# 188 - COMPARATIVE ANALYSIS OF RESULTS AND PANS POSTURE OF PATIENTS WHO UNDERWENT SHOULDER BETWEEN RPG STREGHT & E PATIENTS WHO UNDERWENT ONLY RPG.

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#### INTRODUCTION

In the last century, around the decade of 80, began a search is needed to answer about the real causes of changes muscle-joint and hence solutions to these changes. With that came techniques such as osteopathy and rehabilitation global posture (RPG), who had such techniques as a priority work of the global body, noting that all the changes that was seen in musculo-skeletal changes and consequently posture were so interconnected global (BIENFAIT,

1997).

The reeducation Postural Global (RPG) came in contrast to conventional treatment of physiotherapy, placing within their own work evaluation and differential treatment, emphasizing the work breathing, duration of treatment and RPG's own positions. At the end of a treatment of RPG, regardless of the actual history of the disease, it is always possible to see results from postural improvements in certain parts of the body. In some cases, even in remote locations in the region in treatment because of the work postures of RPG is for all regions assets, improving flexibility as generalized muscle (SOUCHARD, 2003).

The gym is a set of means of physical preparation used in the development of physical qualities related to muscular structures. The practice of weight lifting, also called strength training, is individual. This method is very sports studied, mainly for their appearance physiological, biomechanical and Kinesiologic. That is, where it aims to investigate major muscles worked in the exercises of power and performance that this type of training can benefit those who do (UCHIDA et al., 2003). The strength-training exercises can be classified as: isometric or static, dynamic or isotonic (concentric and eccentric) and isokinetic (POWERS and Howley, 2000). In this training the muscles may be hypertrophied, which most often is a result of the increase in the diameter of muscle fibers. This hypertrophy can be achieved with the alternation of the types of contraction that can carry through the training of strength. It is worth noting that at any stage of a periodization training that you can dominate a particular type of contraction, depending on the objective of the training course and taking into account the principle of individuality (organic BOMPA and CORNACCHIA, 2000).

The joints of shoulder and pelvis regions are suffering constantly because they are postural changes in dissociation with the upper torso and abdomen with legs, respectively, showing that it will change and / or trauma caused in the area of these members may have postural reflexes or pain in the joints of shoulder and pelvis. (ALMEIDA, 2006).

In fact, the bodybuilder and RPG aspects involve physiological, biomechanical and Kinesiologic similar. Such items instigated the execution of a search to see if the results of the improvements associated posture of both techniques in patients with RPG and that also conduct training of the force in the city of Juazeiro do Norte, can be observed before patient who only carry o u t  $\mathbb{R} \mathbb{P} \mathbb{G}$ .

It is understood that the observation and comparison of these results posture of the pelvis and shoulder joints is extremely necessary for the proper routing of these patients to the practice of an activity of strength. Thus the objective of this study was to analyze and compare the results of both types of patients, those who carry out the search for a better posture performing only RPG and those who seek to improve posture associated with RPG's practice gym.

### 1 Global Posture Re-education - RPG

Created by French Philippe Emmanuel Souchard at the beginning of the '70s, the Global Posture Re-education (RPG) deals since then in a different way to muscle up and dynamic, seeking postural improvements in all aspects, since this way the postural deviations and consequently all problems caused by them (SOUCHARD, 2003).

According Souchard (2006), in their studies that preceded the creation of the art of RPG, can be observed failures of palliative treatments until then, because in many cases it was possible to verify the treatments that dealt conseguências the muscle-skeletal changes, ie is not seeking the cause itself the real problem, which in fact were the various changes posture, so they had reports of many cases not solved with conventional physiotherapy. The Global Posture Re-education, or RPG is a technique that aims to get major improvements in macro and micro deformities injuries so globalized and not palliative. (SOUCHARD, 1989).

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The therapy is by means of RPG for job positions associated with the work of breathing. The type of postures and breathing that is what the RPG's own technical and aims to restore the flexibility, length and strength of muscles involved in active and static inspiratory muscles. (SOUCHARD, 1989).

Another assumption that is taken into consideration in sessions of RPG is the time for stretching. According Souchard (2003a), could also noted in their study, which fixes for the macro and micro deformities of the skeletal muscle, it is necessary to act with detail, precision and time. A peculiarity of elastic bodies is that their fluagem, namely their final stretch is directly proportional to their time of the merger.

## 2 EVALUATION RPGÍSTICA

The whole process of technical RPGística, including attendance and assessment, based on the overall assessment of muscle-joint structures and the attitudes of all body structures, independent of the clinical picture that you submit. Only in this way is that the therapist will have the opportunity to detect the possible causes related to the customer and thus treat more effectively (SOUCHARD, 2003).

Thus, as with any consultation, is initially held a clinical history with a view to reaping the history of the disease today and then the client is placed in bipedestação posture and the comments begin with comments ranging from cervical spine until your feet. The therapist will have to assess the changes of posture of the client front, the side and rear with a vision, but can also make use of the perpendicular. After these initial cases, depending on the case can be tested with movements of the cervical

spine and opening up of arms, which also must be performed with the patient sitting. The third time the assessment will be conducting a bending of trunk, looking this way compromises the chain back muscle and that should only be done in patients who do not have acute diseases of the cervical spine. The review should be conducted in bipedestação tests with the patient in sitting postures, positions that simulate some of those positions under load. To finish the initial assessment, which will be classified as held that the first contact customer versus therapist, the therapist may use their knowledge of anatomy palpatória in all the structures available for palpation and, depending on the region, may be held in bipedestação, supine position and prone position. (ALMEIDA, 2006).

There is also a part of the assessment itself RPG(stica that must be updated every session, because the customer can make changes to a different posture query to the other and should be taken into consideration at the moment of the requirements of the postures.

In this context we can find figures ranging from 01 (a) to 04 (four), it indicates the dominant positions and other details will be assessed according to what the patient has the exact day of your query: Photo, as there anatomy of the joints and muscles of the body of the customer are presented in general; interviews, reports, by placing or not an "X" in places, if that day you're feeling no pain or muscle-joint and what Position to cause more pain, whether sitting or standing, place of examination retraction refers to the region of the body at that moment that it is troubling, is just an uncomfortable posture, Pain, or both associates; Rebalancing within the same assessment, the moment in which the therapist tries to hand pick the best posture during the evaluation process, and the rebalancing can be done both in this direction but also to see if there is presence of painful procedures during the normalization of structures; Results are the attitudes that should be held that day with the client that after the establishment of evaluation has been completed and all in accordance with the different results presented by the framework of assessment. (SOUCHARD, 2003).

Chart 1 - RPGística Assessment

Photo	Questioning		<b>R</b> €balancing	Result
		retraction		
1				
2				
3				
4				

#### **3-FAMILIES IN POSTURE**

The postures used in the consultations of RPG's own technical and are around 7 (seven) positions, where five (5) are laden postures (sitting or standing) and 2 (two) are in decubitus positions. During a consultation of RPG, in general, you can apply two of those positions, which should be selected according to the characteristics presented by the client and his case. (SOUCHARD, 1989)

Clearly, the postures in decubitus allow better modeling manual by the therapist, which are more convenient to cases painful or weak. The postures are more active in freight and proprioceptive and allow better integration of results in relation to body scheme (SOUCHARD, 2003).

In the case of decubitus positions in the posture known as "Frog on the ground" working to open up the lame-femoral angle, looking up with it an improvement in muscular flexibility in jail before. Depending on the clinical diagnosis of the patient, this stance can also be worked with opening of the arms, thus emphasizing the improved flexibility of the muscles of his shoulders anteroseptal-domestic. Another is decubitus position in the "frog in the atmosphere, characterized by closure of the lame-femoral angle, working this way to improve the flexibility of the chain back muscle and just like the frog on the floor, can also be worked with open arms (SOCHARD, 2006).

Other types of positions are laden postures, which can be made so seated as the "sitting" and "seated pelvic", which works to close the angle of the lame-femoral; the standing postures, as the "ballerina", Who works the closing of the lame-femoral angle, and those of "standing in the middle" and "standing against wall," which emphasize the opening of the lame-femoral angle. (ALMEIDA, 2006).

Please note that all positions are held above associated with a work of breathing, which has the main objective of indirect way to improve flexibility of inspiratory muscles, especially the diaphragm. (SOUCHARD, 1989).

### 4 POSTURE AFFEDTIONS IN THE JOINTS AND PANS OMBRO

In the region of the basin, the points of reference for the evaluation and consequently palpation are: anterior superior iliac bones (They), posterior superior iliac bones (EIPS) and the internal malleolus. The evaluation of these three points is the main examination of injuries involving postural changes in the basins, so they in normality should be in line with each other. In the prior injuries in the basin, the E.I.A.S. can be found earlier and external and leg on that side is more stretched, and EIPS is higher when compared with the height of They and the member opposite. In posteriority injuries in the basin, the They is more rear leg and internal and is more shortened, while the EIPS is furthest from the sacrum (BIENFAIT, 1997).

Shoulder joint actually involves two major joint systems: scapular and waist-humeral blade bone. All these joints, are united by a set of muscles that surround them in these bone structures and muscles if they suffer any increase in tension in its fibers could characterize postural changes such notable structures. These postural changes may be evidenced in a posture assessment (KISNERAnd Colby, 2005).

The main changes in posture of the shoulder structures are usually caused by imbalances of tension between internal rotators (pectoralis major, major backbone, supraespinhoso, larger round) and external (infrastructure, thorny and subscapular) from shoulder (BIENFAIT, 1997). Within a posture assessment of the structure of the shoulder is possible, outside the normal, to find changes in height between them, which could mean a greater tension in the muscles of scapular elevators on one side against the other. You can also see a prevalence of shoulder in internal rotation, which features a larger increase in tension in the internal rotators. Usually there is no position in external rotation because of shoulder in the activities we do every day hardly dominates the action of external rotators. (ALMEIDA, 2006).

### 5 IMPORTANCE OF IMPROVE RESISTENCE TRAINING POSTURE

The objective of a training program of strength is to increase the maximum amount of force that can be generated by a particular muscle group. In general, any muscle exercised regularly with high-intensity will become stronger (FLECK AND KRAEMER, 2006). The strength-training exercises can be classified in isometric or static, dynamic or isotonic and isokinetic. One of the clearest changes, and perhaps most important for the training of force is an increase in muscle mass (POWERS and Howley, 2000).

Because of the drills may emphasize that in certain periods of training in a gym, the eccentric isotonic exercises, exercises which, according Guyton in 1998 in their studies, showed that this type of contraction increases the size of the functional unit of muscle fiber, the sarcomere conseguentemente and facilitate gains in muscle flexibility in the muscles that is being worked in the manner already described.

Other factors that could facilitate the improvement posture of strength through the drills are that many of the movements performed in a training gym are never repeated at another point in life or in daily activities. However, the positions sitting or standing occur frequently in our day to day and during the practice of listening. As you practice these positions so correct that would leave his muscles regularly adjusted. As a result, consideration is given an improvement in body stability and balance and as a result improves the posture. (Aaberg, 2001).

### **METHODOLOGY OF RESEARCH**

The field research was a comparative, with qualitative and quantitative approach, focused on seeking a lifting of data, based on numbers statistically analyzed and conducted himself in the work environment in the city of Juazeiro do Norte-Ce.

The population of the research was composed of 23 (twenty three) of RPG patients of both sexes (15 women and 8 men), all with changes in retroversion of basin and with changes in the shoulder, where 20 (twenty) had the position of shoulder in internal rotation, those 20 (eighteen), 12 (twelve) held consultations in only RPG all joined these consultations to the practice of resistance exercise, 15 (thirteen) of these 20 (twenty) were still differences in the heights of the shoulders when compared the right and left of the joint, where the 15 (fifteen) 8 (eight) accounted for only RPG. Of these 23 (twenty-three) patients found that 14 (fourteen) held only RPG and the other 9 (nine) held RPG associated with the practice of listening for at least 3 (three) months. It was found that 17 (seventeen) of these patients sought treatment for reasons of RPG-muscle or joint pain, and the other only by postural changes.

To participate in the study, patients need to make changes in posture and shoulder joints of basin, where the patients who joined the RPG to the gym needed to practice this activity at least three (3) meses. Os participants agree that participate in the study signed a term free and informed consent (Appendix A).

They could not participate in the study who did not attend the consultations of RPG weekly and have shown no changes in the structures under study. All data were collected during sessions of RPG, which is held weekly ratings posture, following the framework for evaluating RPGístico. It was used for comparison photographs where they were photographed pictures in the first and 10th of consultation RPG, recorded for the comparative analysis of results posture. We observed the precepts of ethics established by resolution of 196/96 of the National Health Council on research involving humans, incorporating the perspective of individuals and communities, the four basic benchmarks of bioethics: autonomy, non-malfeasance, benevolence and justice.

### **RESULTS AND DISCUSSIONS**

The following table summarizes the frequency of consultations prior to RPG and collection of data from evaluations of

the structures under study:

	Frequency	Percent
Patients who perform only RPG	14	60,86 % of all patients
Had pelvic retroversion	14	100% off 60,86%
Had internal rotation of shoulder	12	71,42%
Had difference in height of the shoulder	08	57,14%
Patients who reported weight training and RPG	09	39,13% of all patients
Had pelvic retroversion	09	100%
Had internal rotation of shoulder	08	88,88%
Difference in height of the shoulder	07	77,77%

With respect to positioning in retroversion of basin can be observed that all patients had improvement of the posture of this, with 10 (ten), or 71.41% of patients who had performed only RPG complete a repositioning of the basin and this may be checked weekly when the evaluation was to compare the heights of the anterior superior iliac bones, with the posterior superior, the 4 (four), or 28.57% were also remaining an improvement of the posture of the pelvis when compared photographic detail of the first and after the ten (10) consultations in RPG, but were unable to reverse the entire framework of pelvic retroversion. Of the patients who joined the RPG's practice gym you can find that 9 (nine), or 100% of these had a retroversion of repositioning the basin, even without the complete cycle of the December consultation. It was also observed that, of these 100%, 5 (five), or 55.55% have a framework for standardization of pelvic retroversion with only five consultations.

In the study of the articulation of the shoulder, the results were even more standardization different. Because it is not only a single joint, but the union of two joints, waist and scapular blade bone-humeral, the necessity of using a large rotation and a greater number of postures may have hampered the prognosis of these results. (And KISNER Colby, 2005).

Among patients who underwent only sessions of RPG, 14 (fourteen) patients, none had complete normalization of the shoulder joint of: the 8 (eight), or 57.14% of patients who had high of uneven shoulders can be observed improvement in tension in the muscles that positioned the articulation in this manner and an equal at the time of shoulder joints of five (5), or 35.71% of these patients, when compared to the photograph of the first evaluation with the tenth consultation; of 12 (in December ), Or 85.71% of patients who had of 12 (ten), or 85.71% of patients who had internal rotation of shoulder, there was significant improvement in only four (4), or 28.57% of them. In the other improves posture is realized at the end of 10 (ten) consultations, but there was no standardization on the inward rotation.

As for patients who joined the treatment of the RPG bodybuilder, 9 (nine) patients, there was a better posture more significant when compared to patients who underwent only the RPG: the 8 (eight), or 88.88%, which showed a stance on internal rotation of shoulder, 6 (six), or 66.66% of these patients had significant improvements, starting for a complete repositioning of these joints at the end of December consultations and the other two (2), or 22.22%, it was observed better, not so significant as to the other; of seven (7), or 77.77% of patients who had made difference in heights of the shoulders, 100% of them had the end of

December sessions equalized the height of the shoulders, and that these, 4 (four), or 44.44% of these patients had repositioned the height of the shoulder before reaching the 10 sessions.

The goal of all muscular rehabilitation is to get a larger amount of muscles stronger. With this it is important to allocate the restoration of flexibility and is in the means employed is all that difference. In some cases the development of muscle volume becomes absolutely necessary, shortening caused by concentric body that must be balanced by equal intensity, with an increasingly eccentric work. (SOUCHARD, 2003).

According to data obtained one can ascertain that there was a significant improvement posture of those patients who performed RPG associated with weight training, both in posture, as in time of improvement in the normal repositioning of structures that were under study. There were also improvements of the patients who only underwent the RPG, but when compared with the results posture of the other patients was observed in a greater need for consultations in both RPG for the normalization doas structures, shoulder and pelvis, and for the maintenance of the results of RPG sessions.

The postural improvements were seen in both cases being exposed to those who had access to another type of activity, in the gym, may get a more satisfactory prognosis and that is cataloged by the authors cited above.

#### CONCLUSION

Taking into account the limitations of this study, one can observe changes posture in all cases under investigation, but could also noted that in cases where there was access to more than one type of muscle work, such as patients which involved the work of the RPG to practice the exercises of force posture changes of the prognosis was most notable and faster to be observed, without mentioning that in case of changes in the shoulder, the results were undoubtedly more satisfactory posture.

For a more satisfactory completion of work, would require monitoring by a longer period of time with the cases being studied in order to be able to verify the stabilization of cases of standardization posture by the practice of listening.

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### APPENDIX I - TERM FREE AAND INFORMED CONSENT

At the End of Free and Informed Consent, you are being invited (a) to participate in a study that has the theme: "COMPARATIVE ANALYSIS OF RESULTS AND PANS posture of patients who underwent shoulder BETWEEN RPG Strength & E patients who underwent ONLY RPG". This research aims to compare the main results and maintained in patients who seek improvements in posture and shoulder joints of the basin, which carry RPG and weight training with patients who achieve only sessions of RPG.

Please be advised that their participation will not bring harm to their health, and guaranteed the privacy of the testimonies provided and collected data, which will be used scientifically. Please also that you will not be submitted (a) the financial costs, or receive payment or gratuity for this study. You may receive clarification on the progress of the search request can quit when you continue working if they so wish.

I agree to participate as a volunteer (a) in the study "COMPARATIVE ANALYSIS OF RESULTS AND PANS posture of patients who underwent shoulder BETWEEN RPG Strength & E patients who underwent ONLY RPG." I declare to have been informed (a) by the researcher on the development of research, the procedures involved and the purposes and the possible risks and benefits of my participation. I understand I can no longer cooperate with the study at any time you like.

# COMPARATIVE ANALYSIS OF RESULTS AND PANS POSTURE OF PATIENTS WHO UNDERWENT SHOULDER BETWEEN RPG STREGHT & E PATIENTS WHO UNDERWENT ONLY RPG.

**ABSTRACT** 

Global Positioning Reeducation (RPG) it is a method that has as principal foundation to the search for improvements in the positioning of the several structures muscle-skeletal. The muscular activity can be defined as a middle of physical preparation used for the development of the physical qualities of the body. The objective of that study was to evaluate and to compare the results of improvements posturais of the articulations of the shoulder articulations and basin among patients that accomplished only the RPG and the ones that associated that technique to the practice of the muscular activity. It is a study observational and quali-quantitative. The research involved 23 patients of both sexes, chosen random, with precedents of alterations posturais in the articulations in study. The data were collected in the period of July from 2007 to January of 2008, having been accomplished evaluations posturais in all the weekly consultations of RPG. The results were observed through pictures that were removed before and after 10 consultations of RPG, where it was ended that in the patients' case that you/they associated the work of RPG to the practice of the exercises of force the prognostic of the alterations posturais were more well-known and faster of they be observed, unassuming that in the case of the shoulder alterations, the results posturais were more satisfactory indisputably.

WORDS - KEY: Rpg, muscular activity, posture.

# ANALYZE COMPARATIF DES RESULTATS ET PANS POSTURE DES PATIENTS QUI ONT SUBI L'ÉSPAULE ENTRE RPG FORCE & E PATIENTS QUI ONT SUBI SEULEMENT RPG.

RÉSUMÉ

Les résultats de l'amélioration posturale et de l'épaule articulations du bassin entre les patients ayant effectué seulement les RPG et ceux qui se sont joints à cette technique à la pratique de l'écoute. Il s'agit d'une étude et d'observation qualitative et quantitative. La recherche a impliqué 23 patients des deux sexes, choisis au hasard, avec les changements de posture dans les joints à l'étude. Les données ont été recueillies à partir de Juillet 2007 au Janvier 2008, la posture a été évaluée dans tous les RPG de consultations hebdomadaires. Les résultats ont été vus par des images qui ont été prises avant et après 10 consultations de RPG, qui a conclu que pour les patients qui ont rejoint les travaux de la RPG à la pratique des exercices, le pronostic de la posture de la force des changements ont été les plus notables, sans compter que, en cas de changements dans l'épaule, les résultats ont été sans doute plus satisfaisant posture.

MOTS - KEY: RPG, haltérophilie, la posture.

## ANÁLISIS COMPARATIVO DE LOS RESULTADOS Y PANS POSTURA DE LOS PACIENTES QUE SE SOMETIENRON A HOMBRO ENTRE RPG STRENGTH & E LOS PACIENTES QUE SE SOMETIERON SÓLO RPG.

RESUMEN

Los resultados de las mejoras posturales y las articulaciones del hombro de la cuenca entre los pacientes que realizaron sólo los RPG y los que se sumaron a esta técnica a la práctica de la escucha. Se trata de un estudio observacional y cualitativos y cuantitativos. La investigación que participan 23 pacientes de ambos sexos, elegidos al azar, con los anteriores cambios de postura en las articulaciones bajo estudio. Los datos fueron recolectados a partir de julio de 2007 a enero de 2008, se evaluó la postura en todos los RPG de consultas semanales. Los resultados fueron vistos a través de fotografías que fueron tomadas antes y después de las 10 consultas de los RPG, que llegó a la conclusión de que para los pacientes que se sumaron a la labor de los RPG para la práctica de los ejercicios, el pronóstico de la fuerza postura cambios fueron más notables, sin contar que, en caso de cambios en el hombro, los resultados fueron, sin duda, la postura más satisfactoria.

PALABRAS - CLAVE: Rpg, levantamiento de pesas, la postura.

# ANÁLISE COMPARATIVA DOS RESULTADOS POSTURAIS DE BACIA E OMBROS ENTRE PACIENTES QUE REALIZAM RPG E MUSCULAÇÃO E PACIENTES QUE REALIZAM SOMENTE RPG.

**RESUMO** 

Os resultados de melhoras posturais das articulações de ombro e bacia entre pacientes que realizavam somente a RPG e os que associaram essa técnica à prática da musculação. É um estudo observacional e quali-quantitativo. A pesquisa envolveu 23 pacientes de ambos os sexos, escolhidos aleatoriamente, com precedentes de alterações posturais nas articulações em estudo. Os dados foram coletados no período de julho de 2007 a janeiro de 2008, tendo sido realizadas avaliações posturais em todas as consultas semanais de RPG. Os resultados foram observados através de fotos que foram tiradas antes e depois de 10 consultas de RPG, onde se concluiu que no caso dos pacientes que associaram o trabalho do RPG à prática dos exercícios de força o prognóstico das alterações posturais foram mais notório, sem contar que no caso das alterações de ombro, os resultados posturais foram incontestavelmente mais satisfatórios.

PALAVRAS CHAVE: Rpg, musculação, postura.