about 2.2 to 3.3 liters of water per day, and observed an increase that amount if the adult is an elite athlete.

For an athlete, replacement water should be viewed with caution, because their intake should be made in the amount recommended to replace water loss caused by sweat and breathing (MAGNONI & CUKIER, 2005).

In this context, this study aimed to describe the hydration and dietary habits in pre, during and after training of a men's team handball university, Rio de Janeiro.

SUBJECTS AND METHODS

In September of 2008, was carried out a descriptive cross-sectional study, from primary base with 14 athletes men, with age between 19 and 35 years, volunteers, of the masculine team of handball of UNISUAM.

The athletes were accompanied by two nutrition students during training in court, inserted in the project of university extension Nutresporte, which happened twice a week, on Tuesdays and Thursdays, from 06 p.m. to 08 p.m.; and nutrition service, of the Clinic School Amarina Motta (CLESAM), once a week (Monday), where the service were performed individualized nutrition.

A formulary developed for the athletes' nutritional attendance in court was applied before and after the training for the students, aiming at to detect mistakes in the alimentary ingestion and the athletes' hydration, for subsequent nutritional orientation.

The variables selected for the study were: age (years), total body mass (TBM) (Kg), height (H) (m), alimentary habits before the training (meal type: snack or lunch; local; and consumed food) and hydration (pré-, during and post-training).

TBM and H they were obtained being the subject in apnea situation, after a maximum inspiration (FERNANDES FILHO, 2003) with an electronic scale was used marks Filizola with capacity of 150Kg and resolution of 100g, coupled with a stadiometer (altimeter, 2.00 m), properly calibrated to obtain the measurements.

Data were typed, consolidated and analyzed by the software Excel for Windows 2007, and then explored by means of absolute and relative frequencies and measures of central tendency (average and standard deviation), values minimum and maximum from the selected variables.

RESULTS AND DISCUSSION

The athletes showed average age of 25.6±5.5 years; average height of 1.79±0.08 meters; and average weight of 81.18±13.2Kg.

Regarding meal type, it was verified that 86% of the athletes referred to have a snack and 14% to eat lunch before the training (Figure 1), mainly, in the university. It was verified, also that, the foods more consumed by the athletes as snack was, principally form bread, margarine, cookies, cheese, soft drinks and, rarely, milk and/or fruit.

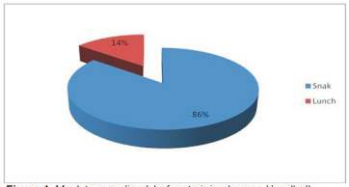

Figure 1. Meal type realized before training by men Handball athletes from UNISUAM, Rio de Janeiro. September, 2008.

Due the schedule of training, from 06 p.m. to 08 p.m., the athletes soon after the classes of the period of the afternoon in the teaching institution, the one that hindered accomplish a balanced meal. Already most of the ones that presented an appropriate feeding, they studied in the shift of the day and, frequently, they accomplished the meals in the residence place.

In agreement with Mcardle et al. (2003), it is unquestionable the importance of the balanced feeding in the training periods, before and the athlete's after competition, in function of the beneficial effects in the physical acting.

This way, it is indicated that in the training periods, the feeding assists to the individual caloric needs and of micro and macronutrients (carbohydrates, proteins, fat, vitamins and mineral), starting from the consumption of fruits, green vegetables, vegetables, legume, cereals (if possible, the integral ones), milk, breads, vegetable oils; being also considered the schedule, the type of foods consumed before, during and post-training and the hydration stated.

Hydration was detected that 64.3% (n=9) of the athletes they were hydrated before the physical training, of these 44.4% they drank water, 22.2% orange juice and 22.2% soft drinks. All of the athletes ingested water during and post-training (Figure 2).

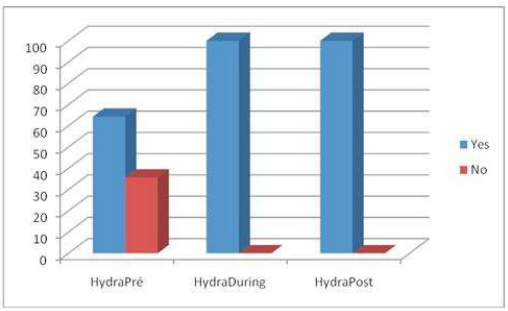

Figure 2. Hidratation pré-, during and post-training realized by men Handball athletes from UNISUAM. Rio de Janeiro. September, 2008.

The average consumption of liquids before the training was of 257.1±240.9 ml; and, 600 ml water during and post-training (Table 1).

Table 1. Average (±SD) values, minimum and maximum (ml), of liquids pré-, during and post-training by men Handball athletes from UNISUAM. Rio de Janeiro. September, 2008.

Hidratatyon (ml)	Average(±SD)	Minimum	Maximum
Pré-Training	257,1±240,9	0	600
During Training	600±0,0	600	600
Post-Training	600±0,0	600	600
Total consumption	1457,1±240,9	1200	1800

The ingestion of 600 ml for the athletes during and after the training it happened, therefore available squeezes were left for consumption of water on those two moments, without however, to stimulate the consumption. An observed fact and of interest, it was the consumption of the total volume of water, contained in the squeezes, for all of the athletes, what reinforces the importance of stimulating the consumption of water in elapsing of the trainings, being left the close bottles of water to the training place.

The hydration is a factor of extreme importance and that should be taken into account not only before the physical activity, but during and after also (VIEBIG & NACIF, 2007).

The recommendation of liquids for the Brazilian Society of Medicine in the Sport (2003) it is: an ingestion of approximately of 500ml of liquids two hours before the practice of an exercise; that in elapsing of the exercise, the athletes begin to ingest liquids immediately and in regular intervals; that the liquids are ingested below the temperature of the atmosphere (between 15 and 22ºC) and with pleasant flavor; the addition of appropriate amounts of carbohydrates and electrolytes for events with larger duration than one hour, as well as the addition of sodium (0,5 the 0,7g.L-1 of water) in the rehydration solution in case the exercise lasts more than one hour.

In agreement with Pereira et al. (2002), the appropriate hydric intake in elapsing of the training, makes possible the best physical income, taking the decrease of the negative effects of the dehydration, seeking to restore the happened losses as well as to aid in the recovery of the muscular glycogen, to improve the acting and to delay the fatigue.

CONCLUSION

It was concluded that the athletes need to improve the alimentary choices inside of what it is recommended in the literature. The ingestion of water was adequate during and post-training, because close bottles of water were put the same ones, to stimulate the consumption. However, before the training the consumption of liquids was inadequate.

In this sense, the appropriate nutritional orientation in the training periods will important to improve of the knowledge about feeding and correct hydration to the athlete´s.

BIBLIOGRAFY

DIAS, S.; SELUIANOV, V.N.; ANDRADE, S.L.F. Musculação. Curitiba: Ed. Juruá, 2008.

FERNANDES FILHO, J. A prática da avaliação física. 2. ed. Rio de Janeiro: Shape, 2003. 268p.

GOMES, A.C.V; RODRIGUES, L.O.C. Avaliação do estado de hidratação dos atletas, estresse térmico do ambiente e custo calórico do exercício durante sessões de treinamento em voleibol de alto nível. Revista Paulista de Educação Física. (São Paulo). 2001. V.15, n.2, p 11-201.

MCARDLE, WD; KATCH, FI; KATCH, VL. Fisiologia do Exercício Energia, Nutrição e Desempenho Humano. Rio de

Janeiro: Guanabara-Koogan, 2003. 1113p.

MAGNONI, D.; CUKIER,C. Perguntas e respostas da Nutrição Clínica. São Paulo: Roca, 2005.

MARTINI, K. Handebol: técnica - tática - metodologia. Portugal: Publicações Europa-América Ltda, 1980.

MELVIN,H. Nutrição para a saúde, condicionamento físico e desempenho esportivo. São Paulo: Manole, 2002.

PEREIRA, LO; MARQUESI, ML; LANCHA JR, AH. Reposição Hídrica. In: Lancha Jr, A.H. Nutrição e Metabolismo Aplicados à atividade física. São Paulo:

Ed. Atheneu. 2002. Cap: 5. pp. 95-130.

SOCIEDADE BRASILEIRA DE MEDICINA DO ESPORTE – SBME. Modificações dietéticas, reposição hídrica, suplementos alimentares e drogas: comprovação de ação ergogênica e potenciais riscos à saúde. Diretriz da Sociedade Brasileira de Medicina do Esporte. Rev. Bra. Med. Esport. (São Paulo). V. 9, n. 2, p 1 – 13, 2003.

TENROLLER, C.A.; MERINO, C.A.T.E. Métodos e Planos para o ensino do esporte. Canoas: Editora Ulbra, 2006.

VIEBIG, RF; NACIF, MAL. Nutrição Aplicada à Atividade e ao Esporte In:

SILVA, SMCS; MURA, J.D.P. Tratado de Alimentação, Nutrição & Dietoterapia. São Paulo: Roca, 2007. Cap. 16. pp. 215-234

VIEIRA, S.; FREITAS, A. O que é handebol: histórias, regras e curiosidades. Rio de janeiro: Casa da Palavra, 2007.

HYDRATION AND ALIMENTARY HABITS IN PRÉ-, DURING AND POST-TRAINING OF A MEN'S TEAM HANDBALL UNIVERSITY, RIO DE JANEIRO

ABSTRACT

In collective sports, the appropriate feeding and hydration are fundamental not only in the search of results, but for the warranty of their apprentices' health. This study aimed to describe the hydration and dietary habits in pre, during and post-training of a men's team handball university, Rio de Janeiro. In September 2008, it was realized a descriptive, cross-sectional and with primary base study with fourteen masculine athletes, aged from 19 to 35 years old, volunteers, all belonging to handball masculine team from UNISUAM. A formulary was developed to make athlete's nutritional follow-up, and it was used by students of nutrition both before, during and after training. Data were typed, consolidated and analyzed by the software Excel for Windows 2007, as well as explored by means of absolute and relative frequencies and measures of central tendency (average and standard deviation) from the selected variables. The athletes' average age (years) was 25.6±5.5; average height (m) was 1.79±0.08; and average body weight (Kg) were 81.18±13.2. As for the meal type, it was verified that 86% of the athletes referred to have a snack and 14% to eat lunch before the training, mainly, in the university. As the hydration, was detected that 64.3% of the athletes were hydrated before the physical training, of these 44.4% they drank water, 22.2% orange juice and 22.2% soft drinks. All of the athletes ingested water during and post-training. The conclusion is that the handball athletes need to improve the alimentary choices inside of what it is recommended in the literature. The ingestion of water was adequate during and post-training.

KEYWORDS: Alimentary Habits, Handball, Hydration

HYDRATATION ET HABITUDES ALIMENTAIRES EN AVANT, PENDANT ET APRÈS LA FORMATION D'UNE EQUIPE DE HANDBALL HOMMES UNIVERSITÉ, RIO DE JANEIRO

RÉSUMÉ

Dans les sports collectifs, une bonne nutrition et un apport adéquat de l'eau sont essentiels non seulement sur les résultats, mais de garantir la santé de ses praticiens. Cette étude visait à décrire l'hydratation et les habitudes alimentaires dans le pré, pendant et après la formation de l'université équipe masculine de handball, Rio de Janeiro. Nous avons mené une primaire, descriptives transversales avec 14 athlètes de sexe masculin, âgés entre 19 et 35 ans, les bénévoles de UNISUAM équipe masculine de handball du mois de Septembre 2008. Une forme développée pour contrôler l'état nutritionnel des athlètes sur le court a été appliquée avant, pendant et après la formation pour les étudiants de la nutrition. Les données ont été numérisées, consolidées et analysées en utilisant Excel pour Windows 2007, et son exploitation via des fréquences absolues et relatives, et les mesures de tendance centrale (moyenne et écart-type) de certaines variables. Les athlètes avaient un âge moyen (années) 25,6 ± 5,5, la hauteur (m) en moyenne 1,79 ± 0,08, et le poids (kg) en moyenne 81,18 ± 13,2. Le type de repas, il a été constaté que 85,7% des athlètes fait état d'un déjeuner snack et 14,3% avant la formation, en particulier dans l'institution éducative. En ce qui concerne l'hydratation, on a découvert que 64,3% des athlètes sont hydratés avant l'entraînement physique, ces buvaient de l'eau 44,4%, 22,2% de jus d'orange et boissons non alcoolisées 22,2%. Tous les athlètes ingestion d'eau pendant et après la formation. A conclu que les athlètes de handball nécessité d'améliorer les choix alimentaires dans ce qui est recommandé dans la littérature. Prise d'eau était adéquat pendant et après la formatio.

MOTS-CLÉS: Handball, Habitudes Alimentaires, Hydratation LA HIDRATACIÓN Y LOS HÁBITOS ALIMENTICIOS

EN ANTES, DURANTE Y DESPUÉS DEL ENTRENAMIENTO DE LOS HOMBRES DEL EQUIPO DE BALONMANO DE LA UNIVERSIDAD, RIO DE JANEIRO

RESUMEN

En los deportes colectivos, la nutrición adecuada y el consumo adecuado de agua son esenciales no sólo en los resultados, sino para garantizar la salud de sus practicantes. Este estudio tuvo como objetivo describir la hidratación y los hábitos alimenticios en el pre, durante y después del entrenamiento de los hombres del equipo de balonmano de la universidade, Rio de Janeiro. Se realizó un estudio descriptivo, transversal primaria con 14 atletas de sexo masculino, con edades comprendidas entre 19 y 35 años, los voluntarios en UNISUAM de hombres del equipo de balonmano, septiembre de 2008. Una forma para vigilar el estado nutricional de los atletas en la cancha fue aplicada antes, durante y después del entrenamiento para los estudiantes de la nutrición. Los datos fueron digitalizados, consolidar y analizar el uso de Excel para Windows 2007, y su explotación a través de las frecuencias absolutas y relativas, y medidas de tendencia central (media y desviación estándar) de variables seleccionadas. Los atletas tenían una edad media (años) 25,6 ± 5,5, la altura (m) promedio de 1,79 ± 0,08, y el peso (kg) de media 81,18 ± 13,2. Cuanto al tipo de alimento se verificó que la merienda és realizado por 86% y el almuerzo por 14%. de las atletas, antes del entrenamiento. En cuanto a la hidratación, se descubrió que el 64,3% de los atletas están hidratados antes de ejercicios de entrenamiento, estos tomaron agua del 44,4%, 22,2% de jugo de naranja y bebidas no alcohólicas 22,2%. Todos los atletas que ingieren agua durante y después del entrenamiento. La conclusión de que los atletas de balonmano necesidad de mejorar la elección de alimentos en lo que se recomienda en la literatura. El consumo de agua adecuado durante y después del entrenamiento.

PALABRAS CLAVE: Balonmano, Hábitos Alimentarios, Hidratación

HIDRATAÇÃO E HÁBITOS ALIMENTARES NO PRÉ, DURANTE E PÓS-TREINO DE UMA EQUIPE MASCULINA DE HANDEBOL UNIVERSITÁRIO, RIO DE JANEIRO

RESUMO

Em desportos coletivos, a alimentação adequada e a ingestão hídrica correta são fundamentais não só na busca de resultados, mas para a garantia da saúde de seus praticantes. O presente estudo objetivou descrever a hidratação e os hábitos alimentares no pré, durante e no pós-treino de uma equipe masculina de handebol universitário, Rio de Janeiro. Realizou-se um estudo descritivo, transversal, de base primária com 14 atletas homens, com idade entre 19 e 35 anos, voluntários, de uma equipe masculina de handebol da UNISUAM, no mês de setembro de 2008. Um formulário elaborado para o acompanhamento nutricional dos atletas em quadra foi aplicado antes, durante e depois do treino pelas alunas do curso de nutrição. Os dados foram digitados, consolidados e analisados no programa Excel for Windows 2007, sendo sua exploração por meio das freqüências absolutas e relativas, e das medidas de tendência central (média e desvio padrão) das variáveis selecionadas. Os atletas apresentaram a média de idade (anos) de 25,6±5,5; estatura (m) média de 1,79±0,08; e peso (Kg) médio de 81,18±13,2. Quanto ao tipo de refeição, verificou-se que 85,7% dos atletas referiram lanchar e 14,3% almoçar antes do treino, principalmente, na instituição de ensino. Quanto a hidratação, detectou-se que 64,3% dos atletas se hidratavam antes do treinamento físico, destes 44,4% beberam água, 22,2% suco de laranja e 22,2% refrigerantes. Todos os atletas ingeriram água durante e no pós-treino. Conclui-se que os atletas de handebol necessitam melhorar as escolhas alimentares dentro do que é recomendado na literatura. A ingestão de água foi adequada durante e no pós-treino.

PALAVRAS-CHAVE: Handebol, Hábitos Alimentares, Hidratação

PUBLICAÇÃO NO FIEP BULLETIN ON-LINE: http://www.fiepbulletin.net/80/a2/101