# 154 - CORRELATION BETWEEN INJURY OF IMPACT IN THE SHOULDER AND TIME OF PRACTICAL IN SWIMMING

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### INTRODUCTION

The swimming is one of the sports more complete than they exist, today. The aquatic animals had shown to the men who were possible to move them selves in the water, without submerging, and they had learned in such a way to the lesson, that in Greece and Rome, swimming was adopted as exercise for training of soldiers. With passing of the times it came evolving and currently he is one of the practiced sports more in the world, being used in such a way for the leisure as well as to generate health.

The practical one of swimming takes to an increasing number of muscular, tendon injuries and ligaments, had to the individual efforts of the athletes in surpassing its proper limits to promote a bigger performance for its individual team or. One of the most serious problems that the swimmers face is the syndrome of the impact of the shoulder or injury of the manguito rotador that has extrinsically caused. This disease is resulted of a repetitive activity (micron traumas) or of the job of a significant force (macro trauma). Valley to point out that the bad anatomical conformation of the acrômio ends the biggest incidence of this syndrome (Brown et al., 2001).

In the macro trauma, it is breached completely, partial or, one or more when strain tendon of the (MANGUITO ROTADOR) (usually the supply-spinal one), leaving umero the socket glenóide. This occurs, generally, after displacement or longitudinal tractive injury. With the overuse, it has extreme demand of the muscles of the (rotador manguito). (Brown et al., 2001; Mellion, 1999). The type most frequent of impact was described for CHARLES NEER (1972), as being what it occurs below of third previous of the acrômio and inferior surface of the joint to acrômio collar-bone.

The Syndrome of the Impact presents three periods of training: period of training I i reversible, attacks people below of 25 years of he/she acts i characterized by the presence of edema and hemorrhage; period of training II attacks the acts band enters the 25 40 years of he/she acts and presents ill tendon and fibrose; and period of training III attacks the acts band above of 40 years of he/she acts, i characterized by degeneration and tendinosa rupture.

The hands and the arms of the swimmer produce the biggest propeller forces in swimming. These propeller forces occur, predominantly, due to the forces of survey (lift) and drag (drag) generated by movements of I row and similar blades to a helix. The propeller forces are bigger when movements of I row and of blade they occur in backwater, not turbulent, I contend a minimum of air bubbles.

According to FINE (International Federacy of Amateur Swimming), swimming is divided in four styles: crawl, back stroke, breast-coast, and butterfly-stroke. (JUNIOR Orival Andries; DUNDER Luis Enrique et al, 2002).

Due to probability that practicing athletes of swimming to be attacked of pains in the shoulders due the great day of training had motivated the present article, that have the objective to he/she tells the team of practical of swimming with pains in the shoulders and the day of training with pains in the shoulders.

#### **METHODOLOGY**

The present research had as quantitative character, had been used 15 athletes of swimming, operating in the requested clubs: Sport Club White Handle and CIEF, in the city of João Pessoa, state of the Paraiba, where athletes had been analyzed in accordance with its modality, pain in some movements carried through during the training, time of training and time of practical of the sport. A reestablish protocol (constituted of a series of questions that had been answered in writing with the presence of the researchers) by means of interview, where the procedure was clarified to be carried through and according to Resolution 196/96 of the National Advice of Health department. Being analyzed the data of descriptive form with the quantitative data.

#### RESULTS

In accordance with the results of the research were observed that amongst interviewed athletes 13 they train, but of 04 years and with a day of training of more 03 hours to the day. Pain in the shoulder is present in all the searched athletes, differentiating only in the phases of the strokes ones (when pulling the water with the arm submerged and when it finishes the stroke one, removed it arm of the water).

According to the coefficient of linear correlation of the index Pearson enters the 0 variable of Pain in the shoulder and Time of practical, we get as resulted the -0,19 0 variable.

Table 1	
Correlation of the "r" of Pearson enters the 0 variable Pain in the Shoulder and Time of	
Practical	
Time of/Pain in the shoulder	- 0,19

Following the same linear correlation of the index Pearson, now enter the 0 variable Pain in the shoulder and Day of Trainings, we got the result of 0,22.

Table 2	
Correlation of the "r" of Pearson enters the 0 variable Pain in the Shoulder and Day of Trainings	
Day of trainings/Pain in shoulder	0,22

#### **DISCUSSION**

It is known that the shoulder is one of the joints of the human body that plows attack of it lives you insult and mainly in athletes that it uses this joint a lot. It goes the practitioners of swimming one of the main complaints, only that they leave the practical one of the sport or diminish the sporting income and they look the doctor's offices of the orthopedic doctors, it is the complaint of pain in the shoulder.

In accordance with COHEN (1998), we can say that pain in the shoulder is present in almost the totality of the athletes who practice swimming. In our study it observed that all the athletes related pains in the shoulder.

The present study COHEN (1998) goes in accordance with, where it affirms that pains in the shoulder are not related with

the time of practical of the sport, therefore the index of Pearson of -0,19, with regard to these two 0 variable, confirms this data. But we can affirm that pains in the shoulder are on to the training day, therefore the index of Pearson was equal the 0,22, proving that how much bigger the time of the training more citizens pain in the shoulder the athletes would be.

Valley to lives point out that the majority of the interviewed athletes had the hourly load of training above of 03 hours to the day, being these an one of the possible cause of pains, being necessary detailed study on this causes.

In accordance with the presented study, the swimming although to be the sport that provides benefits of the physiological point of view goes any age band, it any impact or trauma is practiced in the way without, sees it necessity of lives her minute study, which had the great incidence of athlete with pains in the shoulder.

### **CONCLUSION**

The research results had taken to conclusion that this sample pain in the shoulder is inversely correlated with the time of practical of the sport and not correlated with the training day.

### **REFERENCES**

COHEN, M. et al. Incidence of pain in the shoulder in Brazilian swimmers of the elite. Orthopedics Brazilian magazine. Rio de Janeiro, v.33, n.12, p.930-932, 1998.

BROWN, David E. and NEWMANN, Randall D.; Secrets in Ortopedia; Artmed; Porto Alegre; 2001.

HALL, Susan J.; Basic biomechanics; Guanabara Koogan; Rio De Janeiro; RIO DE JANEIRO; Brazil; 2000.

MELLION, Morris B.; Secrets in Porting Medicine; Artmed; Porto Alegre; 1997.

HALL, Susan J.; Biomechanics Basic; Guanabara Koogan; Rio de Janeiro; RJ; Brasil; 2000.

JUNIOR, Orival Andries; DUNDER, Luis Enrique et al, Swimming-Training Technician; Manole; Barueri, São Paulo; Brazil, 2002.

CARR, Gerry; Biomechanics of the Sports; Manole; They are Pablo-SP; Brazil, 1998.

SANTOS, Jose Luiz Lopes. Articles: Conditioning to prevent injuries of shoulder and elbow. Available em> http://www.tenisgaucho.com.br/artigos det.php?ar id=5;Access in> 22.08.2005 17:49.

# CORRELATION BETWEEN INJURY OF IMPACT IN THE SHOULDER AND TIME OF PRACTICAL IN SWIMMING SUMMARY

The objective of the present study was to correlate the practical time of swimming and the day of training with pain in the shoulder. The sample was composed for 15 swimmers, with age between 15 and 22 years (17,4; ±2,13), 10 of masculine sex and 5 of feminine of the clubs the Sport Club White Handle and CIEF, the two in Joao Pessoa - PB. The swimmers had answered to a composed questionnaire of 24 questions. The research demonstrated that all the evaluated ones had presented pain in the shoulder more than and a day of training of 04 hours per day, 13 interviewed had affirmed that they train the 04 years more than. The equation of correlation of the "r" of Pearson for the 0 variable was applied pain in the shoulder and practical pain and time in the shoulder and time of trainings, got following results - 0,19 and 0,22 respectively. The results of the research had taken the conclusion that stops this sample pain in the shoulder inversely is correlated with the time of practical of the sport and it is not correlated with the training day.

Keys words: Pain in the Shoulder, Training, Swimming

### CORRÉLATION ENTRE LES DOMMAGES DE L'IMPACT DANS L'ÉPAULE ET LE MOMENT DE PRATIQUE DE LA NATATION.

RESUME

L'objetive de cette estude cétait relacioner lê temps de pratique de natation avec la journé de pratique avec lê mal d'épaule. Cétait composte de 15 nachers, avec age entre 15 e 22 ans (17,4;±2,13), 10 masculin et 5 femmes du Clube Esporte Cabo Branco et CIEF, lês deux em João Pessoa - PB. Lês nachers a repond une questionaire de 24 questions. Dans la pesquise lês nachers avoir Douler dans l'épaule et une journé de pratique plus 4 heures pour jour et 13 nachers dit que pratique plus de 4 ans. L'équation de la corrélation du "r" de Pearson a été appliquée pour lês variables douler dans l'épaule et temps de pratique et douler dans l'épaule et temps de pratique, on a obtenu les résultats suivants respectivement -0,19 e 0,22. Les résultats de la recherche avaient pris la conclusion qui arrête cette douleur d'échantillon dans l'épaule inversement est corrélée avec de la période de pratique du sport et il n'est pas corrélé avec le jour de formation.

Clefs de mots : Douleur dans l'épaule, formation, natation.

### CORRELACIÓN ENTRE LA LESIÓN DE IMPACTO EN HOMBRO E TIEMPO DE PRACTICA DE NATACIÓN RESUMEN

El objetivo del actual estudio era correlacionar la época práctica de la natación y el día del entrenamiento con dolor en el hombro. La muestra fue compuesta para 15 nadadores, con edad entre 15 y 22 años (17.4; ±2,13), 10 del sexo masculino y 5 de femenino de los clubs la manija y el CIEF blancos, los dos del club del deporte en Joao Pessoa - PB. Los nadadores habían contestado a un cuestionario compuesto de 24 preguntas. La investigación demostró que todas las evaluadas habían presentado dolor en el hombro más que y un día del entrenamiento de 04 horas por día, 13 entrevistados con había afirmado que entrenan a los 04 años más que. La ecuación de la correlación del "r" de Pearson para las 0 variables era dolor aplicado en el hombro y dolor práctico y tiempo en el hombro y época de entrenamientos, conseguida después de resultados - 0.19 y 0.22 respectivamente. Los resultados de la investigación habían tomado la conclusión que para este dolor de la muestra en el hombro se correlaciona inverso con la época de práctico del deporte y no se correlaciona con el día del entrenamiento.

Palabras claves: Dolor en el hombro, entrenamiento, natación

# CORRELAÇÃO ENTRE LESÃO DE IMPACTO NO OMBRO E TEMPO DE PRÁTICA DE NATAÇÃO. RESUMO

O objetivo do presente estudo foi correlacionar o tempo de prática de natação e a jornada de treinamento com a dor no ombro. A amostra foi composta por 15 nadadores, com idade entre 15 e 22 anos (17,4;±2,13), 10 do sexo masculino e 5 do feminino dos clubes Esporte Clube Cabo Branco e CIEF, os dois em João Pessoa - PB. Os nadadores responderam a um questionário composto de 24 questões. A pesquisa demonstrou que todos os avaliados apresentaram dor no ombro e uma jornada de treinamento de mais de 04 horas por dia, 13 entrevistados afirmaram que treinam a mais de 04 anos. Foi aplicada a equação de correlação do "r" de Pearson para as variáveis dor no ombro e tempo de prática e dor no ombro e tempo de treino, obteve-se os seguintes resultados respectivamente -0,19 e 0,22. Os resultados da pesquisa levaram a conclusão que para essa amostra a dor no ombro está inversamente correlacionada com o tempo de prática do esporte e não está correlacionada com a jornada de treinamento.

Palavras chaves: Dor no Ombro, Treinamento, Natação.