152 - INCREASE OF THE WHICH HAD MAXIMUM FORCE TO THE TRAINING OF I ROW IN GIG

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Introduction:

I row is a sport of boats race with manual propulsion where each man uses one or two I row's to obtain a support in the water and to stimulate the boat ahead or and reverse speed. The boat I row it is one of the oldest ways of transport, being used in the commerce, wars, the displacement of people and loads and in commemorative parties. Competitive I row appeared in Brazil in the year of 1567, when after a naval battle in 1566, all year was commemorated the victory of the Portuguese and it always had a dispute of canoes between indians and colonists who lived of fish in the coast of Rio De Janeiro.

I row in Gig, as well as I row Olympic, is a sport of cyclical characteristics of predominance aeróbica-anaeróbica (80-20% respectively (FISA, 2002)) and practiced by military of the Navy of Brazil the centuries and currently also for civilians who are part of teams of I row Olympic.

In I row, the athlete must make with that its boat reaches the biggest possible speed to cover in the distance definitive in the lesser possible time.

The competition boats must be weighed in the beginning of the season to determine a weight average to diminish the inequality between the teams. This average was stipulated for the navy Commission of Sports, that it is the responsible one for the organization of the Circuit to be able Maritime (State Championship of I row in Gig), in the year of 2005 was of 950kg at the very least, being obligator that the boats ran with this minimum nor that they had that to load extra weight (Ballast) in the boat.

So that the remadores to generate the biggest possible power for the biggest possible time, it is necessary that they present beyond a anaeróbico threshold very raised, what allows the work in high intensity for a period of bigger time, one high level located muscular resistance and speed of contraction.

They exist, according to Uchida, Charro, Bacurau, Navarro and Pontes (2003), four types of force training, to gain profits of muscular hypertrophy, for the increase of the maximum force or pure, for increase of the muscular power and the increase of the muscular resistance, and what it differs each type of training is the number of repetitions, series, intervals between series and training and the involved load.

The dynamic maximum force is a maximum repetition that can be raised or looser, where has alternation between the concentrically and eccentric contractions (Uchida, Charro, Bacurau, Navarro and Pontes, 2003).

According to Verkochansky & Oliveira (1995), the speed is the main characteristic of the effectiveness of the cyclical locomotion.

The training directed toward the increase of the force can be made in such a way in the room of musculação with weights, as in the outdoors with plyometric, races in slopes, and even though with the proper motor gesture of the sport being that with artifices to increase the contrary resistance to the performance of the boat or in I row in gig through rowed fast with high loads.

I row is part of the group of sports where the applications of forces are continuous and high, however is not maximum. When adding the duration of the force applications during a test of I row more observes a value for return of 1 minute or more.

The Olympic I row , for being a Olympic sport, already presents research and studies in some areas, like as Physiology of the Exercise and Biomechanics among others. I row in Gig comes very growing throughout 5 years until then, arriving at the point of awaking in the Technician the interest for the research on the same objectifying to improve the results of its teams and to contribute for the evolution of the Sport.

The objective of this study it intends to evaluate the decurrently profits of maximum force of the training of I row in Gig.

Methodology:

The research was of the Comparative type, because was compared the result of the first evaluation with the one of the reevaluation to get the desired result, with research of field for collection of data.

The sample was selected by the appraiser for belonging the team of Rows in Gig where the same it assumes the position of Technician. 13 individuals of the masculine sex had been selected, with ages between 23 and 29 years, being that all had been submitted to the same physical training and technician, despite this study not taking in consideration which was the carried through training, that it was only come back toward tests of 1000 meters of I row in Gig, being 80% of the total of the weekly training directed toward aeróbico training and 20% directed toward the anaeróbico training.

For accomplishment of this study maximum load tests had been carried through (Uchida, Charro, Bacurau, Navarro and Pontes, 2003) using 3 related exercises directly with the modality and 1 exercise that represents the antagonistic muscle of motor gesture of the rowed one, is the exercises: Agonist Rowed seated in the pulley low, Rowed Bending supported in the bank and Pulled by the front in the high pulley; Straight Supine antagonist in the bank with bar bell of long bar.

A limitation that the study had was that the load for accomplishment of the tests of Rowed seated in the pulley low and Pulled by the front in the high pulley, was not enough so that the athletes reached its maximum loads. The solution found for the appraiser was to guide the athletes to make the maximum number of repetitions with the load maximum allowed for the device, and later correlating this value with the percentage of the maximum load offered by the table of Baechle & Earle (2000), cited for Uchida (2003), being that the athletes who had obtained to execute 15 repetitions more than had been discarded of the sample, therefore the table indicates the relative percentage of the maximum load even stops in the maximum 15 repetitions.

Table 1: Equivalence table of the maximum load (Baechle & Earle, 2000)

Equivalence table	
%1RM	n° rep.
100	1
95	2
93	3
90	4
87	5
85	6
83	7
80	8
77	9
75	10
70	11
67	12
65	15

The intention of the study is to provide the visualization of the increase of the load and not how much it was increased it. By means of such fact, the author does not see problems in accepting the correlation proposal for the appraiser. The first

evaluation was carried through in May of 2005 and second in October of 2005, giving an interval of 5 months between the evaluations.

Results:

The results of the evaluations are presented in tables below, being each one referring one to an exercise with its before and later.

Table 2: Rowed seated in the low pulley

Sample	May (kg)	October (kg)
1	110	107
2	92	110
3	87	97
4	97	110
5	97	113
6	152	157
7	97	107
8	120	117
9	110	123
10	107	117
11	136	120
12	87	97
13	113	120
Average from the team	108,08	115,00
SD	19,15	15,04
Máx	152	157
Mín	87	97
	Teste T = 0,01	October > May

Table 2 shows on the referring collection of data to the values of maximum load gotten in May and October of 2005, in the exercise rowed seated in the low pulley. When comparing the values gotten in the two evaluations, an increase of the load for an only repetition is observed.

Table 3: Rowed bending with support in the bank

Sample	May (kg)	October (kg)
1	73	75
2	80	80
3	70	75
4	80	85
5	80	80
6	90	100
7	75	90
8	70	85
9	80	90
10	80	95
11	110	100
12	75	90
13	75	100
Average of the team	79,85	88,08
SD	10,50	9,02
Máx	110	100
Mín	70	75
	Teste T = 0,01	october > may

In Table 3 we can see on the referring collection of data to the values of maximum load gotten in May and October of 2005, in the exercise rowed bending with support in the bank. When comparing the values gotten in the two evaluations, an increase of the load for an only repetition is observed.

Table 4: Pulled for the front in the high pulley

Sample	May (kg)	October (kg)
1	87	97
2	77	87
3	92	92
4	92	97
5	92	113
6	92	97
7	97	107
8	92	117
9	117	107
10	92	102
11	110	120
12	97	117
13	102	113
Average of the team	95,31	105,08
SD	10,03	10,58
Máx	117	120
Mín	77	87
	Teste T = 0,00	October>May

Table 4 show´s the referring collection of data to the values of maximum load gotten in May and October of 2005, in the exercise pulled for the front in the high pulley. When comparing the values gotten in the two evaluations, an increase of the load for an only repetition is observed

Table 5

Sample	May (kg)	October (kg)
1	80	80
2	90	100
3	60	64
4	70	80
5	90	95
6	110	100
7	80	90
8	60	90
9	100	90
10	60	76
11	100	110
12	80	90
13	80	90
Average of the Team	81,54	88,85
SD	16,25	11,83
Máx	110	110
Mín	60	64
	TesteT = 0,01	October> May

Table 5 show to us the referring collection of data to the values of maximum load gotten in May and October of 2005, in the supine exercise. When comparing the values gotten in the two evaluations, an increase of the load for an only repetition is observed.

The tables indicate that it in such a way had a significant increase in maximum loads in the agonist musculature how much in the antagonistic musculature of the athletes who had participated of this research

Conclusions:

By means of the results and the presented statisticians already, we can affirm that the practical one of I row in Gig provided directly to the athletes who had been part of this research, amongst other factors, the increase of the maximum load for a repetition of the exercises chosen for the accomplishment of the research, mainly in the involved muscular groupings in the motor gesture of the rowed one.

All the four tested exercises had presented significant difference of p< or = 0,01 in Test T, being that in the three of the exercises significant difference it was of 0,01 and in one of them 0,001.

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INCREASE OF THE WHICH HAD MAXIMUM FORCE TO THE TRAINING OF I ROW IN GIG

Summary

Remo is a sport of races of boats of manual propulsion where each remador uses one or two remos to obtain a support in the water and to stimulate the boat ahead or and reverse speed. Remo in Gig, as well as Remo Olímpico, is a sport of cyclical characteristics of aeróbica-anaeróbica predominance (80-20% respectively (FISA, 2002)) e practised for military of the Navy of Brazil the centuries and currently also for civilians who are part of teams of I row Olímpico. So that remadores obtain to generate big power possible for big time possible, it is necessary that they present beyond a anaeróbico threshold very raised, that allows the work in high intensity for a period of bigger time, one high level of located muscular resistance. The dynamic maximum force is a maximum repetition that can be raised or looser, where has alternation between the concentrical and eccentric contractions (Uchida, Charro, Bacurau, Navarrese and Bridges, 2003). Remo is part of the group of sports where the applications of forces are continuous and high, however is not maximum. When adding the duration of the force applications during a test of I row, more observes a value for return of 1 minute or. Although such fact, is observed an increase of the muscular force of the athletes of I row in Gig. This comment took the achievement of this study that it intended to evaluate the probability of profit in the maximum force in result of the training of I row in gig. The citizens of the study had been 13 athletes of row in gig of the team of the instruction center alexandrino admiral, in the etária band of 23 the 29 years and that they were training for competitions of 1000 meters of distance. the individuals had been submitted the maximum load test in May of 2005 and another one in October of 2005, with the following exercises; rowed seated in the pulley low; rowed bending supported in the bank; pulled for the front in the high pulley and supino rectum in the bank with bar bell of long bar. After the analysis with inferencial statistics (teste_t) was evidenced that the group of citizens carried through at as the moment, October of 2005, test with superior load what it made it in May. Beyond the biggest load, the mapeado increase statistical revealed significantly bigger (p<0,05) in all the exercises.

Word-keys: I row in Gig, Test of 1 RM, Training

AUMENTO DE LA FUERZA MÁXIMOS DEBIDO A LA FORMACIÓN DE REMO EN BOTE

Resumen

Reman es un deporte de cursos de barcos de propulsión manual donde cada rameur utiliza unos o dos de los remos para conseguir una ayuda el agua e impulsar barco a continuación o y popa. Reman en Bote, así como reman Olímpico, son un deporte de características cíclicas de predominio aeróbica-anaeróbica (80-20% respectivamente (FISA, 2002)) y practicado por militares de la Marina de Brasil a siglos y actualmente también por civiles que hacen parte de equipos de reman Olímpico. Para que los rameurs consiguen producir el el más grande poder posible por más el mayor tiempo posible, es el necesario que presentan además de un límite máximo anaerobio muy elevado, que permite el trabajo en alta intensidad por un período de tiempo mayor, alto nivel de resistencia muscular localizada. La fuerza máximos dinámica es una repetición máximos que puede levantarse o perdedora, donde tiene de la alternancia entre las contracciones concéntricas y excéntricas (Uchida, Charro, Bacurau, Navarro y Puentes, 2003). Reman formado parte del grupo de deportes donde las aplicaciones de fuerzas son continuas y altas, sin embargo no son máximas. A la adición la duración de las aplicaciones de fuerza durante una prueba de reman, se observado un valor por vuelta de 1 minuto o más. A pesar de tal traje, se observa un aumento de la fuerza muscular de los atletas de Remo en Bote. Este comentario tomó la realización de este estudio el cual pretendió evaluar la probabilidad de beneficio en la fuerza máximos en resultado de la formación de rema en bote. Los temas del estudio fueron 13 atletas de reman en bote del equipo del centro de instrucción el almirante alexandrino, en la banda étaire 23 a 29 años y que se implicaban para competencias de 1000 metros de distancia. se sometió a las personas la prueba de cargamento máxima en mayo de 2005 y demás en octubre de 2005, con los siguientes ejercicios; remada de lugares sentados en la polea reduce; remada curvada sostenida en el banco; extraída por el frente en la alta polea y el supino derecho en el banco con haltére de barra larga. Después del análisis con estadística inferencial (teste_t) se constató que el grupo de temas realizó en el segundo momento, octubre de 2005, prueba con cargamento superior aulequel él lo hizo en mayo. Además del el más grande cargamento, el aumento mapeado se mostró estadísticamente significativamente mayor (p<0,05) en todos los ejercicios.

Palabras-claves: Reman en Bote, Prueba de 1 RM, Formación

AUGMENTATION DE LA FORCE MAXIMA DÛ À LA FORMATION DE RAME DANS CANOT

Résumé

Ils Rament est un sport de courses de bateaux de propulsion manuelle où chaque rameur utilise un ou deux des remos pour réussir une aide l'eau et impulser bateau en avant ou et poupe. Ils Rament dans Canot, ainsi que Rament Olympique, est un sport de caractéristiques cycliques de prédominance aeróbica-anaeróbica (80-20% respectivement (FISA, 2002)) et pratiqué par des militaires de la Marine du Brésil à des siècles et actuellement aussi par des civils qui font partie d'équipes de Rament Olympique. Pour que les rameurs réussissent à produire la plus grande pouvoir possible par plus le plus grand temps possible, est nécessaire qui présentent outre un seuil anaérobie très élevé, qui permet le travail dans intensité haute par une période de temps plus grand, un haut niveau de résistance musculaire localisée. La force maxima dynamique est une répétition maxima qui peut être soulevée ou perdante, où a de l'alternance entre les contractions concentriques et excentriques (Uchida, Charro, Bacurau, Navarrais et Ponts, 2003). Ils Rament fait partie du groupe de sports où les applications de forces sont continues et hautes, néanmoins ne sont pas maxima. À l'adjonction la durée des applications de force pendant une preuve ils de

Rament, s'observe une valeur par retour de 1 minute ou plus. Malgré de tel costume, s'observe une augmentation de la force musculaire des athlètes de Rame dans Canot. Ce commentaire a pris la réalisation de cette étude laquelle il a prétendue évaluer la probabilité de profit dans la force maxima dans résultat de la formation de rament dans canot. Les sujets de l'étude ont été 13 athlètes de rament dans canot de l'équipe du centre d'instruction amiral alexandrino, dans la bande étaire de 23 à 29 ans et qu'ils s'entraînaient pour des concurrences de 1000 mètres de distance. les personnes ont été soumises l'essai de chargement maximum en mai 2005 et autre en octobre 2005, avec les suivants exercices ; ramée de places assises dans la poulie il abaisse ; ramée courbée soutenue dans la banque ; tirée par le devant dans la poulie haute et la supino droite dans la banque avec haltére de barre longue. Après l'analyse avec statistique inferencial (teste_t) il s'est constaté que le groupe de sujets a réalisé au second moment, octobre 2005, essai avec chargement supérieur auléquel il l'a fait en mai. Outre la plus grande chargement, l'augmentation mapeado s'est statistiquement montrée significativement plus grand (p<0,05) dans tous les exercices.

Mot Clefs: Ils rament dans Canot, Essai de 1 RM, Formation

AUMENTO DA FORÇA MÁXIMA DEVIDO AO TREINAMENTO DE REMO EM ESCALER

Resumo

O Remo é um esporte de corridas de barcos de propulsão manual onde cada remador utiliza um ou dois remos para conseguir um apoio na água e impulsionar a embarcação adiante ou e ré. O Remo em Escaler, assim como o Remo Olímpico, é um esporte de características cíclicas de predominância aeróbica-anaeróbica (80-20% respectivamente (FISA, 2002)) e praticado por militares da Marinha do Brasil a séculos e atualmente também por civis que fazem parte de equipes de Remo Olímpico. Para que os remadores consigam gerar a maior potência possível pelo maior tempo possível, é necessário que apresentem além de um limiar anaeróbico muito elevado, que permite o trabalho em intensidade alta por um período de tempo maior, um alto nível de resistência muscular localizada. A força máxima dinâmica é uma repetição máxima que pode ser levantada ou vencida, em que há alternância entre as contrações concêntricas e excêntricas (Uchida, Charro, Bacurau, Navarro e Pontes, 2003). O Remo faz parte do grupo de esportes onde as aplicações de forças são contínuas e altas, porém não são máximas. Ao somar a duração das aplicações de força durante uma prova de Remo, observa-se um valor por volta de 1 minuto ou mais. Apesar de tal fato, observa-se um aumento da força muscular dos atletas de Remo em Escaler. Esta observação levou a consecução deste estudo que pretendeu avaliar a probabilidade de ganho na força máxima em decorrência do treinamento de remo em escaler. Os sujeitos do estudo foram 13 atletas de remo em escaler da equipe do centro de instrução almirante alexandrino, na faixa etária de 23 a 29 anos e que estavam treinando para competições de 1000 metros de distância. os indivíduos foram submetidos a teste de carga máxima em maio de 2005 e outro em outubro de 2005, com os seguintes exercícios; remada sentada na polia baixa; remada curvada apoiada no banco; puxada pela frente na polia alta e supino reto no banco com halter de barra longa. Após a análise com estatística inferencial (teste_t) constatou-se que o grupo de sujeitos realizou no segundo momento, outubro de 2005, teste com carga superior ao que o fez em maio. Além da maior carga, o aumento mapeado estatisticamente mostrou-se significativamente maior (p<0,05) em todos os exercícios.

Palavras-chaves: Remo em Escaler, Teste de 1 RM, Treinamento.