21 - EDUCATION FOR PHYSICAL EXERCISE IN THE PREVENTION OF CARDIOVASCULAR DISEASE: THE VALUE OF CHANGES IN LIFESTYLE

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INTRODUCTION

The reduction in daily activities evidenced today denote aspects of the contemporary world and modernization. Further decreasing the daily and regular exercise performed by the population in general physical activity can be observed. Regardless of age, social class or ethnicity, some behavioral aspects have emerged in order to harm the health of individuals, contributing to the increase of risk factors for chronic degenerative diseases and, consequently, to the increase of Cardiovascular Diseases (PORTO, 2005; LEE, 2010).

According to the Institute of Geography and Statistics, one third of all deaths of world population (16.7 million people) are caused by heart diseases (TEODORO et.al., 2010).

However, among the risk factors that predispose to the onset of this disease, there is a sedentary lifestyle or physical inactivity that occurs in all age groups. By the American Heart Association (AHA), the sedentary lifestyle is a major modifiable risk factor for heart disease and is seen as a global health problem (TERRA, 2010; LAVIE et.al., 2009; PENA et.al., 2011).

The reasons that lead to inactivity, one of the possible factors is the lack of knowledge of how to exercise, the purpose of each exercise and the distorted perceptions of the benefits of the same.

Physical exercise is associated with a decrease in the incidence of cardiovascular events may act in primary, secondary or tertiary prevention of health. It is characterized by all physical activities that are planned, structured in order to condition, improve physical fitness and health of those who practice (TEODORO et.al., 2010; GUEDES et.al., 2010).

In a general approach, the health care of individuals with risk factors for cardiovascular diseases have become efficient with regard to preventive education, change in lifestyle and improved quality of life.

Therefore, the general objective of this study was to demonstrate the importance of education of individuals to changes in lifestyle with the practice of exercises prevention of sedentary and others risk factors that may culminate in cardiovascular exercises.

METHODOLOGY

In this study, we used literature review by subject. Library were used as references, publications in English, Portuguese, Spanish and Italian scientific articles in the MEDLINE (PubMed), BIREME (LILACS) and SCIELO 2008-2014 and books published from 1982 to 2010 found in the Central Library and medicine at the Pontifical Catholic University of Rio Grande do Sul (PUCRS). The subject descriptors used for the research were: education, exercise and aerobic exercises, prevention and control of cardiovascular diseases.

EDUCATION FOR CHANGES IN LIFESTYLE

The attainment and preservation of quality of life understood in a generic sense are linked intimately to lifestyle, including eating patterns, practice of daily activity, physical exercise, not adherence to harmful habits and the way individuals perceive work, family and so-called "strain of modern life" (PORTO, 2005). Thus, the willingness of individuals to understand the changes in lifestyle are crucial and important to obtain a positive impact with regards to improvement in quality of life (RAMOA et.al., 2014).

Thus, education for prevention implies the need to cope with behavioral and motivational obstacles, however, the objective is to promote health, seeking with each individual consciousness and freedom, making them able to do their work with self-awareness and self-discipline. To do so, the motivation is essential to the smooth running of the learning element, regardless of the purpose to be achieved (COUTO, 1995; CAÑETE, 1996; CARRETERO, 1997; RAMOA et.al., 2014). Thus, determining goals involves setting priorities, deciding what is valid and what is not valid for changes in lifestyle (SAVIANI, 1985).

Yet, knowledge alone is not enough when not bound to learn to do. Education in its sense of wholeness believes that learning includes the integral development of the human being: intelligence, sensitivity, ethical and aesthetic sense, personal responsibility, spirituality, autonomous and critical thinking, imagination, creativity, initiative (PERRENOUD, 2001; SOUZA, 2004).

Therefore, learning implies the pursuit of information, which, in continual progress, must become knowledge (ASSMANN, 2000), it is necessary that the search for knowledge is understood in a continuous exchange, this is "learning learning" (ENRICONE, 2001).

Allied to these precepts, health professionals have an important function to perform guidance, clarification and performances, providing necessary follow-up to individuals who need them for achieving better changes in lifestyle and, consequently, better quality of life.

Assmann and Sung (2000) emphasize that "... the hope of a more humane world, a deeper sense of life depends on education, responsible care to know, the forms of learning and knowledge."

PREVENTIVE EDUCATION WITH THE PRACTICE OF PHYSICAL EXERCISE

It is known that a sedentary lifestyle and an unbalanced diet are factors responsible for excessive accumulation of abdominal fat and that your back is the basis of a cascade of biological and inflammatory events that dramatically increase the risk of atherosclerosis (FONTANA, 2007).

With each new study comparing the incidence, prevalence, severity, efficacy of therapy and mortality in most chronic degenerative diseases that predispose individuals to cardiovascular disease and its complications, influence of physical activity

are demonstrated, the importance of regular exercise to restrict this development (LEE et.al., 2010).

Exercise is an activity performed with a systematic repetition of oriented movements, with consequent increase in oxygen consumption due to muscular work (DELBIN et.al., 2009).

The regular practice of physical exercise is one of the main aspects included in the change of lifestyle advocated for the prevention of chronic degenerative diseases and cardiovascular diseases. Thus, a coherent proposal for primary prevention, which aims to promote health and quality of life, must necessarily rely on a type of physical activity that is planned, structured and repetitive, which has as its ultimate goal the improvement or maintenance of physical fitness (PORTO, 2005).

Exercise causes a number of physiological responses in order to maintain cell balance, increase of metabolic demands and power consumption. Thus, regular exercise improves endothelial function, exercise capacity, and furthermore, is associated with improvements in body weight, blood pressure, insulin sensitivity (TEODORO et.al., 2010), among other benefits while being regular practice.

Programs predominance of aerobic exercise can attenuate or regulate the state of stress, and conditioning to provide positive changes in relation to chronic dysfunction, reducing the likelihood of anomalies that may limit the individual's functional capacity or take an individual to a death (LAVIE et.al., 2009).

Aerobic exercises are defined as exercises of low or medium intensity, can be carried by a prolonged period of time, due to the balance between consumption and oxygen delivery (Steady-state) that the body requires for the activities (COOPER, 1982).

It should be noted, that moderate exercise, low intensity and long duration, has the property of using the energy obtained primarily by the use of oxygen, characterized as aerobic, thus benefiting the cardiorespiratory system (LEE et .al., 2010).

Aerobic exercise has been used and recommended for both prevention and treatment of risk factors for cardiovascular disease. The Brazilian Society of Cardiology (SBC) recommends regular aerobic exercise on a weekly frequency from three to six times daily, lasting 30-60 minutes per session, with moderate light intensity, 50-60% of maximum heart rate (TEODORO et.al., 2010).

It should be noted that even the exercise low physical volume, defined as 15 minutes per day or 90 minutes per week, was effective and independently associated with a 20% reduction in risk of cardiovascular mortality (WEN et.al., 2011).

Cycling, dancing, swimming, walking, etc. can be chosen according to the profile of the individual, however, it is important that the chosen physical activity provides motivation, pleasure and well-being to be performed and, consequently, the health benefits (RAMOA et.al., 2014).

Sessions of exercise should also consider elements of physical fitness, such as flexibility, balance, rhythm, agility, coordination, and muscle relaxation resistances located, anaerobic and aerobic, which aim to learn, correct, condition and improve the physical qualities and body movements.

Furthermore, the education propitiated to the best performing physical exercises along with the adoption of healthy eating habits, as well as, stress management and strategies to combat drug use in general, including the lawful, such as tobacco and alcohol, make up what is recognized as a healthy lifestyle (DJOUSSÉ et.al., 2013).

It should also be understood that the intensity by which is held by aerobic exercise becomes a key factor in their potential benefits. Aerobic exercise works both the prevention as in the treatment of atherosclerosis and in relation to the intensity of the physical effort of running there is a certain consensus, however, some evidence seems to define high intensity exercises (75-80% heart rate max for 40 minutes, four times a week) leads to increase risk of primary coronary, increase oxidative stress, decrease vasodilator function of the body, increased inflammation and platelet aggregation, and contraindicated in individuals previously afflicted with atherosclerosis (UMPIERRE et.al., 2011; WEN et.al., 2011; LEE, 2010).

Still, to control the intensity of effort, it is suggested that this is accomplished with the use of subjective perception scales also considering checking the heart rate of the individual, at the beginning, middle and end of the activity, aimed at controlling and prevention of sudden cardiac arrest (HAYS et.al., 2010; LAVIE et.al., 2009).

Therefore, to improve eating habits and include daily routine is the regular practice of physical exercise, preferably both therapeutic targets of choice in changing lifestyle, because together cover much of the cardiovascular risk factors considered modifiable, since they are related to the individual education and is associated with a decrease incidence of cardiovascular events.

FINAL

Education can be defined as a need that generates meanings and provides the most appropriate development of societies, cultures and personalities (MOSQUERA, 1983).

Today we live in a social and economic context that determines significant differences between people. These differences related to biological and cultural aspects, determine ways of being and living. With this, human diversity is reflected, among other aspects, also in education, from the viewpoint of those who teach and those who learn (CARRETERO, 1997). In this quest of learning, question, disagree, discuss, propose, create, finally, become a transformative and critical individual's care with you and your health.

The health education, covers the possibility that individuals may develop higher levels of self-image and self-esteem. Health can be defined as a balanced way of life, the absence of disease or tolerable state of vital continuity, thus highlighting the importance of physical homeostasis and psychological balance (MOSQUERA, 1983).

However, we need to be taught and that learning is directed to health education. In this context, learning has two senses in which one of them is the goal: to get the person to learn from the synonym to be taught and the other, subjective: learn to learn for themselves, distinguish, master knowledge, whether for a job intellectual or physical, is the lived experience (NOT, 1993).

In this sense, health has two significant aspects. The physical aspect given to the maintenance of homeostatic balance, corresponding to good nutrition, health care and favorable conditions to develop the activities of daily life without fatigue. The other, a healthy psychical personality, what is meant by the ability of the individual has to develop the know, to seek to modify their behavior lifestyle and your own routine of life, leading him to understand that he can modify himself, conquering your self-knowledge and, above all, the preservation of health.

The promotion of health through supervised exercise can help in the treatment of several risk factors for cardiovascular disease, ensuring that individuals practicing regular physical activity can live integrated into society, physically and mentally active, developing autonomy and independence with everyday tasks, considerably improving their quality of life (TERRA, 2010).

In this perspective, the actions of health professionals is of paramount importance with regard to "develop together".

These professionals should act as educators and purveyors of scientific and practical knowledge, and developments that can be adopted by individuals in their daily lives in order to assist them in reorganizing their behaviors, habits and behavioral tendencies acquired. So, are closely united with a capacity of knowledge and reality, management, which becomes sufficiently skilled, or concerned about the community and social environment in which they operate.

So education to regular exercise should be understood by the general population, helping them given current conditions experienced by sedentary lifestyle and warning them about the big changes a healthy lifestyle can bring into their lives, preventing factors risk for development of atherosclerosis and cardiovascular diseases.

"Intellectual development includes large and small changes processed in humans, involving the whole existential dynamics of human life in which he finds meaning and elaborates their life plans" (SAVIANI, 1985).

CONCLUSION

The health education is part of education as a whole and aims to lead individuals to a better and more effective knowledge and health practices, earning a healthy living from growing humanization and self-education for life. Therefore, education for adherence to lifestyle changes, obtaining and preserving the quality of life when supervised by health professionals, educators and acting as propagators of knowledge, through physical exercise and care with healthy habits, have proven effective and are used and recommended both to the prevention to the treatment of chronic degenerative diseases, but also of reducing cardiovascular as disease mortality in the general population and improving the quality and life expectancy of these individuals (STEWART et al., 2013; COELHO, 2009; LEE, 2010).

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EDUCATION FOR PHYSICAL EXERCISE IN THE PREVENTION OF CARDIOVASCULAR DISEASE: THE VALUE OF CHANGES IN LIFESTYLE.

ABSTRACT

Aims: The decrease in daily physical activities and physical exercises performed by the population in general, can be clearly observed, contributing to the increase in chronic degenerative diseases and, consequently, to the increase in cardiovascular disease. The physical exercise is associated with a decreased incidence of cardiovascular events, together with a well balanced diet. Therefore, education, understanding and motivation of individuals to adherence to exercise programs and changes in lifestyle are important and can help in preventing these diseases. Methodology: Literature review by subject in MEDLINE (PUBMED), BIREME (LILACS) and SCIELO database, published from 2008 to 2014 and books published from 2005 to 2010. Objective: Highlight the importance of educating individuals to lifestyle change with physical exercise in the prevention of cardiovascular diseases. Conclusions: The improvement of eating habits and physical exercise have been considered effective at preventing cardiovascular disease and can aid in the treatment of these individuals, making them able to do their work with

autonomy, self-awareness and self-discipline, thus gaining quality of life, health and general welfare. Adherence to lifestyle changes will only be won when understood and introjected by the individual, and also a joint action with health care professionals through education and awareness, aiming at reducing mortality and improving the quality of life and life expectancy.

KEYWORDS: Education; Prevention; Exercise; Cardiovascular Diseases.

ÉDUCATION POUR LA PRATIQUE DE L'EXERCICE PHYSIQUE EN PRÉVENTION DES MALADIES CARDIOVASCULAIRES: LA VALEUR DES CHANGEMENTS DE MODE DE VIE.

RÉSUMÉ

Introduction: Une diminution de l'activité physique quotidienne et des exercices physiques effectués par la population en général, peut être clairement observé, contribuant à l'augmentation des maladies dégénératives chroniques et, par conséquent, à une augmentation des maladies cardio-vasculaires. Un exercice physique est associée à une diminution de l'incidence des événements cardio-vasculaires, les soins au pouvoir par un régime alimentaire équilibré. Par conséquent, l'éducation, la compréhension et la motivation des individus elles sont conformes aux programmes d'exercice et des changements de mode de vie sont importantes et peuvent aider à prévenir ces maladies. Méthodologie: Littérature sujet dans les données MEDLINE (PUBMED), BIREME (LILACS) et SCIELO, publié de 2008 à 2014 et livres publiés de 2005 à 2010. Objectif: mettre en évidence l'importance d'éduquer les individus à changer le mode de vie à la pratique de exercice dans la prévention des maladies cardio-vasculaires. Conclusion: L'amélioration des habitudes alimentaires et l'exercice physique ont été considérées comme efficaces pour la prévention des maladies cardiovasculaires et peut aider dans le traitement de ces personnes, ce qui les rend capables de faire leur travail en toute autonomie, la conscience de soi et l'auto-discipline, donc gagner qualité vie, la santé et le bien-être général. L'adhésion à des changements de style de vie ne sera gagné quand compris et intériorisé par l'individu, et aussi une action commune avec les professionnels de la santé par l'éducation et la sensibilisation, visant à réduire la mortalité et d'améliorer l'espérance de vie et la qualité.

MOTS-CLÉS: Éducation; La prévention; Exercice; Maladies Cardio-vasculaires.

EDUCACIÓN PARA LA PRÁCTICA DE EJERCICIO FÍSICO EN LA PREVENCIÓN DE ENFERMEDADES CARDIOVASCULARES: EL VALOR DE CAMBIOS EN EL ESTILO DE VIDA.

RESUMEN

Introducción: Una disminución de la actividad física diaria y ejercicios físicos realizados por la población en general, se puede observar claramente, que contribuye al aumento en las enfermedades degenerativas crónicas y, en consecuencia, a un incremento en la enfermedad cardiovascular. Un ejercicio físico se asocia con una disminución de la incidencia de eventos cardiovasculares, con cuidado en potencia a través de una dieta equilibrada. Por lo tanto, la educación, la comprensión y la motivación de los individuos a la adherencia a los programas de ejercicio y cambios en el estilo de vida son importantes y pueden ayudar en la prevención de estas enfermedades. Metodología: Literatura tema en los datos MEDLINE (PUBMED), BIREME (LILACS) y SCIELO, publicada desde 2008 hasta 2014 y los libros publicados desde 2005 hasta 2010. Objetivo: resaltar la importancia de educar a las personas a cambiar de estilo de vida con la práctica de ejercicio en la prevención de enfermedades cardiovasculares. Conclusión: La mejora de los hábitos alimenticios y el ejercicio físico se ha considerado eficaz para la prevención de enfermedades cardiovasculares y puede ayudar en el tratamiento de estos individuos, haciéndolos capaces de hacer su trabajo con autonomía, auto-conocimiento y la auto-disciplina, lo que les valió la calidad la vida, la salud y el bienestar general. La adhesión a los cambios de estilo de vida sólo se ganará cuando se entiende y introyectado por el individuo, y también una acción conjunta con profesionales de la salud a través de la educación y la sensibilización, encaminadas a reducir la mortalidad y mejorar la calidad y esperanza de vida .

PALABRAS CLAVE: Educación; Prevención; Ejercicio; Efermedades Cardiovasculares.

EDUCAÇÃO PARA A PRÁTICA DE EXERCÍCIOS FÍSICOS NA PREVENÇÃO DE DOENÇAS CARDIOVASCULARES: O VALOR DAS MUDANÇAS NO ESTILO DE VIDA.

RESUMO

Introdução: Uma diminuição das atividades físicas diárias e exercícios físicos realizados pela população em geral, pode ser claramente observada, contribuindo para o aumento de doenças crônicas degenerativas e, consequentemente, para o aumento de Doenças Cardiovasculares. A prática de exercícios físicos está associada a um decréscimo na incidência de eventos cardiovasculares, juntamente com os cuidados na alimentação por meio de uma dieta equilibrada. Por isso, a educação, entendimento e motivação dos indivíduos para a adesão a programas de exercícios físicos e mudanças no estilo de vida são importantes e podem contribuir na prevenção dessas doenças. Metodologia: Revisão de literatura por assunto nas bases de dados MEDLINE (PUBMED), BIREME (LILACS) e SCIELO, publicados de 2008 a 2014 e livros publicados de 2005 a 2010. Objetivo: evidenciar a importância da educação dos indivíduos para a mudança de estilo de vida com a prática de exercícios físicos na prevenção de doenças cardiovasculares. Conclusão: A melhora dos hábitos alimentares e a prática de exercícios físicos têm sido considerados eficazes à prevenção de doenças cardiovasculares e podem auxiliar no tratamento desses indivíduos, tornando-os capazes de realizar suas atividades com autonomia, autoconsciência e autodisciplina, conquistando assim, qualidade de vida, saúde e bem estar geral. A adesão às mudanças de estilo de vida só serão conquistadas quando compreendidas e introjetadas pelo indivíduo, sendo também, uma ação conjunta com os profissionais da saúde por meio da educação e conscientização, objetivando a redução da mortalidade e a melhora da qualidade e expectativa de vida.

PALAVRAS-CHAVE: Educação; Prevenção; Exercícios Físicos; Doenças Cardiovasculares.