76 - THE PREVENTION OF THE SUDDEN DEATH IN GYMS THROUGH THE EVALUATION MEDICAL PRÉ-EXERCISE

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INTRODUCTION

This research was accomplished of May from 2005 to July of 2006 in the gyms of Curitiba registered in the system CREF-PR in the year of 2005, totaling 189 academies. To these academies a questionnaire was applied and of the total of academies, 137 answered to him and they are included in that research, approved for the Committee of Ethics of the Positive Academicals Center. The objective was to measure how many academies request medical examinations physical pré-activity.

The campaigns in the media motivate the end of the sedentary, what ends for inducing a lot of people to begin her/it a physical activity, and a lot of times that happens without the due cares (CROSS, 1985). Now about 3.6 million Brazilians they practice physical activities in about 20 thousand gyms, according to data presented by CONFEF 2004. The professional of Physical education is responsible for prescribing, to guide and to accompany all that practice physical activity or sport CONFEF, 2000. And it is his/her duty to guarantee the student's physical integrity, once the physical activity presents risks.

The most serious problem than it can happen during the practice of exercises in the academy is the sudden death. This can be understood in several ways, but this study is limited to approach the coronary sudden death (MAGALHÃES, 1983), that he/she usually feels 30 seconds after the pick of the physical activity that caused this fact, could also happen up to 6 hours after this point. That problem happens in a proportion of until twice more to each exhibition of 100 thousand hours of exercise in the populations in general than in normal situations.

The sudden death is the first general cause of death pre hospitable in Brazil (CANESIN, 2005). According to Laurenti (2000) in Brazil they are 292 thousand sudden deaths a year and, in the United States, 300 thousand, and this number is general, because of athletes still no there is an exact statistics. The soccer players' recent deaths put the cardiovascular emergency in prominence, causing apprehension in the population and resulting in the beginning of a revolution close to the authorities of the medicine and of the sport, generating understanding campaigns. Studies accomplished in the United States reveal that the incidence of sudden death is from 1 to each 200 thousand among athletes no professionals that he/she has from 12 to 20 years and among the adult population, and the data reveal 300 thousand sudden deaths a year.

Like this being, the main objective of that study is to present to the middle academic subsidies that you/they allow a better understanding of the importance of the medical examinations for a safe practice of the physical activity. Alerting like this, for the necessary cares of the professional's of Physical education practice, of the conduct of the academies, tends in view that the medical examinations are parts of the necessary procedures to avoid accidents, lesions and even death; considering that 90% of the victims of sudden death possess known heart disease or no diagnosed, like this being is ended that in most of the cases, the sudden death can be forewarned.

A study accomplished in Brasília about the people's clinical conditions that wanted to practice physical activities before liberating them for sporting activities concluded that 70% of the visitors of gyms presented heart problems (SÉRGIO, 2006). According to Paulo Milk 1983, of the individuals physically assets most doesn't know in which intensity the exercise should be executed, nor so a little he/she has orientation to practice the exercise in a safe way. Same being taken care of athletes that already have basic knowledge for the sport practice holds, accomplished researches point that they don't value the symptoms that appear during the physical activity.

The verification of several occurrences of sudden deaths caused by heart problems generates the question of as it can be made the prevention of such events and he/she wonders which the importance of the medical evaluation before beginning the practice of physical activity.

The evaluation pré-participation belongs advisable for all to the individuals that practice physical exercise of competitive character or no - and he/she has as one of their main objectives to move away conditions that can have in the physical exercise a trigger for the development of serious events, as the occurrence of sudden death" (RBME, 2005).

The evaluation medical pré-participation in physical activity is an important instrument for maintenance of the health and the athlete's safety and more than a simple formality, the correct medical evaluation can eliminate or to impede a physical activity and also to identify conditions that can predispose the athlete to the sudden death, allowing the professional of Physical education to delimit which the activities are or no pertinent to a certain individual.

In a great number of academies that exam is already requirement for the student's registration, and in some States there is already that legal determination there is the compulsory nature of the medical examination. In Rio de Janeiro, for instance, the Law no.. 2.014, of July 15, 1992, it turns obligatory the medical examination and the physical education professionals' permanent attendance in the places of sport practice (SENATE, 1998).

The medical evaluation is composed of the construction of medical report (anamnesis) analyzing the past pathological history, family report of cardiopatas and or premature sudden death, the social history and life habits. It is known today that the anamnesis, when well driven, it is responsible for 85% of the diagnosis in the medical clinic, liberating 10% for the clinical exam and only 5% for the exams laboratories or you complement. In the case of the anamnesis in exam pré-participation in physical activity, the application of the specific questionnaire is recommended - PARQ (ACSM, 2001) (Physical Activity Readiness Questionnaire, or questionnaire of readiness for physical activity). He is suggested as minimum pattern of evaluation, because it can identify, for some positive answer, the individuals that you/they need previous medical evaluation.

It is added to this historical one, physical exams, relating vital data; cardiovascular exam that detects the propensity to the heart sudden death and orthopedic exam. Other exams can complement the diagnosis, as the Electrocardiogram, ecocardiograma, test of effort.

According to TELES (1996), the risks for the health, particularly the one of cardiovascular nature, current of the exercise they can become reduced for evaluation discerning pré-participation that it allows guided practice. Symptomatic individuals and/or with important risk factors for diseases cardiovascular, metabolic, lung and of the system loco motor, that they could be worsened by the physical activity, they demand specialized medical evaluation, for definition it aims at of eventual

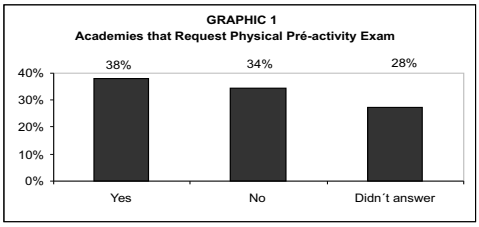
restrictions and the correct prescription of exercises.

The American school of Sporting Medicine recommends as prevention the heart sudden death in people that practice physical activity, that all that that wants begin any sport practice, even if is walked, submitting to a medical examination and the people above 30 years should have his/her profile coronary plan.

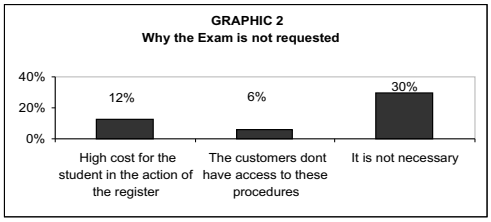
RESULTS

With the objective of delimiting how many academies request medical examination before the beginning of the sport practice in their facilities, a research was accomplished in the academies registered in the system CREF in the year of 2005 in Curitiba, Paraná. Like this, it can be obtained a parameter to classify the safety and prevention of the academies regarding sudden death. Besides, there was the intention of to discover which exams are requested in those academies. Of the 189 academies of Curitiba, 137 answered to the questionnaire, in the following way:

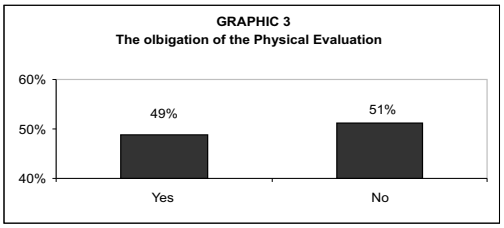
The Graph 1 corresponds to the number of academies that you/they request exam physical pré-activity. Of the total of academies, 52 or 28% of them didn't answer to the questionnaire for several reasons, of the ones that 34% answered don't request exam physical pré-activity and 38% request. A preoccupying die when being considered that the students' great part can have a heart problem still no diagnosed, according to researches of Sérgio (2006) and Leite(1983).



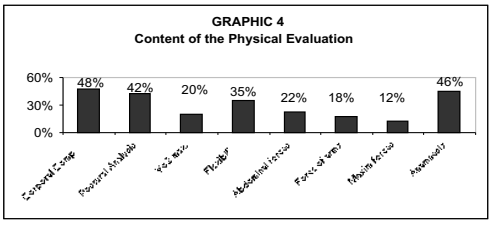
The Graph 2 reveals that of the 34% of the academies that don't request the exam physical pré-activity, 30% affirm not to be necessary, 12% believe that the cost of the exam is loud for the students and 6% affirm that the customers don't have access the those procedures.



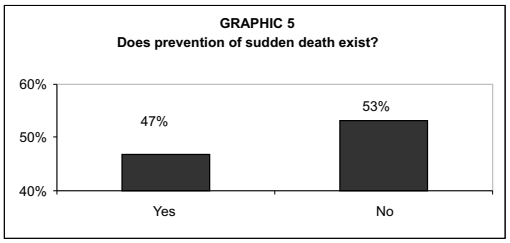
The Graph 3 display the student's obligation to accomplish a physical evaluation before the beginning of the sport practice, in other words, differently of the exam physical pré-activity, the academies request physical evaluation, and in 49% of the 137 academies that answered to the questionnaire this evaluation it is obligatory.



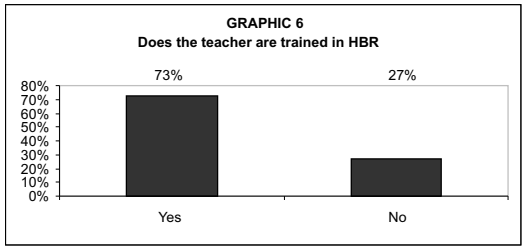
The graph 4 demonstrates that of the 49% of the academies that collect the student's Physical Evaluation, 48% analyze the corporal composition in this evaluation, 46% make anamnesis, 42% use the analysis postural, 35% measure the flexibility, 22% evaluate the abdominal force, 20% esteem the Vo2 max, 18% quantify the arm force and 12% measure the maximum force.



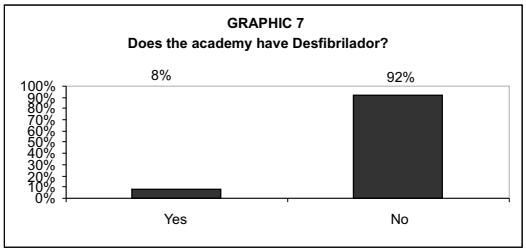
The graph 5 confirms that 47% of the academies are used from prevention means to the sudden death, against 53% that affirm not to have practices prevencionistas related to this subject. The medical literature recommends that the atmosphere of the sport practice should have equipments for service in emergencies, besides having professionals in HBR and of the popularization of the measures of prevention of the sudden death. For the precaution of accidents it is advisable that the academy demands the accomplishment of a battery of exams, that you/they should be accomplished by a medical professional that can guarantee the student's perfect health condition for the beginning of the physical activities. (PEREIRA, 1996)



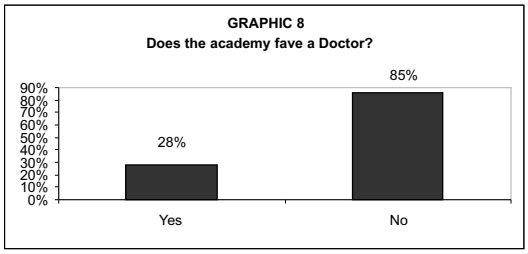
The graph 6 points that 73% of the teachers registered in those academies are trained in heart-breathing animation. The ideal is that all the professionals of Physical education were capable to accomplish HBR, given the gravity of the subject and also considering that professional's formation. In this point it must rethink the quality of this professional's formation, once when working with the very larger, the life, he should have knowledge of the practices of First Aid and HBR. Going beyond, "All of the supervisors should have a learning of techniques of First Aid and HBR". (FLECK; KRAEMER, 1999, p.109).



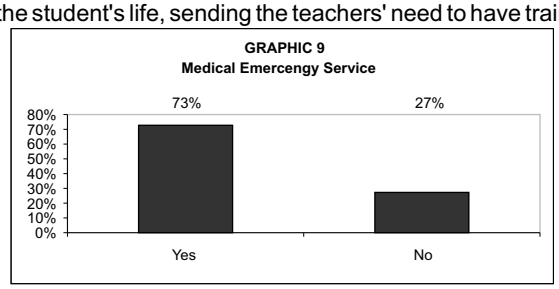
The graph 7 reveals that only 8% of the academies possess desfibrilador, a preoccupying die. If the place possesses a desfibrilador, there is more chance of saving the victim's life. The desfibrilador is an apparel means the difference between the life and the death in case of cardiac arrest, reverting 90% of the cases of "fibrillation to articulate", when the heart beats, but it is unable to maintain the functions of the organism.



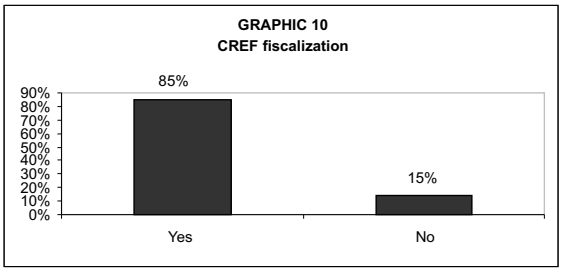
The graph 8 presents that 28% of the academies count on a medical professional in his/her picture of employees to evaluate and to assist the students and 85% doesn't have. SANTOS (2003) it recommends that the academy hires a sport medical professional for the emergency performance in case of accident and traumatism during the physical exercise.



The graph 9 display that most of the academies, 73% have agreement with service of service emergencies and of removal, against 27% that it doesn't make available that easiness to their students. The recruiting of such service shows the concern of the academies in relation to accidents, however in the case of heart-breathing stop, that service becomes secondary, once it is only had 5 minutes to save the student's life, sending the teachers' need to have training in HBR.



The graph 10 exposes that of the academies that answered to the questionnaire, 85% besides they be registered, they affirm to be supervised by CREF-PR. The system CONFEF/CREfs should guide and to supervise the legal entities that render service in the area, motivating the professionals' of Physical education recruiting and the prevention of accidents.



CONCLUSION

The Physical Activity is a factor of promotion of the health; however it should not be practiced without the professional's of Physical education orientation, and without an analysis of the individual's physical condition before the beginning of the exercise. Like this, the previous clinical exam is recommended, even for children, medical examinations (with periodic revisions)

for adults, mainly sedentary that he/she intends to begin the sport practice.

The sudden death should be seen as a reality more and closer and it should be avoided with every pledge, for so much, all the reasonable measures of prevention should be adopted.

He/she is considered, then that the clinical exam, anamnesis, it should be following by physical evaluation when the patient is not framed in a risk group or of propensity to the sudden death, and you/he/she should accomplish physical exams when the anamnesis points harmful habits the cardio-breathing health or family report.

Of the physical exams, he/she is considered the evaluation of the test ergo metric as indispensable for cardio-breathing evaluation. The literature of the Sporting Medicine affirms that this test detects up to 61% of heart disorders. Second Jogging (2002) all of the people, independent of the conditioning level, they should be motivated to the maximum test, and not just the athletes. Second WHISTLE, 2004, the test ergo metric it is a procedure of low risk with extremely rare complications. Adult patients have as more frequent indication of the test ergo metric the search for information when it happens in an intermediate probability of disease arterial significant coronaries, in the absence of significant alterations of rest ECG. To evaluate symptoms or signs that can be induced or worsened by the exercise, to identify adapted abnormal to the exercise in patients with heart diseases or other diseases. This test can esteem the functional capacity and safety for the participation in activities recreational or athletic and to detect disturbances of the heart rhythm, associates or not with the exercise.

The electrocardiogram is seen as limited exam, but due to his/her low cost it is an alternative that supplies important information the evaluation physical pré-activity. In agreement with RBME (2005) this test almost detects all of the cases of cardiomiopatia hypertrophy, that it is one of the main causes of sudden death in young athletes.

The ecocardiograma is a very important exam for the detection of congenital heart diseases that you/they are directly related with the sudden death, being, therefore recommended as exam physical pré-activity in cases in that the other exams indicate that need, because with high costs he/she becomes unviable his/her application in great populations. The factor cost should be taken into account, once 18% of the researched academies don't request physical exams because the students don't have access to the resources or it is not disposed to pay for them.

Inside of an Evaluation pré-activity several physical exams they can be present in order to detect propensity the sudden death and its considered indispensable the anamnesis, physical evaluation and rest electrocardiogram.

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THE PREVENTION OF THE SUDDEN DEATH IN GYMS THROUGH THE EVALUATION MEDICAL PRÉ-EXERCISE

Abstract

It is noticed that a larger amount of the society is looking for the practice of physical activities, because these aid in the preservation and promotion of the health, once epidemic studies come demonstrated expressive association between an active lifestyle and a smaller death possibility. The risks for the health, particularly the cardiovascular ones, current of the moderate physical exercise are low and they can still become more reduced through the evaluation pré-participation that allows practice guided by the professional of Physical Education. Of the risks, the largest is the sudden death related to the physical activity, that usually feels 30 seconds after the pick of the physical activity that caused this fact, and 90% of the victims of sudden death had a heart disease not diagnosed, so in most of the cases this event can be forewarned. The objective of this article is to state clearly how many academies in Curitiba, registered in 2005 on Cref-Pr, request medical examination before the beginning of the sport

practice in their facilities, tends like this a parameter to classify the safety and prevention of the same ones regarding sudden death. Besides it is intended to know which exams are requested in those academies, relating like this with the medical literature, that it proposes a complete medical evaluation, composed of a construction of medical report (anamnesis) and exams as the Electrocardiogram, ecocardiograma and effort test.

Word-keys: Physical academies, sudden death, evaluation pre physical activity.

LA PREVENTION DE LA MORT SOUDAINE DANS GYMNASES A TRAVERS L'ÉVALUATION PRE-EXERCISE MEDICAL

Résumé

Il est remarqué qu'un plus grand montant de la société cherche l'entraînement d'activités physiques, parce que ceux-ci aident dans la conservation et promotion de la santé, une fois les études épidémiques viennent association expressive démontrée entre une manière de vivre active et une plus petite possibilité de la mort. Les risques pour la santé, en particulier les cardio-vasculaires, le courant de l'exercice physique modéré est bas et ils peuvent devenir encore plus réduits à travers la participation du pré de l'évaluation qui autorise l'entraînement guidée par le professionnel d'Éducation Physique. Des risques, la plus grande est la mort soudaine en rapport avec l'activité physique qu'habituellement sent 30 secondes après la pioche de l'activité physique qui a causé ce fait et 90% des victimes de mort soudaine ne possèdent pas diagnostiqué, donc dans la plupart des cas cet événement peut être prévenu. L'objectif de cet article est déclarer clairement combien d'académies dans Curitiba, enregistré en 2005 sur Cref-Pr, demande examen médical avant le commencement de l'entraînement du sport dans leurs installations, soigne comme ce un paramètre classer la sécurité et prévention des mêmes qui regardent la mort soudaine. En plus il est projeté de savoir quels examens sont demandés dans ces académies, en racontant comme ceci avec la littérature médicale, qu'il propose une évaluation médicale complète, composé d'une construction de rapport médical (anamnèse) et examens comme l'Électrocardiogramme, ecocardiograma et épreuve de l'effort.

Mot clefs: Académies physiques, mort soudaine, évaluation par activité physique.

LA PREVENCIÓN DE LA MUERTE SÚBITA EN LOS GIMNASIOS A TRAVÉS DE LA EVALUACIÓN EL PRÉ-EJERCICIO MÉDICO

RESUMEN

Se nota que una cantidad más grande de la sociedad está buscando la práctica de actividades físicas, porque éstos ayudan en la preservación y promoción de la salud, una vez los estudios epidémicos se interponen la asociación expresiva demostrada entre un estilo de vida activo y una posibilidad de muerte más pequeña. Los riesgos para la salud, particularmente los cardiovasculares, actual del ejercicio físico moderado es bajo y ellos todavía pueden volverse más reducidos a través de la pré-participación de la evaluación que permite la práctica guiada por el profesional de Educación Física. De los riesgos, el más grande es la muerte súbita relacionada a la actividad física que normalmente siente 30 segundos después del pico de la actividad física que causó este hecho y 90% de las víctimas de muerte súbita no poseen diagnosticado, para que en la mayoría de los casos este evento pueda prevenirse. El objetivo de este artículo es declarar cuántas academias claramente en Curitiba, registrado en 2005 en Cref-Pr, demanda el examen médico antes del principio de la práctica deportiva en sus medios, tiende como este un parámetro para clasificar la seguridad y prevención de los mismos que consideran la muerte súbita. Además se piensa que sabe qué exámenes se piden en esas academias, mientras relacionando así con la literatura médica, que propone una evaluación médica completa, compuesto de una construcción de informe médico (el anamnesia) y exámenes como el Electrocardiograma, ecocardiograma y prueba de esfuerzo.

La palabra-llave: Las academias físicas, la muerte súbita, la evaluación por la actividad física.

A PREVENÇÃO DA MORTE SÚBITA EM ACADEMIAS DE GINÁSTICA ATRAVÉS DA AVALIAÇÃO MÉDICA PRÉ-EXERCÍCIO

Resumo

Nota-se uma procura cada vez maior da sociedade, pela prática de atividades físicas, pois que estas auxiliam na preservação e promoção da saúde, uma vez que estudos epidemiológicos vêm demonstrado expressivas associações entre um estilo de vida ativam e uma menor possibilidade de morte. Os riscos para a saúde, particularmente os cardiovasculares, decorrentes do exercício físico moderado são baixos e podem tornar-se ainda mais reduzidos através da avaliação pré-participação que permita prática orientada pelo profissional de Educação Física. Dos riscos, o maior é a morte súbita relacionada à atividade física, que geralmente se dá 30 segundos após o pico da atividade física que causou este fato, sendo que 90% das vítimas de morte súbita possuem doença cardio pulmonar não diagnosticada, assim sendo conclui-se que na maioria dos casos, este evento pode ser prevenido. O objetivo deste artigo é delimitar quantas academias em Curitiba, registradas em 2005 no Cref-Pr, solicitam exame médico antes do início da prática desportiva em suas instalações, tendo assim um parâmetro para classificar a segurança e prevenção das mesmas com relação à morte súbita. Além disso, objetiva-se saber quais exames são solicitados nessas academias, relacionando assim com a literatura médica, que propõe uma completa avaliação médica, composta de uma construção de histórico médico (anamnese) e exames como o Eletrocardiograma, ecocardiograma e teste de esforço.

Palavras-chave: Academias de Ginástica, Morte Súbita, avaliação pré-atividade física.