68 - INFLUENCE OF A PROGRAM OF PHYSICAL ACTIVITY APPLY A CHILDREN SOROPOSITIVO

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INTRODUCTION

After the emergence of the first cases of Acquired Immunodeficiency Syndrome (AIDS) at

the beginning of the 80s, is believed by many years, in the middle area of health professionals who treat patients of the disease, which the rest and the preservation the energy reserves, avoiding the practice of physical activities over whose intensity levels of physical activity everyday usual, the procedure would be more advisable for people with HIV / AIDS.

What was justified because of the large loss of weight observed among carriers of the

syndrome, leading to believe that with the practice of physical exercises, it would aggravate the process of weight loss. Similarly, believed that the wear caused by physical exercises decrease the resistance of the patient, facilitating the advancement of aggressive HIV on the immune system, thereby allowing the emergence of opportunistic diseases, caused by low resistance immune.

But the practice of regular exercises is beneficial to the health of any person, including those who live with HIV or AIDS, as the exercise can have a positive effect on your immune system and the ability to deal with the psychological stress.

The physical activity related to health, appears as one of the factors that could alter the risk of individuals to adoecerem. It may be highlighted that the influence of physical activity in improving the efficiency of the immune system, which can reduce the incidence of some types of cancer and improve the resistance of patients with AIDS, in addition to that, the adoption of physically active lifestyle will provide change of behavior of individuals thus changes in the environment (PITANGA, 2002).

According to Saba (1999), many are the benefits attributed to physical activity. From the psychological point of view it can help combat depression, acting as a catalyst for interpersonal relationships, producing pleasant feeling of well-being and stimulating self-esteem by overcoming small challenges. It is noted also that there is now scientific documentation that people active decrease the likelihood of developing major chronic diseases and improve levels of physical fitness and mental available.

Another major benefit brought by the practice of physical activity is the ability muscle, which Fleck and Kraemer (1999), the systematic training can increase muscle mass may result in gain in strength by 20% to 50%, providing undoubtedly a significant impact on the quality of life of young people, adults and elderly.

With regard to flexibility, Weinech (1991) shows that their absence, particularly in the joints of the spine, hip and knees, is associated with difficulties in carrying out various activities daily, and may bring future desconfortos and even disabilities. Highlights that the physical activity contributes to range of motion and can be observed in a few weeks, depending on the program developed.

Currently there is sufficient information suggesting that the physical exercises are not deleterious for patients infected by HIV, and may, in contrast, provide physical and psychological benefits, demonstrating stimulating effect of the immune system, motivated by the physical activity of moderate intensity, especially among individuals infected.

In the context of People Living With HIV / AIDS (PVHA), Lazzarotto (2007), says that a program of physical exercises can be used as a strategy not drug therapy to alleviate or delay the development of certain complications arising from HIV infection and / or the medication anti-retroviral drug, focusing on among them, the lipodystrophy.

The prescription of appropriate programs of aerobic exercises (walking, running, swimming and cycling) and exercises with weights (more commonly known as weight training) can improve the following aspects in PVHA: increased cardiorespiratory capacity, muscle strength and endurance, decreased weight fat (fat) and increasing lean (muscle mass) decrease in anxiety and depression (improving health psychological) (Lazzaroto, 2007).

Thus, the goal of this study was to analyze the influence of a program of regular physical activity on morphological variables and neuromuscular HIV positive in children linked to the project of the institution Casa Vhida developed in the city of Manaus.

METHODOLOGY

Initially the program began with a number of 15 children and that four of them tabled two

consecutive failures, this criterion recommended as a minimum so that the individual be included in the final analysis. Thus only 11 children with 7.27 ± 1.84 years; 115 ± 0.12 cm and 22.17 ± 7.28 kg were included, with the same interests in all sessions advocated by the experimental protocol. All parents, as well as the institution responsible were aware of the goals of the program and thus signed a term of free and informed consent as the resolution (196/96) of the National Council of Health for experiments with human beings.

The morphological variables were analyzed sum of skin folds triceps and panturrilha (Edc) suggested by Fernades (1998), and to the calculation of the components of somatotipo endomorfia (END), mesomorfia (MES) and ectomorfia (ECT) was used to equation suggested by Health & Carter (1990).

To verify the flexibility (FLEX) is the test used to sit and reach adapted (GAYA and SILVA, 2007), and to measure the strength of senior member of the left and right side (FMS), and lower limb (IMF) has been used the dynamometer adapted for these two segments, and these two cases followed the protocols recommended by Johnson & Nelson (1975).

The program of physical activity had a duration of 12 weeks with two sessions weekly, and the sessions were applied twice in the week between taking 48 hours in the same range. Each session had duration of 50 minutes, constituting itself of three main parts: a) 05 minutes of introduction with motor activities of elongation; B) 40 minutes of instruction and practice of games, play and recreational activities with the goal of aerobic work and anaerobic; c) 05 minutes of closing, with discussion on the activities undertaken and work of flexibilities through exercises, stretching, and all sessions applied by the same teacher.

The treatment was so descriptive statistics using average and the standard deviation for all variables, and for the comparison between pre - and post-program was used to test samples for Student T-dependent, with the significance level of 0.05. All worked out in the statistical package SPSS 12.0 for Windows.

RESULTS

Table 1 presents the 0 variable analyzed for the morphologic components and neuromusculares.

	IT PREPROGRAMS	PÓS-PROGRAMA
MORPHOLOGIC		
Edc (mm)	19,16±5,18	17,63±3,93
Endomorfia	3,80±1,20	3,56±0,97
Mesomorfia	4,05±0,73	4,18±0,72
Ectomorfia	1,78±0,95	1,54±0,76
NEUROMUSCULARES		
Flexibility (cm)	39,27±4,05	42,90±6,15
Force Superior Member Right (Kgf)	12,27±12,07	10,36±4,75
Force Superior Member left (Kgf)	11,27±12,06	11,00±4,93
Force Inferior Member (Kgf)	27,27±15,65	30,81±13,23

QUARREL

The results indicate that it did not have significant differences in the morphologic 0 variable and neuromusculares analyzed daily pay and after-program of physical activity. However, they demonstrate that it had modifications between the periods daily pay and after-program of physical activity.

The infection for the virus of the HIV can take to the loss of force and muscular resistance, besides affecting the functions neuromusculares, generating, also, problems of loss of balance, what it can be fought through a specific work of physical exercises.

Through the results it is observed that the participant children of the program had had increase of lean mass, since the mesomorfia component suffered alteration between the analyzed periods, even so not if can attribute this factor directly to the stimulaton of the exercise, however factors associates in practical result of the regular one can be.causing, since the system of a general form normally presents positive adaptations in validity of the regular exercise, of this form the weight profit, for the muscular hipertrofia, improve beyond the aesthetic ratio, on aspects to the control of the physiological functions in such a way in the point of view autonomous worker as somatic, since if knows that the infection for the HIV diminishes the aeróbica capacity and generates sensation of muscular fatigue. Despite the endomorfia component having suffered to reduction this it can be considered acceptable had to the rocking found between this and the mesomorfia component, where it can be classified the analyzed individuals as mesomorfico-endomorfico.

Coquetel of medicines used in the combat the virus provokes as collateral effect, a redistribution of the corporal fat, known as Lipodistrofia, characterized for the increase of the volume of the waist, an accented afinamento of the extremities (inferior members, superior members and waist to escapular), a reduction of the subcutaneous fat with increase of the visceral and sanguineous fat (increasing the cholesterol taxes and triglicerídeos), the face encovamento and the sprouting of a stock market of fat behind the cervical region, called "buffalo hunchback" (buffalo hump). Practical the regular one of physical exercises if has disclosed as an important instrument in the combat to such effect, with results extremely entertainers (Pimentel, 2007).

Already cientificamente it is proven that the physical exercises also increase the number of linfócitos T or CD4, what it allows the imunológico system to answer better to the opportunist illnesses that acometem the soropositivos. But the comment heading, we remember that the linfócitos are important groups of cells in our imunológico system and if divide in two categories: the linfócitos B and linfócitos T. Linfócitos B protect the body against the microbes, manufacturing called substances antibodies, that go "glue" it the microbe, hindering it to act. Between linfócitos T, it has the calls of T4 (also called CD4), that they are the responsible ones for "alerting" the imunológico system that is necessary to defend itself. Without being informed for the linfócitos T4, linfócitos B do not function. Virus HIV attacks the linfócitos T4 exactly (CD4). From there because the increase of the production of such cells, happened of the practical one of physical exercises, is of utmost importance for the soropositivo (Pimentel, 2007).

These affirmations leave clearly that the function of the physical exercise is to provide one better quality of life, where if stand out the results of the present study how much the analyzed components neuromusculares, where the ones that had not presented absolute increases between the two periods, as the FMS of the right and left side, had been presented without alterations. However, components as flexibility and FMI had demonstrated alterations, being possible to intervine that adaptations had been suffered and these are beneficial for the improvement of the quality of life of the individuals analyzed here.

After all as Saba (1999) the physical activity guarantees improvement of auto-esteem, improves of the auto-image, reduction of the anxiety levels and stress, development of a positive attitude, facilitation of the social integration and acquisition of healthful habits. Being these primordial elements for perfect development of the soropositivos children.

CONCLUSION

The results of this work and other recent studies, however, point with respect to the benefits acquired for practical the regular one of physical exercises. Today, the agreement in the scientific way is that this practical is not only recommendable, as essential, in the aid to the treatment of the HIV/AIDS carriers, with any etária band, also children, in practically in any period of training of the syndrome.

However it has the necessity of a medical accompaniment, the lapsing, for a professional of Nutrition, of a diet that it aims at to compensate and to prepare the organism for practical of the more intense physical activities and planning of a criterioso program of physical exercises, for a professional of Physical Education, the HIV/AIDS carrier, only has to earn, not only in objective terms of improvement of the general state of health, as also in subjective aspects of quality of life and social integration. Although that many steps need to be given for the agreement of all the 0 variable that guide the improvement of the cardiorespiratório system and to neuromuscular in carrying individuals of HIV/AIDS when of the accomplishment of exercises.

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INFLUENCE OF A PROGRAM OF PHYSICAL ACTIVITY APPLY A CHILDREN SOROPOSITIVO

ABSTRACT
The carrying the HIV virus have weakness in the system and cardiac muscle, and is more susceptible to the development of hypertension and constant loss of body mass. Currently there is sufficient information suggesting that the physical exercises are not deleterious for patients infected by HIV, and may, in contrast, provide physical and psychological benefits. Thus, the goal of this study was to analyze the influence of a program of regular physical activity on morphological variables and neuromuscular linked HIV positive children in the institution Casa Vhida located in the city of Manaus. They were referred to the program 11 children with 7.27 ± 1.84 years; 115 ± 0.12 cm and 22.17 ± 7.28 kg, and evaluated variables morphological and neuromuscular. All the children were subjected to a program of physical activity with 12 weeks in duration with two sessions per week. Each session had duration of 50 minutes, providing itself with three parts: a) 05 minutes of introduction with motor activities of elongation; B) 40 minutes of instruction and practice of motor activities and recreational activities in large groups and stations; C) 05 minutes of closure, with discussion of the activities carried out in order to return to calm, and all sessions applied by the same teacher. The treatment was so descriptive statistics using average and the standard deviation for all variables, and for the comparison between pre - and post-program was used to test samples for Student T-dependent, with the significance level of 0.05. The results show that the morphological variables and neuromuscular did not show significant differences between the two moments analyzed. Despite the lack of statistical differences changes when the observation of absolute values, which shows a positive response when the application of systematic physical activity in children HIV positive.
KEYWORD: HIV, physical activity, soropositivos.

L'INFLUENCE D'UN PROGRAMME D'ACTIVITÉ PHYSIQUE APPLIQUENT LES ENFANTS SOROPOSITIVO

RESUMÉ
Les porteurs de l'atonie actuelle d'HIV de virus dans le système cardiaque et musculaire, étant plus susceptible du développement du hipertensão et de la perte constante de la masse corporelle. L'information existent suggérant que les exercices physiques ne soient pas délétères pour des infectados de patients pour HIV, pouvant en mesure, en fournissant les avantages physiques et psychologiques. De cette forme, l'objectif de cette étude était d'analyser l'influence d'un programme d'activité physique régulière sur 0 morphologique variable et de neuromusculares dans des enfants de soropositivas attachés à la Chambre de Vhida d'établissement. Des années avaient été soumises aux enfants du programme 11 avec 7,27±1,84; 15±0,12cm et 22,17±7,28kg, étant morphologique variable évalué et neuromusculares. Tous les enfants avaient été soumis à un programme d'activité physique avec 12 semaines de durée avec deux sessions hebdomadaires. Chaque session a eu la durée de 50 minutes, se composant de trois parts :) les 05 minutes d'introduction avec les activités motrices de l'allonge ; b) 40 minutes d'instruction pratique et d'activités motrices et d'activités de recreativas dans de grands groupes et stations ; c) 05 minutes de fermeture. Le traitement statistique était de la forme descriptive moyenne en utilisant et la ligne de manoeuvre norme pour toute la 0 variables, étant celle pour la comparaison entre le salaire quotidien de période et l'après-programme un essai d'T-Étudiant a été employée pour les échantillons dépendants, avec le niveau d'importance de 0.05. Les résultats démontrent que le 0 morphologique variable et les neuromusculares n'avaient pas présenté des différences significatives entre les deux moments analysés. En dépit de l'absence des différences statistiques change quand du commentaire des valeurs absolues s'était produit, ce qui il démontre une réponse positive quand de l'application de systématisez l'activité physique dans des enfants de soropositivos.
MOTS-CLÉS: HIV, activité physique, soropositivos.

LA INFLUENCIA DE UN PROGRAMA DE LA ACTIVIDAD FÍSICA APLICA A NIÑOS SOROPOSITIVO
RESUMÉN

Los portadores atonía del VIH del virus de la actual en el sistema cardiaco y muscular, siendo más susceptible al desarrollo del hipertensão y de la pérdida de masa corporal. La información existe sugiriendo que los ejercicios físicos no son deletéreos para los infectados de los pacientes para el VIH, pudiendo, al proporcionar ventajas físicas y psicologicas. De esta forma, el objetivo de este estudio era analizar la influencia de un programa de la actividad física regular en 0 morfológico variable y de los neuromusculares en los niños de los soropositivas atados a la casa de Vhida de la institución. Los años habían sido sometidos a los niños del programa 11 con 7,27±1,84; el 115±0,12cm y 22,17±7,28kg, siendo morfológico cambiable evaluado y neuromusculares. Habían sometido a todos los niños a un programa de la actividad física con 12 semanas de duración con dos sesiones semanales. Cada sesión duro 50 minutos consistiendo en tres porciones:) los 05 minutos de introducción con actividades de motor del allonge; b) 40 minutos de instrucción práctica y de actividades de motor y de actividades de los recreativas en grandes grupos y estaciones; c) 05 minutos de cierre. El tratamiento estadístico estaba de la forma descriptiva media usando y la línea de desvío estándar para toda la 0 variables, siendo ésa para la comparación entre el pago diario del período y el despue's-programa una prueba del T-Estudiante fue utilizada para las muestras dependientes, con el nivel de la significación de 0.05. Los resultados evidencian que el 0 morfológico variable y los neuromusculares no había presentado diferencias significativas entre los dos momentos analizados. A pesar de la ausencia de diferencias estadísticas cambia cuando del comentario de los valores absolutos había ocurrido, demostrando la contestación positiva cuando del uso de sistematice la actividad física en niños de los soropositivos.

PALABRA CLAVE: VIH, actividad física, soropositivos.

INFLUÊNCIA DE UM PROGRAMA DE ATIVIDADE FÍSICA APLICADA A CRIANÇAS SOROPOSITIVO
RESUMO

Os portadores do virus HIV apresentam debilidade no sistema cardíaco e muscular, sendo mais suscetíveis ao desenvolvimento da hipertensão e perda constante da massa corporal. Atualmente existem informações suficientes sugerindo que os exercícios físicos não são deletérios para pacientes infectados pelo HIV, podendo, ao contrário, proporcionar benefícios físicos e psicológicos. Desta forma, o objetivo do presente estudo foi analisar a influência de um programa de atividade física regular sobre variáveis morfológicas e neuromusculares em crianças soropositivas vinculadas a *Instituição Casa Vhida* localizada na cidade de Manaus. Foram submetidas ao programa 11 crianças com 7,27±1,84 anos; 115±0,12cm e 22,17±7,28kg, sendo avaliadas variáveis morfológicas e neuromusculares. Todas as crianças foram submetidas a um programa de atividade física com 12 semanas de duração com duas sessões semanais. Cada sessão teve duração de 50 minutos, constituindo-se de três partes: a) 05 minutos de introdução com atividades motoras de alongamento; b) 40 minutos de instrução e prática de atividades motoras e atividades recreativas em grandes grupos e estações; c) 05 minutos de encerramento, com discussão sobre as atividades realizadas com o objetivo de volta à calma, sendo todas as sessões aplicadas pelo mesmo professor. O tratamento estatístico foi de forma descritiva utilizando média e o desvio padrão para todas as variáveis, sendo que para a comparação entre o período pré e pós-programa foi utilizado um teste *T-Student* para amostras dependentes, com nível de significância de 0,05. Os resultados evidenciam que as variáveis morfológicas e neuromusculares não apresentaram diferenças significativas entre os dois momentos analisados. Apesar da ausência de diferenças estatísticas ocorreram mudanças quando da observação dos valores absolutos, o que demostra uma resposta positiva quando da aplicação de atividade física sistematizada em crianças soropositivos.

PALAVRA CHAVE: HIV, atividade física, soropositivos.