39 - STRETCHING: ONE HEALTHY PRACTICE - STUDY OF ITS INFLUENCE ON THE FLEXIBILITY

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SUMMARY

This study brings for the debate the relations among physical aptitude, quality of life and public health, when dimensioning the epidemiologist aspects of flexibility. In this direction we focused our study subject concerning the regular physical exercise under the physical perspective. First we have done a literature review on the possible benefits stretching, as a modifier instrument of the flexibility physical capacity in its aspects. The main aim of this research was to analyze the effectiveness of a stretching physical exercise program, on the joint mobility, through the use of Active the Static method and Static Liabilities. The sample was composed of 16 women, between 22 and 30 years of age who join the "Alongamento:uma prática saudável" couse three times a week, 60-minute-session. The tests had included shoulders, trunk, hip and knees flex moviments. The data collected had two phases the initial and final with an interval of ten weeks, and we have worked with descriptive statistics and the resultes have shown a quantitative improvement in flexibility. We can consider that this corporal practice has presented positive results when applied in a ten weeks period, resulting in an joint amplitude increase.

Key Words: Stretching, Flexibility, Life Quality.

INTRODUCTION

Factors related to daily life activities as sedentarism and work stress, have been subjects that defy public health regarding to the populations´ good quality of life, the benefits of regular physical exercises practice can help in biological, physique and social factors.

According to Ramos and Tojal (2006), the benefits of one exercise streching program can be observed in some aspects: the improvement in the corporal position quality, muscle relaxation of stress, corporal aptitude, pain muscle relief, prevention or reduction of injuries risks and development of corporal conscience. In regarding to public health for attainment of quality of life, this corporal practice that uses stretching physical exercises are found in literature, as a tool in prevention and also therapeutical actions agaisnt flexibility degenerative epidemiologists aspects.

Studies demonstrate that some variables interfier in this motor capacity, as sex, ethnic, social economic conditions, corporal composition, level of physical activity and age. Exógenos and endogenous factors can influence this element of physical aptitude during the life, that will affect in its level decrease.

Mcardle (2003) points that reduced levels of this physical capacity compromise the development of the others, harming the movements efficiency, potencializes the increase of the risk of injuries and makes it difficult to execute daily life activities, leading to the dependence through the loss of the autonomy.

Taylor (1990), still considers that the levels of the physical aptitude, like resistance, force, speed and flexibility, functional potentiality and the participation in physical activities decline significantly with aging. The organism functional levels are resultant and dependent of the biological aging process and physical inactivity which affects the performance of the components of the motor capacities.

According to Dantas (1999), flexibility is an important component of physical aptitude related to health, and responsible for the movements execution of maximum angular amplitude for the joints, inside the morphologic limits without risk to provoke injury.

Franciscon (1996), considers flexibility as essential element in the morfo-functionality of the human locomotive, which determes the amplitude of movement limit. The decurrent alterations of aging linked to sedentarism interfiers in the locomotor system damaging mucle, joints, and ligaments systems affecting corporal posture.

In this direction, Mcardle (2003) tells that the maintenance of a physiological function and a improvement in physical aptitude include the accomplishment of stretching exercises, so that significant modifications are felt mainly in flexibility, when establishing adequate levels of amplitude of movement in order to prevent or to minimize posturais alterations and chronic degenerative illnesses of the locomotive system components.

This author also agrees that functional capacity and good global health are influenced by illnesses prevention and linked physical activity, which involves the "aerobic or cardiovascular aptitude, corporal composition, abdominal muscles endurance and the region lombossacra and thigh posterior muscle flexibility" (MCARDLE, p.895, 2003).

In accordance with Pollock et al apud Dantas (1999) flexibility is resultant of the corporal elasticity of determined joints, the muscles, tendon and ligament adaptation and plasticity.

Theodoro (2004), previously explains that the restriction in the development of flexibility this associated to the elastic properties of the mentioned structures, but also it is dependent of external organism conditions, as time, muscle temperature, environment temperature and fatigue degree.

The limitation of this element of the physical aptitude is a result of hardened muscles and ligaments which intefier excessively in the execution of movements simple, but essential for individual motor independence. The the autonomy maintenmance is essential for the accomplishment of the daily tasks, which are interrelated with the diverse factors that make quality of life.

Literature considers to obten higher levels of flexibility there is the necessity of using stretching stimulations, that are requests to increase muscles and other structures of the locomotive system extensibility, which is kept by a determined time.

For Souza (1998), stretching is based on the principle of spindles muscular and tendinosos agencies of golgi activation, which are sensible to the alterations in the length, speed and in muscle tension. The impulses of these receivers provoke reflected answers, that induce musculotendíneas adaptations, which bring profits to joints mobility. There are basic stretching techniques, which include methods: static, ballistic, passive, active and neuromuscular proprioceptiva facilitation (FNP).

For this research we used the active static and passive static methods: Active streching is characterized for the voluntary use of the muscles without external aids. Passive streching is the method that does not need the voluntary contraction, but depends on external forces, through a friend or an equipment (SOUZA 1998).

METHODOLOGY

We have used in this reaserch students, employees and Unicamp´s community, registered in the 2nd semester of 2006 in the course "ALONGAMENTO: UMA PRÁTICA SAUDÁVEL" at Unicamp´s campus.The sample was composed by an experimental

group of 16 women, from 22 to 30 years of age. The work was characterized for the practical the stretching method, with approach on the methods: active static and passive static liabilities (ACHOUR JUNIOR, 2002).The streching program was realized three times a week, with 60 minutes duration each session, in a ten weeks period.

As methodology we have opted to action research. According to Thiollent apud Theodoro (2004), the action research is a "study based on associative experience in which the action characteristic is a collective problem in which the participants and the researchers are involved in cooperative way" (p.56).

The research and the term of free and clarified assent had been approved by the Committee of Ethics of the FCM-UNICAMP, under n 348/2006. The individuals had had knowledge on the research goals, the form of fulfilling the questionnaires and the accomplishment of exercises and they agreed in participating as volunteers in the scientific study.

This study followed these evaluations: anamnese; physical evaluation of flexibility at two distinct moments: a disgnostic examination of flexibility in the beginning of the course and another after ten weeks of work.

To analyze the degree of flexibility of the individuals, we use the Flexímetro developed for the CARCI, instrument that determines in degrees, the amplitude level of the joint movement. The evaluation used the following movements: shoulders, trunk; hip, and knees flex moviments. The analysis of the data was done statisticaly, and there was the comparison of the results obtained from the begining of the course in August 2006 and after in October 2006.

RESULTS

The sample was composed by 16 female individuals , from 22 to 30 years old. Of the 16 interviewed we analyzed that, 62% have already practice physical exercises at least six months before starting the stretching classes, and 32% of the people did not carry any physical exercise.

We could observe that in the shoulder flex movement, the right side presented the values of 154,22 (±13,89) degrees before the flexibility program and after 156,87 (±12,28) degrees. In the left side, we verified the value of 156,66 (±16,04) degrees in the first evaluation, and in the second evaluation the value of 160,22 (±13,14) degrees.

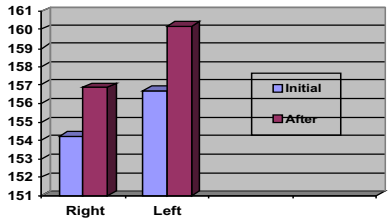
In the trunk flex moviment, we observed in the initial evaluation the value of 89,44 (±19,96) degrees, and in the end 93,66 (±12,51) degrees.

The hip flex moviment for the right side, the individuals had presented 102,11 (±6,52) degrees in the initial test, and the final test 109,77 (±6,51) degrees. And in the left side 108,33 (±11,47) degrees in the evaluation initiates and in the final 112,77 (±7,32) degrees.

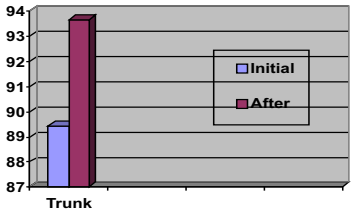
In the knee joint, we have found values of 115,44 (±9,90) degrees in the first test, and after 116,66 (±6,38) degrees for the right side. In the left side it was of 119,44 (±8,83) degrees at the first moment and 122,55 (±8,53) degrees in the end.

Grafics

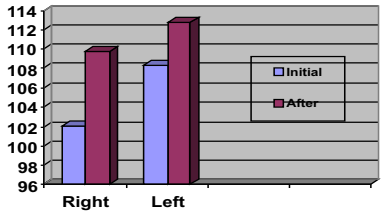
Shoulder flex moviment



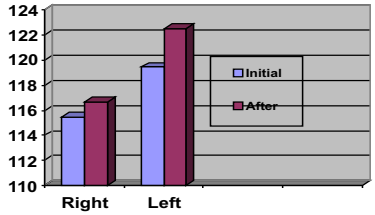
Trunk flex moviment



Hip flex moviment



Knee flex moviment



DISCUSSION

The criteria of choice of these joints as study object was based on its great importance or the functional capacity performance which interfiers on the daily activity, as an example of the influence of the hip joint on the locomotion (MCARDLE, 2003).

Moraes (2003), also considers that the pelve and trunk mobility are necessary for the accomplishment of countless activities of the daily life and of the work, and they promote mechanical advantage for the function and lumbar efficiency.

The present study suggests that the stretching training makes positive adaptation in flexibility; we observed that all joints had an improvement after ten weeks treinament, we have found significant results in the hip joint, These data found was described in the literature which in a short period of training is possible to find adaptations in the muscle system. (ALTER, 2001).

FINAL CONSIDERATIONS

This work revealed as a valuable instrument in profts attainment of joint mobility through stretching exercises promoting flexibility increase. Indirectly it also echos in health helping performance in daily activities diminishing risk factors through a preventive and therapeutical acting as mechanism of intervention in stress situations and alterations related to bad corporal position.

This corporal technique allows compensation of structures used in surplus in some situations of effort, however is impossible to reach great results in the flexibility without that it has interdependence of other factors that determine the physical adaptation as, respiratory and postural conscience that leads to a change of habits and improvement of the quality of life.

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SUMMARY

This study brings for the debate the relations among physical aptitude, quality of life and public health, when dimensioning the epidemiologist aspects of flexibility. In this direction we focused our study subject concerning the regular physical exercise under the physical perspective. First we have done a literature review on the possible benefits stretching, as a modifier instrument of the flexibility physical capacity in its aspects. The main aim of this research was to analyze the effectiveness of a stretching physical exercise program, on the joint mobility, through the use of Active the Static method and Static Liabilities. The sample was composed of 16 women, between 22 and 30 years of age who join the "Alongamento:uma prática saudável" couse, three times a week, 60-minute-session. The tests had included shoulders, trunk, hip and knees flex moviments. The data collected had two phases the initial and final with an interval of ten weeks, and we have worked with descriptive statistics and the resultes have shown a quantitative improvement in flexibility. We can consider that this corporal practice has presented positive results when applied in a ten weeks period, resulting in an joint amplitude increase. Key Words: Stretching, Flexibility, Life Quality.

ALLONGEMENT: UNE PRATIQUE SAINE - ÉTUDE DE SON INFLUENCE SUR LA SOUPLESSE ET LA FLEXIBILITÉ

RÉSUMÉ

Cette étude amène au débat les rapports entre l'aptitude physique, la qualité de vie e la santé publique, lorsque dimensionne les aspects épidémiologiques de la souplesse et la flexibilité. Dans cet sense on envisage notre thèse sur la pratique régulière de exercices physiques d'allongement sous la perspective physique. Elle représente d'abord une révision de la littérature sur les possibles benéfices de l'allongement, comme instrument modificatif de la capacité physique de la souplesse et la flexibilité dans ses divers aspects. L'objectif basique de cette recherche a été l'analyse de l'efficacité d'un programme d'exercices physiques d'allongement, sur la mobilité articulaire, em utilisant la méthode Statique Active et Statique Passive. L'echantillon a été constitué par 16 femmes où l'âge variait entre 22 et 30 ans, participantes du cours "allongement: une pratique saine", trois fois par semaine, 60 minutes par session. Les testes réalisés comprenaient les mouvements de flexion des épaules, de flexion du tronc, de flexion de l'hanche, et flexion des genoux. Les donnés collectés dans la phase initiale et finale des évaluations ont été obtenus dans un intervalle de dix semaine, et ont été traités au moyen de statistique descriptive et comme résultat de l'étude on a observé l'amélioration de donnés quantitatifs mensurables de la souplesse et la flexibilité. En fonction des resultats on peut considerer que cette pratique corporalle a mis en évidence resultats positives lorsque apliquée pendant une période de dix semaine, concernant le croissement de l'amplitude articulaire. Mots Clefs: Allongement, Flexibilité, Qualité de Vie.

ALONGAMIENTO: UNA PRACTICA SALUDABLE - ESTUDIO DE SU INFLUENCIA SOBRE LA FLEXIBILIDAD

RESUMEN

Este estudio trae para el debate las relaciones entre habilidad física, calidad de vida y salud pública, al dimensionar los aspectos epidemiológicos de la flexibilidad. En esta dirección enfocamos nuestro tema a cerca de la práctica regular de ejercicios físicos de alongamiento sobre la perspectiva física. Constituido primeramente una revisión de la literatura sobre posibles beneficios del alongamiento, como instrumento modificador de la capacidad física de la flexibilidad en sus varios aspectos. El objetivo principal de este estudio fue analizar la eficacia de un programa de ejercicios físicos de alongamiento, sobre la movilidad articular, a través de la utilización del método Estático Activo y Estático Pasivo. La muestra fue compuesta por 16 mujeres, con edades entre 22 y 30 años de edad, participantes del curso "Alongamiento: una practica saludable", tres veces por semana, 60 minutos por sesión. Las pruebas realizadas incluyeron los movimientos de flexibilidad de hombros, flexión de tronco, flexión de caderas y flexión de rodillas. Los datos recolectados en la fase inicial y final de las evaluaciones fueron obtenidos en un intervalo de diez semanas, y fueron tratados mediante estadística descriptiva y como resultado del estudio se observo una mejoría en los datos cuantitativos mensurables de la flexibilidad. Delante de los resultados podemos considerar que esta práctica corporal revela resultados positivos cuando es aplicada en un período de diez semanas, para el aumento de la amplitud articular.

Palabras Claves: Alongamiento, Flexibilidad, Calidad de vida.

ALONGAMENTO: UMA PRÁTICA SAUDÁVEL - ESTUDO DE SUA INFLUÊNCIA SOBRE A FLEXIBILIDADE

RESUMO

Este estudo traz para o debate as relações entre aptidão física, qualidade de vida e saúde pública, ao dimensionar os aspectos epidemiológicos da flexibilidade. Nesta direção enfocamos nosso tema acerca da prática regular de exercícios físicos de alongamento sob a perspectiva física. Constituído primeiramente uma revisão da literatura sobre possíveis benefícios do alongamento, como instrumento modificador da capacidade física da flexibilidade em seus vários aspectos. O objetivo principal desta pesquisa foi analisar a eficácia de um programa de exercícios físicos de alongamento, sobre a mobilidade articular, através da utilização do método Estático Ativo e Estático Passivo. A amostra foi composta por 16 mulheres, com faixa etária entre 22 e 30 anos de idade, participantes do curso "Alongamento: uma pratica saudável", três vezes por semana, 60 minutos por sessão. Os testes realizados incluíram os movimentos de flexão de ombros, flexão de tronco, flexão de quadril e flexão de joelhos. Os dados coletados na fase inicial e final das avaliações foram obtidos num intervalo de dez semanas, e foram tratados mediante estatística descritiva e como resultado do estudo observou-se melhora nos dados quantitativos mensuráveis da flexibilidade. Diante dos resultados podemos considerar que esta prática corporal revelou resultados positivos quando aplicada em um período de dez semanas, para o aumento da amplitude articular. Palavras Chaves: Alongamento, Flexibilidade, Qualidade de vida.