

THE HYGIENE OF PHYSICAL EDUCATION AND SPORT

Tugurlan Ionel Dorel¹

¹Sports High School Suceava, Romania

Benedek Florian²

²Stefan cel Mare University of Suceava, Romania

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Summary: The study of this issue is useful for the students from the Faculty of Physical Education and Sport for two reasons. The first one is that the practice of performance sport must use the tempering procedures in view of strengthening the body, increasing the endurance to effort; adjusting to climate variations. The second reason results from the fact that the physical education teacher is alongside the family and physician responsible for the health of future generations. In the case of the classes from the curriculum he must work with all the children, not only with the talented ones, to include tempering procedures in accordance with the student's age.

Introduction

Hygiene is one of the oldest branches of medicine which aimed at preventing diseases and maintaining the health of man and of the community in which he lives and works. Through these objectives, hygiene is different from the clinical branches of medicine which aim at studying diseases and the ways in which we can heal the sick man.

Hygiene deals with the study of the environmental factors on the population's state of health, on the sanitary and environmental consequences following man's actions on the environmental factors, man's manner and possibility of adjustment to the environment in which he lives. The data obtained through these studies are the basis for the elaboration of the sanitary norms, of the sanitation and prevention measures for a hygienic living environment.

World Health Organization defines health as men's physical, psychological (mental) and social well-being. These three elements are closely interdependent directly influencing man's activity, his way of life, interpersonal behavior, the inborn natures which he transmits.

The hygiene of physical education and sport is an educational subject that influences the great results and performances dealing with the sportsman's health, the place and the manner in which the practice for

preventing the elements of over-practice and over-straining takes place, with the elements of self-control.

It is possible to achieve the established goals through:

- a) the analysis of the main effects which take place in the body after practicing physical exercises correlated with the environmental factors; named tempering the body;
- b) the use of the environment for improving the state of health and the effort capacity which represents the hygiene of the curricular , extra-curricular activities, the hygiene of mass sport;
- c) the scientific management of the sportsman's diet according to the training or recovery stages.

The measures took for the practical application of the hygiene rules are called sanitary measures and aim to prevent diseases, accidents, and to increase the exercise capacity. The application of these sanitary measures must be made by all those who participate to the achievement of the sport performances, trainers, physicians. The great champions get into the optimal shape for competition not only through practice but also through a hygienic lifestyle which consist of a diet in accordance with the practice's intensity, weight, with the elimination of the toxic substances (coffee, tobacco, alcohol) respecting the ratio between the diet principles, sleep schedule and active rest by tempering the body, the organization of practices and avoiding over-practice.

Material and method

The physical education hygiene has the following methods for the study of the specific issues:

1. the statistical method which consists in the study of the sportsmen health indexes: physical development, speed of reaction, etc. of the conditions where the activity takes place;

2. the experimental method which helps in the qualitative and quantitative estimation of the influence exerted by different sport activities and by the environment on the state of health, and of the sport efficiency;

3. the sanitary monograph by which we collect data, observations, concerning the fitting out of simple or complex sports grounds, diet in several sport specialties.

Physical education and sport must use the medical discoveries which give the trainer precise rules for conducting practice in optimal conditions.

The main elements which the hygiene of physical education and sport has to develop are:

1. The diet hygiene participates in maintaining an optimal state of health. The food ration must be adjusted to the development period and must take into consideration the morphofunctional features, the energy consumption, the degree of difficulty of the events, the training stage, the environment where the practice or the competition take place.

2. The process of tempering the body uses natural factors (air, water, sun) in adapting the sportsman's body to various climate situations.

3. The notions of personal hygiene and epidemiology are included in the course due to the necessity that a physical education teacher or trainer transmits to the student notions concerning clothing, shoes, and personal hygiene rules.

4. The hygienic lifestyle ensures a superior level of efficiency and longevity for the sportsman in the practiced sport specialty.

5. The hygiene of the sports grounds establishes on scientific bases their location and the hygienic requirements for the annexes.

6. The hygiene of the curricular and extra-curricular activity must be mastered by the future physical education teacher which alongside the family should ensure a harmonious development of the future generation.

The sportsman's lifestyle

For a performance sportsman practice must be the first element on the road to affirmation, but it must be supported by a hygienic lifestyle and regime of activity.

The elaboration of some conditioned reflexes (feeding, sleep, doing an activity) is very important because, after accomplishing these reflexes all activity takes place with a smaller consumption of nervous energy. So, after the elaboration of the conditioned reflexes the nervous system's solicitation is smaller thus achieving a protection of the nervous system making it capable to cope with other solicitations.

Discussions

1. Passive rest (sleep)

Sleep is the most efficient method for the recovery of the nervous cell, the abolition of the muscle tone, the reduction of the body's functions. Sleep has two phases:-the slow sleep phase with anabolic role, of physical recovery, synthesis of macromolecules (proteins, ribonucleic acid); -rapid sleep phase, the second part of sleep with a part in the adjustment of the homeostatic mechanisms, of elimination through dream of the information that are no longer useful to the body; memory

strengthening, concentration, recovery of the catecholamine reserves which interfere in maintaining the state of vigilance, the tonus and the psychological energy, in the restoration of the neuromuscular system. The number of hours of sleep is variable depending on the person; the rule of the 3X8 hours: 8 hours of sleep, 8 hours work, 8 hours passive activity must be adjusted for every individual. The most reposeful sleep is between the hours 22-24, this being the physiological period of slow sleep production. So, the trainers that, in training camp, oblige the sportsmen to go to bed at around 22 hours act in a correct manner from a medical point of view.

A series of preparatory measures are necessary in order to achieve a reposeful sleep: dinner must be served about 1 hour and ½ before going to bed and must not contain stimulant substances (coffee, alcoholic beverages); the sleeping position must be right lateral decubitus, by the discreet compression on the biliary vesicle which is thus stimulated in the production of gall, the digestion taking place more rapidly and more completely; a warm shower is indicated before sleep, but without massage or auto massage; falling asleep should happen on a musical background if it is possible ; the aeration of the sleeping room for 10-15 minutes before.

2. Tempering the sportsman body

We underline the fact that, performance sportsmen must practice gymnastics in the morning for 20 minutes outside or with the window open, in a strict equipment (shorts, shorts and T-shirt for girls).

2. The elimination of some unhygienic habits. .

The cigarette smoke has effects on the sight, on the mucous of the respiratory pathways, on the digestive apparatus, effects on the cardiovascular apparatus, on the endocrine glands. From the studies made on sportsmen it resulted for example that one cigarette smoked by a basketball player before the game reduces with 12% the efficiency of the precision of the throw to the hoop ; smoking during the game's halftime reduces with 10% the speed of reaction.

Alcohol consumption as smoking has serious repercussions on the body, specially in the cases of a daily chronic consumption.

Among the immediate effects we mention the reduction of the efficiency in effort, coordination disorders, the decrease of precision and of the speed of reaction; produces the inhibition of the higher nervous centers.

The late effects of alcohol are: the diminution of the resistance to infections, precocious ageing, the reduction of the expectation of life, the

decline of memory and intelligence, psychological instability, by cholesterol deposition in the small vessels.

4. The sportsman's diet during various stages of training

300-500 extra calories for every hour of practice are recommended during the training period. The development of general resistance is achieved by increasing the quantity of vitamins C, B1, B2, B6, B15, PP in the diet.

In the stages in which the resistance effort as duration dominates the ration will include a large quantity of glucides from fruits, vegetables, sugar products.

In the stages in which the physical exercises for the development of speed dominate we recommend the increase of the animal proteins (large quantity of phosphorus).

The portion will include food with a large biological value, easy to digest and to assimilate and will not include quantities larger than 2,5 kg food/day.

We present as follows a configuration example of the caloric ration of 3000 – 3500 for the training period. The breakfast has to be a meal abundant in proteins in order to allow the execution of physical effort during training: 250ml milk, tea or coffee with 2-3 tea-spoons of sugar, 150g bread or cereal flour mixed with milk, 50g butter, 50g honey or marmalade or comfiture, 50-75g roast or light ham, 100-200g fruits. The lunch is the meal through which the recovery of the consumed substances and energy is realized: 100 ml soup or vegetables cream, 100-150g meat (roast, quickie or fish), 100g salad, 50g cheese, 200g vegetables garnish or rice and 50g sour cream, 150g bread, 100g fruits. Through dinner the losses that have not been recovered are reestablished and the energetic substratum for the next day is prepared: 100g meat or 1-2 eggs or 200g fish or 150g cheese, 100-150g salad, 100g vegetables, a fruit/compote. Before going to bed 250ml warm milk.

The diet during competition period

During the days before competition the diet must not be changed abruptly, because there is the risk of derangement of the conditioned reflexes. We present as follows the medium necessary conditions for a sportsman during competition period: 350g beef or chicken, 50-100g ham, 300-500ml milk, 60g yogurt, cheese or sour cream, 5g butter, 1-2 eggs, 500g bread, 100g pasta or rice or semolina, 500g vegetables, 500g fresh fruits, 100g marmalade or comfiture, honey, 400-500g potatoes, 60-80g sugar, 5-10g cacao. These quantities are as a rough guide, it is necessary their adaptation to the individual necessities and sport.

The diet for the sports that don't allow nutrition during competition

I. Sports characterized by effort on a short period

a) Short, single effort: all athletics trials (except for half marathon, race walking, marathon), speed trials in swimming, fencing, alpine skiing, trampoline ski jumping, bobsleigh, skating.

b) Short, repeated efforts: weightlifting, gymnastics, bicycle racing, trampoline jumping.

All these jumping are challenging for the nervous system, asking for a bigger reaction speed. So, the nutrition has to be abundant in phosphor, carbohydrates 650-700g, lipids 110-120g, vitamin B1 5-8mg, C 150-200mg.

The general caloric value is of 4400-4600/day.

Particularities

The weightlifters need 5000-6000 cal, depending on weight category, distributed in carbohydrates 800g, proteins 160-170g, lipids 110g. Boxing, sport wrestling, judo are dynamic sports where the caloric demand is low: 4500-5000 with 120g lipids, 160-170g proteins, carbohydrates 650-700g, vitamin A 3 mg and B1 5-6 mg. In fencing the demand on vitamin A is bigger than in other sports, reaching 5000 Ui, having as purpose the prevention of eye-asthenia caused by the mask, over-intensity.

The swimming implies on the part of the sportsman a special effort because of the high water resistance towards air and heat waste. On these grounds in the daily allowance the carbohydrates quantity will be of 130-150g. In order to maintain the glycemia during the trials that run for a day the sportsman will be given at intervals of 90 minutes 125ml fruit juices sweetened with honey.

II. Sports characterized by effort on a long period

a) Single efforts: half marathon, marathon, race walking, rowing, speed or figure skating, equestrianism, bicycle racing, swimming, automobile races, parachuting;

b) Repeated efforts: lawn tennis, fencing, wrestling, judo, karate, water skiing;

c) Special sports like marathon, race walking. For these sports the nutrition allowance has to contain at least 15% proteins. The accent falls on realizing energy reserves based on which the effort is realized: 700-750g carbohydrates/day and vitamin B1 5-8mg.

Conclusions

Without respecting the presented norms a sportsman cannot train in order to obtain high results. Also, by not respecting the hygiene norms the sportsmen can catch different diseases. It is known the fact that they

sweat a lot during training and by using the same unwashed training equipment they create an uncomfortable state.

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Titre: L'hygiene de l'education physique et du sport

Mots-clés: hygiène, éducation physique, sportif

Sommaire: L'étude de cette question est utile pour les étudiants de la Faculté d'éducation physique et du sport, pour deux raisons. La première est que la pratique du sport doit utiliser les procédures de trempe en vue de renforcer le corps, l'augmentation de l'endurance à l'effort d'adaptation aux variations climatiques. La deuxième raison provient du fait que le professeur d'éducation physique est aux côtés de la famille et le médecin responsable de la santé des générations futures. Dans le cas des classes du programme, il doit travailler avec tous les enfants, non seulement avec le talent, pour la trempe des procédures conformément à l'étudiant de l'âge.

Titlu: Igiena Educației Fizice și Sportive

Cuvinte cheie: igienă, educație fizică, sportiv

Rezumat: Studiul asupra acestei probleme este util studenților de la Facultățile de Educație Fizică și Sport din două rațiuni

Prima dintre ele este că practica sportul de performanță trebuie să utilizeze procedeele de călire în vederea întăririi organismului, creșterea efortului de anduranță pentru a se adapta la variațiile climatice. Al doilea motiv rezultă din faptul că profesorul de educație fizică este, alături de familie și medicul responsabil de starea de sănătate a generațiilor viitoare. În cazul claselor de curriculum, el trebuie să lucreze cu toți copiii, nu doar cu cei talentați, incluzând proceduri de revenire, în conformitate cu vârsta studentului.