147 - CORPORAL IMPACT OF THE LIGHT PHYSICAL ACTIVITY UNDER INDICATORS MAXIMUM OF VO2 AND COMPOSITION IN INDIVIDUALS OF AGE.

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INTRODUCTION

The society current existence big epidemic of diseases caused by the sedentariness, or genetic predisposition (NAHAS, 2003; GUEDES, D.P., GUEDES, J.E.R.P, 1995). degenerative chronic Diseases: arterial hypertension, diabetes, osteoporoses, cardiopathies reached big part of the modern society, many due you adds risk factors such an: tobacconist, sedentary and inadequate feeding (NIEMAN, 2001; ALLSEN, HARRISON, VANCE, 2001).

As main risk, the sedentary started to prevail in a large part of the society; mostly in the countries more developed as, for instance, United States, Spain and France. Before that, those countries started to accomplish researches aiming to understand that behavior form. Starting at that point, they published a proposed for a more appropriate lifestyle. Nowadays it is defined by some authors as lifestyle active (NIEMAN, 1999).

Many research institutes as: CDC and ACMS have presented a proposed for the practice of physical activity and exercise physics hoping to call the attention of the society for this problem. What is now faced as of public health?

In 1997, CDC presented his/her model returned for rehabilitation and control of diseases where it prescribed in his/her protocol that the practice of physical activity should be accomplished frequently week from 6 to 7 days, of light intensity the moderate 50% to 55% of the maximum heart frequency with duration continues or accumulated of 30 min, that today is defined as model of reduction of risks.

Already ACMS, in 2001 presented a model for the practice of physical exercise returned for the physical conditioning, where the program should possess at least three components: aerobic muscular overload, and flexibility with intensity above 60% of the maximum heart frequency, frequently weekly of 5 times, with minimum duration from 30 to 40 min. in a continuous way tends a weekly energy expenditure of in the minimum 2000 weekly kcal for a person of 70kg.

With everything, the importance to the adhesion of the active lifestyle, stepped on in practice regulating of activities as the walk, became of knowledge of great part of the population, because it contributes to the direct reduction of the risk of development of great part of the degenerative chronic diseases, besides serving as element promoter of health (ALLSEN, HARRISON, VANCE, 2001).

Now great part of the population still comes with the inadequate lifestyle, in other words, they still didn't change the lifestyle, they don't get to establish a level of ideal physical fitness for his/her age, (GUEDES, D.P., GUEDES J.E.R.P., 1995; NAHAS, 2003; ACMS, 2004).

These factors become worse with the aging, that means: increase of the fatty fabric, reduction of the bony mass, decrease of the muscular mass, decrease of the basal energy expense, and of the capacity cardiorespiratória (GUEDES, D.P., GUEDES J.E.R.P., 1995; ACMS, 2004). ACSM published 2000, a revision regarding the effects of the aging on the system cardiorespiratório, where VO2máx. it decreases in 8% to 10% to every decade after the 25 years of age, so much for men as for the women. About of half of that reduction in these studies were related with the people's fact to reduce the level of physical activity and to increase his/her corporal weight every lived year

These information motivated to evidence which objective Real that the individual can reach in a period of 9 weeks of walk, and which the best orientation for the beginning and the continuity of the walk as regular activity for the adhesion of an active lifestyle.

POPULATION AND SAMPLE

The population of the study was composed by participant volunteers that were beginning his/her participation in a project that UNESC develops denominated of More Health.

They were part of the study 12 volunteers female, being all classified as sedentary in agreement with CDC (1997) and ACSM (2001), in other words, that you/they don't practice any type of systematized physical activity.

MATERIALS AND METHODS

The materials used for accomplishment of the tests were: test of the mile proposed by Rippe (1988), for special groups. For the accomplishment of the this a soccer field belonging to the neighborhood was used, with the dimensions of 80m x 40m. All the tests were accomplished individually. Before they participate in the tests, the volunteers filled out the Questionnaire for Readiness of Physical Activity (Q-PAF), medical exam (when necessary), weight verification and stature, and determination of IMC.

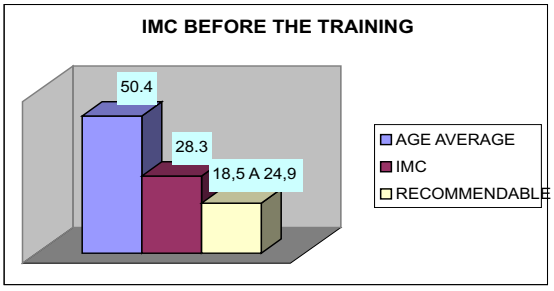
PROCEDURES OF RESEARCH

Before the volunteers to participate in the program, all were appraised, since then they were inserted in the program of guided walk, in which you/they participated for a period of 9 weeks training, with weekly volume from 5 to 6 times, with duration from 20 to 30 min day and intensity of 50% to 55% of the maximum heart frequency corresponding to a light physical activity.

ANALYSIS RESULTED

The gráfico1 presents results regarding the average of the variables IMC pré - training and age, and the advisable values for the (OMS).

Graph 1

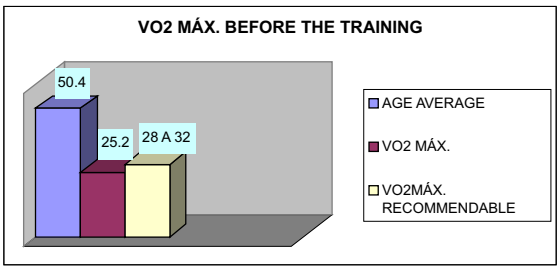


Being analyzed the graph 1 was observed that the individuals present average of 50.4 year-old age (+4.4), what characterizes as a group of stocking age subject to degenerative diseases potentiated by the factor of risk sedentary.

Regarding the Index of Corporal Mass, the individuals meet with overweight characterized by the variable IMC with value of 28,3kg/m2 (+1,5kg/m2) presenting value above 18,5 kg/m2 to 24,9 kg/m2, advisable strip proposed by the (OMS).

The graph 2 presents results regarding average of the variable VO2Max. daily pay-training being compared to the advisable values by the Institute of Jogging (1997) in agreement with sex and age of the studied group.

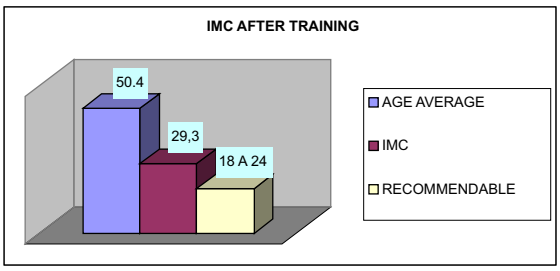
Graph 2



It can be observed in the graph 2 that the volunteers meet with level of aptitude weak cardiorespiratório characterized by the variable VO2Max 25,2ml/kg.min-1 (+2.67 ml/kg.min-1), presenting value below 28ml/kg.min-1 to 32ml/kg.min-1 advisable strip in agreement with Institute of Jogging (1997).

The graph 3 presents results regarding the average of the variables IMC powders - training and of the age of the studied group being compared to the advisable values by the (OMS).

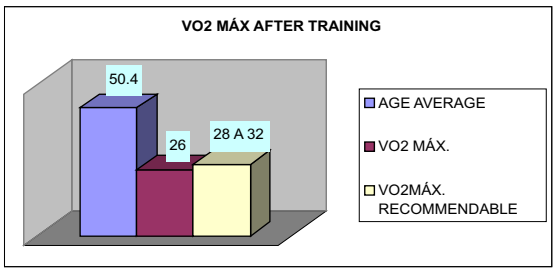
Graph 3



It is observed in the graph 3 that the individuals continue with overweight characterized by the variable IMC with value of 29,3kg/m2 (+1,6) presenting value above 18,5 kg/m2 to 24,9 kg/m2, advisable strip proposed by the (OMS).

The graph 4 presents results regarding average of the variable VO2Max. powder-training in agreement with sex and average of age of the studied group.

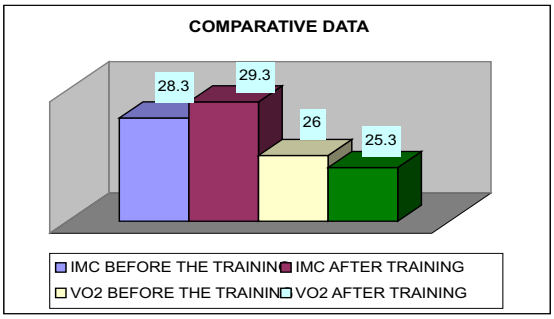
Graph 4



In the graph 4, it was observed that the individuals continue with level of aptitude weak cardiorespiratório characterized by the variable VO2Max 26ml/kg.min1 (+1.67 ml/kg.min-1) presenting value below 28ml/kg.min-1 to 32ml/kg.min-1 advisable strip for the Institute of Jogging (1997).

The graph 5 presents results comparative pré-training and referring powder-training the variables IMC and VO2 Máx.

Graph 5



Being analyzed the graph 5 was observed that the individuals didn't present significant modification in the level of aptitude cardiorespiratório and in the corporal composition characterized by the variables VO2Max with value of 25,3ml/kg.min1 (+2.67 ml/kg.min-1) pré-training and 26ml/kg.min1 (+1.67 ml/kg.min-1) powder-training being obtained increase of (0,7 ml/kg.min1) and IMC with value of 28,3kg/m2 (+1,5kg/m2) pré-training and 29,3 kg/m2 (+1,6kg/m2) powder-training being obtained increase of (1 kg/m2).

DISCUSSION

In agreement with the proposal of the study of evaluating a protocol of applied training with the period of 9 weeks, volume of 30 min. a day, 5 to 6 times a week and intensity 50% to 55% of maximum FC, it can be observed that this protocol was not enough to have a significant positive answer related to the VO2 max and the corporal composition of this population.

IMC presented an average powder-training of 29.33kg/m2 (+1,6) the one that in agreement with the (OMS) it is still characterized as overweight, because the ideal index for the studied group is from 18,5kg/m2 to 24,9kg/m2.

During the program the volunteers had an increase of (+1,6kg/m2) presented by the variable IMC, maybe due to a

modification of other behaviors, as the alimentary, however that was not investigated.

In the variable VO2 max. it is observed that the average of the appraised group was 26 ml/kg.min-1 (+1.67 ml/kg.min-1) powder-training, considered low, because the advisable strip for this age group is of 28-32 ml/kg.min-1, that sends her/it a characterization of group risk.

The increase of (0,7 ml/kg.min1) presented by the variable VO2 Max didn't obtain significance when the results were compared to the advisable values, however it evidenced that the change of the lifestyle as the adhesion the regular practice of walk can help to reach the objectives, but for this he/she needs to be appropriately programmed to potential results.

Being taken into account the natural process of aging and the values proposed by the institute jogging of research aerobic and for the (OMS) it influences her/it of the age and of the sedentary lifestyle it was shown relevant in the acting of the evaluations of the participants before and powder-training.

This way, the degenerative effects of the physical fitness can be attributed to the progress of the age and the sedentary, because activities of the daily are not enough to maintain the values of IMC and VO2 max in satisfactory values.

CONCLUSION

With base in this study was ended that: The decline in the physical fitness and the current physiologic modifications of the aging are aspects that evidenced in this study relating the classification of the group in the beginning of the study as sedentary, with medium age 50.4 years old (+4.4), and the results of the tests of IMC and unsatisfactory VO2Max.

The period of 9 weeks of training following the protocol proposed by the (CDC) Center it goes Disease Control with volume of 30 min day, 5 to 6 times a week and intensity 50% to 55% of the Fc maxim was not enough to adapt the participants to the patterns of health in the indicators of VO2 maximum and IMC proposed by the Institute Cooper and (OMS).

It is evidenced that, with elapsing of the program it is made new necessary adaptations in the volume variables and intensity, and frequency of the training following the orientation of the (ACMS, 1999).

This way, the minimum time proposed by the (ACSM) for a positive answer of the organism related to the benefits of the moderate physical activity of at least 16 weeks, it reinforced through this study.

However the proposal of the present study following the protocol of the (CDC) Center it goes Disease Control was enough for change of the lifestyle being taken into account the adherence and continuity of the volunteers to the walk program guided being this indispensable way to the continuity of the activities and maintenance of the active lifestyle for reach of the objectives.

Bibliography

ALLSEN, Philip E.; HARRISON, Joyce M.; VANCE, Barbara. **Exercício e qualidade de vida**: uma abordagem personalizada. 6.ed São Paulo: Manole, 2001.

AMERICAN COLLEGE OF SPORT MEDICINE - CURRENT COMMENT

GUEDES, Dartagnan Pinto**. Atividade física** e **saúde**: manual do usuário. Londrina: Universidade Estadual de Londrina, (199).

GUEDES, D.P.; GUEDES, J.E.R.P. **Exercício Físico na Promoção da Saúde.** Londrina: Midiograf, 1997

NAHAS, Markus Vinícius**. Atividade física**, **saúde** e **qualidade de vida**: conceitos e sugestões para um estilo de vida ativo. 3.ed., rev. atual. Londrina: Madiograf, 2003.

NIEMAN, David C**. Exercício** e **saúde**. São Paulo: Manole, 1999

ROBERGS, Robert A.; ROBERTS, Scott **O. Princípios fundamentais de fisiologia do exercício: para aptidão, desempenho e saúde**: Phorte Editora, 2002 São Paulo

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CORPORAL IMPACT OF THE LIGHT PHYSICAL ACTIVITY UNDER INDICATORS MAXIMUM OF VO2 AND COMPOSITION IN INDIVIDUALS OF AGE.

SUMMARY

The capacity to supply oxygen in satisfactory levels to the body is one of the parameters that make possible the man the accomplishment of their daily activities with life quality. The objective of that study is of verifying the impact of 9 weeks of bed guided in light intensity is tended the base the protocol proposed by the (CDC) Center it goes Disease proposal Control and linking the of the (ACMS) American College of Sport Medicine that foresees positive answer to the components of the physical fitness in individuals in a minimum period of 16 weeks. They participated in this study, 12 volunteer's female, participant of project of extension of the University of Extreme South Catarinense (UNESC). For obtaining of the dates regarding to the relative VO2 máx., the test of the mile was used; proposed by Rippe (1988). As instrument for obtaining of the data regarding age, Index of Corporal Mass (IMC) the protocol was used proposed by the World Organization of Health (OMS). It is corporal weigh divided by the height square (P/A ²). For treatment of the dates software Microsoft Excel was used. The Results: 1) the average of the acts is 50,4 years (+14.4), what characterizes a group of middle age; 2) in the level of physical fitness variable daily pay-training it was observed that the individuals met with weak level characterized by the IMC = 28,3 kg/m2 (+1,5 kg/m2) and VO2Max = 25,3 ml/kg.min-1 (+2,67 ml/kg.min-1); in the evaluation powder-training, it was observed that the individuals continued with weak level characterized by the variable IMC = 29,3 kg/m2 (+1,6kg/m2) and VO2Max 25,3 ml/kg.min-1 (+1,67 ml/kg.min-1), or be if he/she didn't obtain improvements in the studied variables. Conclusion: Physical This activity from 20 you the 30 min. day, frequency volume from 5 you the 6 teamses in the week, intensity 50% you 55% of 9 maximum FC will be period of weeks of accomplished training, was not enough you have an to answer positive when related the improvement of the VO2 máx and IMC, to however will be the adhesion you an activates lifestyle the training was shown efficient.

Words key: Maximum consumption of Oxygen, Index of Corporal Mass, Health.

IMPACT DE L'ACTIVITÉ PHYSIQUE LÉGÈRE SOUS DES INDICATEURS DU MAXIMUM VO2 ET DE L'ÂGE CORPOREL DE COMPOSITION IN INDIVIDUALS OF DU DEMI.

RÉSUMÉ

la capacité de fournir l'oxygène dans les niveaux satisfaisants au corps est l'un des paramètres qui rendent à l'homme l'accomplissement possible de ses activités quotidiennes avec la qualité de la vie. L'objectif de cette étude est de vérifier l'impact de 9 semaines de promenades guidées dans l'intensité de la lumière ayant elle-même car la base le protocole considéré pour (CDC) le centre sera commande de la maladie et devenir reliée le proposition (ACMS) de l'Université Américaine de la Médecine de Sport qui

prévoit une réponse positive aux composants de l'aptitude physique dans les individus non qualifiés dans une période minimum de 16 semaines. Ils avaient participé de cette étude, 12 volontaires du féminin, sexe de participant d'un projet de la prolongation de l'université d'Extremo Sul Catarinense (UNESC). Pour l'accomplissement des données se rapportant au máx VO2. le parent, l'essai du mille considéré pour Rippe a été employé (1988). Comme instrument pour l'accomplissement des données se référant l'âge, l'index de Mass corporelle (IMC) a employé le protocole considéré pour l'organisation mondiale de Saúde (OMS), poids corporel divisé par la taille à la place (² de P/A). Pour le traitement du logiciel de données le Microsoft Excel a été employé. Résultats : la 1) moyenne de l'âge a lieu de 50.4 ans (+14.4), ce qu'elle caractérise comme groupe de demi d'âge ; on a observé 2) au niveau de la payer-formation quotidienne d'aptitude physique qui les individus si trouvé avec le niveau faible caractérisé par les 0 kg/m2 de la variable IMC = 28.3 (+1.5 kg/m2) et 25.3 VO2Max = ml/kg.min-1 (+2.67 ml/kg.min-1) ; dans l'après-formation d'évaluation, on l'a observé que les individus avaient continué le niveau faible caractérisé par les 0 kg/m2 de la variable IMC = 29.3 (+1,6kg/m2) et 25.3 VO2Max ml/kg.min-1 (+1.67 ml/kg.min-1), qui sont n'ont pas obtenu des améliorations des 0 variables étudiée. Conclusion : Cette activité physique de 20 le jour de 30 mn, fréquence de 5 les 6 temps en semaine, l'intensité 50% 55% du maximum FC pendant une période de 9 semaines de réalisé la formation, n'était pas assez pour avoir une réponse positive une fois reliée l'amélioration du máx VO2 et d'IMC, toutefois pour l'adhérence à un modèle actif de la vie la formation a indiqué efficace.

Clef de mots : Consommation maximum de l'oxygène, index de Mass corporelle, santé.

IMPACTO DE LA ACTIVIDAD FÍSICA LIGERA DEBAJO DE INDICADORES DEL MÁXIMO VO2 Y EDAD CORPORAL DE COMPOSITION IN INDIVIDUALS OF DE LA MEDIA.

RESUMEN

La capacidad de proveer el oxígeno en niveles satisfactorios al cuerpo es uno de los parámetros que hacen posible al hombre la realización de sus actividades diarias con la calidad de la vida. El objetivo de este estudio es verificar el impacto de 9 semanas de caminatas dirigidas en la intensidad de luz que tiene sí mismo pues la base el protocolo considerado para (CDC) el Centro será Control de la Enfermedad y relacionarse lo oferta (ACMS) de la Universidad Americana de la Medicina del Deporte que prevé una contestación positiva a los componentes de la aptitud física en los individuos no entrenados en un período mínimo de 16 semanas. Habían participado de este estudio, 12 voluntarios del femenino, sexo del participante de un proyecto de la extensión de la universidad de Extremo Sul Catarinense (UNESC). Para el logro de los datos que refieren al máx. VO2. utilizaron al pariente, la prueba de la milla considerada para Rippe (1988). Como instrumento para el logro de los datos que referían la edad, el índice de Mass corporal (IMC) utilizó el protocolo considerado para la organización mundial de Saúde (OMS), peso corporal dividido por la altura al cuadrado (² de P/A). Para el tratamiento del software de los datos el Microsoft Excel fue utilizado. Resultados: el 1) promedio de la edad es de 50.4 años (+14.4), qué caracteriza como grupo de la media edad; 2) en el nivel del pagar-entrenamiento diario de la aptitud física fueron observados que los individuos si está encontrado con el nivel débil caracterizado por los 0 kg/m2 de la variable IMC = 28.3 (+1.5 kg/m2) y 25.3 VO2Max = ml/kg.min-1 (+2.67 ml/kg.min-1); en el después-entrenamiento de la evaluación, fue observado que los individuos habían continuado con el nivel débil caracterizado por los 0 kg/m2 de la variable IMC = 29.3 (+1,6kg/m2) y 25.3 VO2Max ml/kg.min-1 (+1.67 ml/kg.min-1), que es no consiguieron mejoras en las 0 variables estudiada. Conclusión: Esta actividad física de 20 el día de 30 Min., frecuencia de 5 los 6 tiempos en la semana, intensidad el 50% el 55% del máximo FC por un período de 9 semanas de llevado con el entrenamiento, no era bastante para tener una contestación positiva cuando estaba relacionada la mejora de el máx VO2 e IMC, no obstante para la adherencia a un estilo activo de la vida el entrenamiento reveló eficiente.

Llave de las palabras: Consumición máxima del oxígeno, índice de Mass corporal, salud.

IMPACTO DA ATIVIDADE FÍSICA LEVE SOB INDICADORES DE VO2 MÁXIMO E COMPOSIÇÃO CORPORAL EM INDIVÍDUOS DE MEIA IDADE.

RESUMO

A capacidade de fornecer oxigênio em níveis satisfatórios ao corpo é um dos parâmetros que viabilizam ao homem a realização das suas atividades diárias com qualidade de vida. O objetivo desse estudo é de verificar o impacto de 9 semanas de caminha orientada em intensidade leve tendo-se como base o protocolo proposto pelo (CDC) Center for Disease Control e relacionando-se a proposta do (ACMS) American College of Sport Medicine que prevê uma resposta positiva aos componentes da aptidão física em indivíduos não treinados em um período mínimo de 16 semanas. Participaram deste estudo, 12 voluntárias do sexo feminino, participante de um projeto de extensão da Universidade do Extremo Sul Catarinense (UNESC). Para obtenção dos dados referente ao VO2 máx. relativo, utilizou-se o teste da milha proposto por Rippe (1988). Como instrumento para obtenção dos dados referente a idade, Índice de Massa Corporal (IMC) utilizou-se o protocolo proposto pela Organização Mundial de Saúde (OMS), peso corporal dividido pela altura ao quadrado (P/A²). Para tratamento dos dados utilizou-se software Microsoft Excel. Resultados: 1) a média da idade é de 50.4 anos (+14.4), o que caracteriza como um grupo de meia idade; 2) no nível de aptidão física prétreinamento observou-se que os indivíduos se encontravam com nível fraco caracterizado pela variável IMC = 28,3 kg/m2 (+1,5 kg/m2) e VO2Max = 25,3 ml/kg.min-1 (+2.67 ml/kg.min-1); na avaliação póstreinamento, observou-se que os indivíduos continuaram com nível fraco caracterizado pela variável IMC = 29,3 kg/m2 (+1,6kg/m2) e VO2Max 25,3 ml/kg.min-1 (+1.67 ml/kg.min-1), ou seja não se obteve melhoras nas variáveis estudadas. Conclusão: Esta atividade física de 20 a 30 min. dia, freqüência de 5 a 6 vezes na semana, intensidade 50% a 55% da FC máxima por um período de 9 semanas de treinamento realizado, não foi suficiente para se ter uma resposta positiva quando relacionado a melhora do VO2 máx e IMC, no entanto para a adesão a um estilo de vida ativo o treinamento mostrou-se eficiente.

Palavras chave: Consumo Máximo de Oxigênio, Índice de Massa Corporal, Saúde.