

O efeito da prescrição do treinamento de força na fragilidade física: Uma meta-análise de ensaios clínicos randomizados.

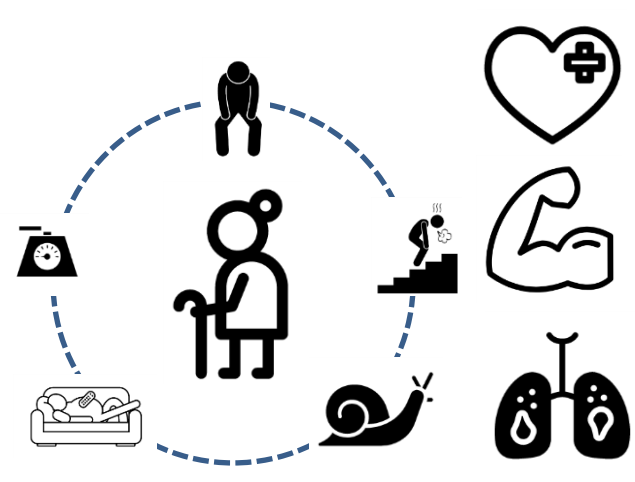


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Introdução



Fatores relacionados a Síndrome de Fragilidade



Efeitos positivos com o treinamento de força (TF) combinado com outros componentes

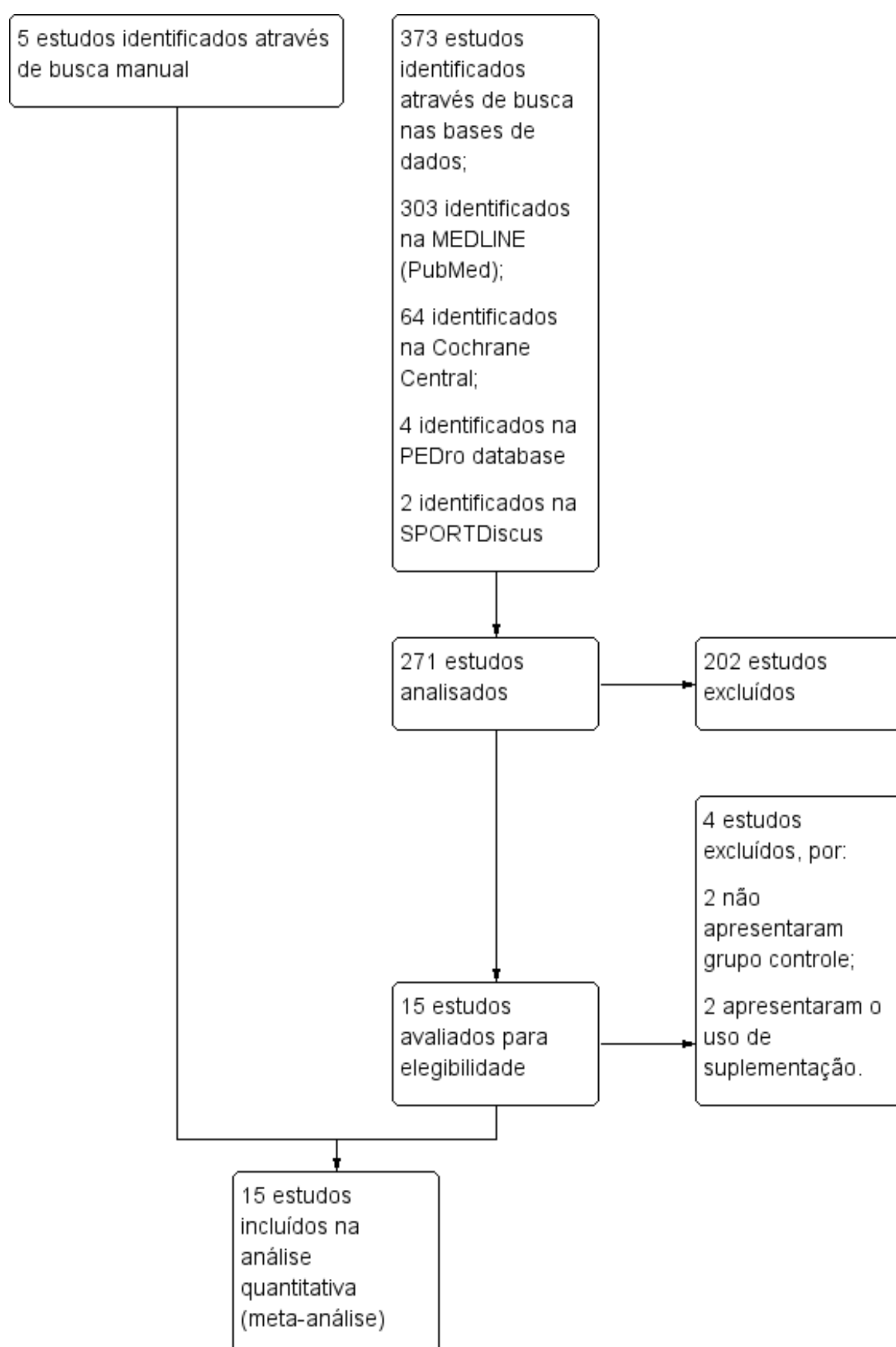
Objetivo

Revisar sistematicamente e analisar os efeitos do TF realizado com outros tipos de exercícios sobre a força máxima em indivíduos fisicamente frágeis.

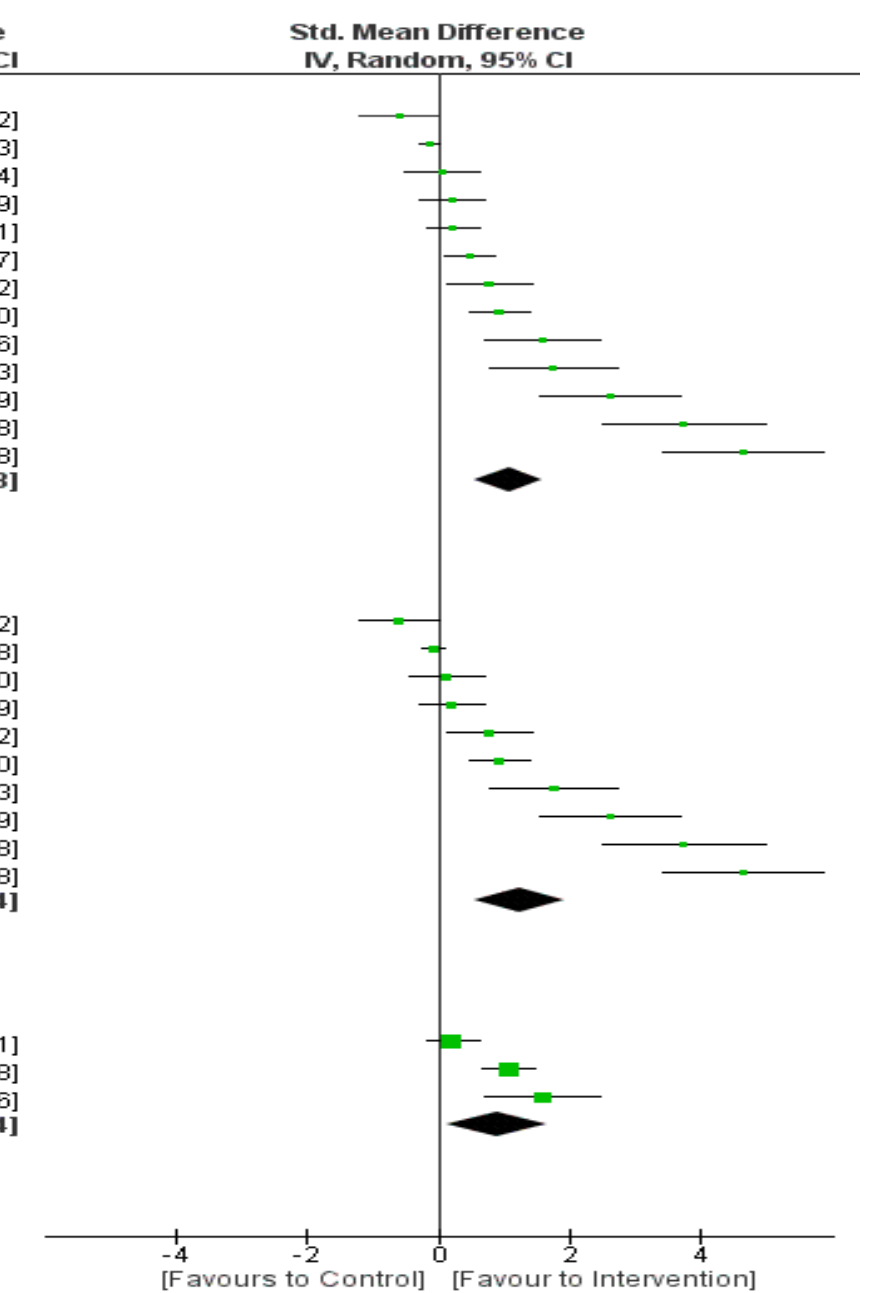
Métodos

A busca dos estudos foi realizada nas bases de dados MEDLINE, Cochrane CENTRAL, PEDro, e SPORTdiscus, além de busca manual nos últimos 12 anos. A diferença de média padronizada pós-intervenção foi computada e combinada utilizando o efeito fixo.

Resultados



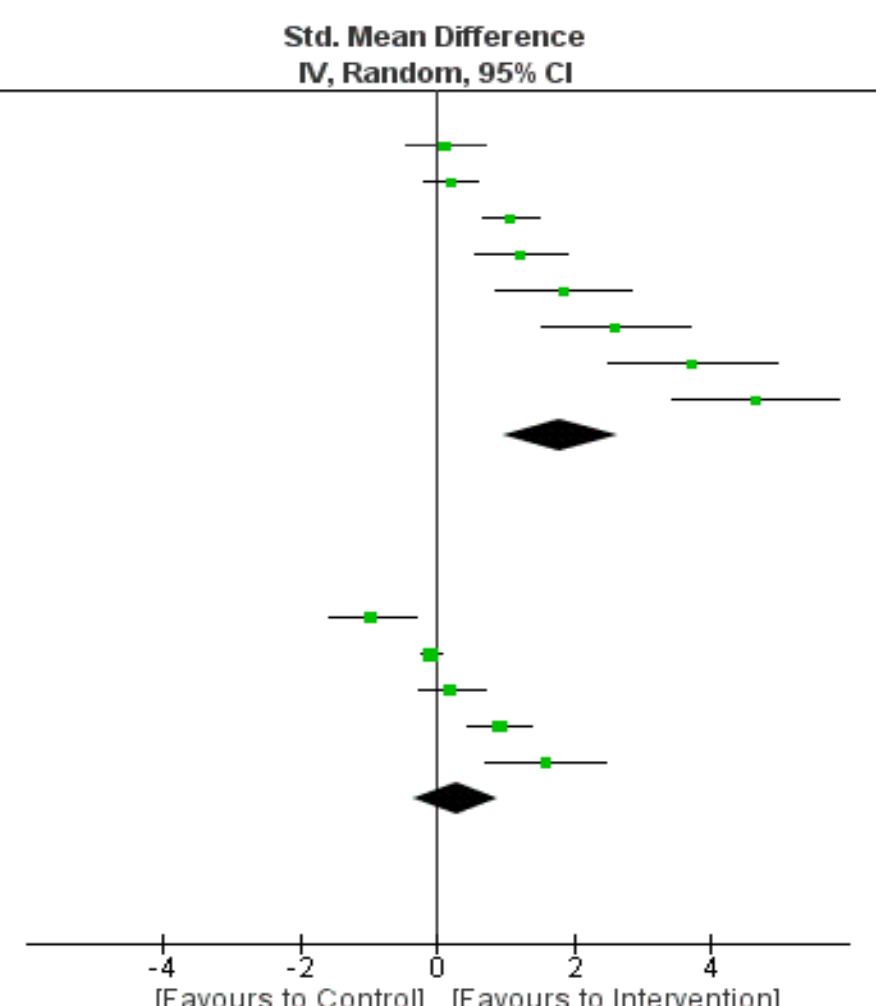
Study or Subgroup	Experimental			Control			Weight	Std. Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
1.1.1 Knee extensor maximum strength								
Lustosa 2011	-1.1	13.309	32	6.72	12.211	16	8.1%	-0.59 [-1.21, 0.02]
Lee 2013	1.5	5.42	313	2.2	5.41	303	9.0%	-0.13 [-0.29, 0.03]
Rosendahl 2006	10.9	41.9	24	8.2	39.9	23	8.2%	0.06 [-0.51, 0.64]
Kim 2015	8.81	28.79	33	2.27	33.18	33	8.4%	0.21 [-0.28, 0.69]
Ng 2015	1.76	2.79	49	1.13	2.97	50	8.6%	0.22 [-0.18, 0.61]
Gudlaugson 2012	28.5	88.73	48	-13.9	85.13	58	8.7%	0.49 [0.10, 0.87]
Serra-Rexach 2011	10.6	19.244	20	-4	17.48	20	8.0%	0.78 [0.13, 1.42]
Kim 2012	0.02	0.18	39	-0.14	0.16	39	8.5%	0.93 [0.46, 1.40]
Ikezo 2005	0.13	0.17	13	-0.14	0.16	15	7.2%	1.59 [0.72, 2.46]
Cadore 2014	294	285.491	11	-164	218.477	13	6.9%	1.76 [0.79, 2.73]
Hess 2006	32.7	7.47	13	-4.3	17.6	14	6.5%	2.62 [1.55, 3.69]
Kryger 2007	23.08	8.3	15	-3.08	4.9	15	5.9%	3.73 [2.49, 4.98]
Giné-Garriga 2010	0.15	0.04	22	-0.04	0.04	19	6.0%	4.66 [3.43, 5.88]
Subtotal (95% CI)			632			618	100.0%	1.07 [0.56, 1.58]
Heterogeneity: Tau ² = 0.75; Chi ² = 159.11, df = 12 (P < 0.00001); I ² = 92%								
Test for overall effect: Z = 4.10 (P < 0.0001)								



Study or Subgroup	Experimental			Control			Weight	Std. Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
1.1.2 ≤ 12 weeks								
Lustosa 2011	-1.1	13.309	32	6.72	12.211	16	10.5%	-0.59 [-1.21, 0.02]
Lee 2013	1.5	10.6	313	2.2	6.75	303	11.4%	-0.08 [-0.24, 0.08]
Rosendahl 2006	10.9	18	24	8.2	24.7	23	10.7%	0.12 [-0.45, 0.70]
Kim 2015	8.81	28.79	33	2.27	33.18	33	10.9%	0.21 [-0.28, 0.69]
Serra-Rexach 2011	10.6	19.244	20	-4	17.48	20	10.4%	0.78 [0.13, 1.42]
Kim 2012	0.02	0.18	39	-0.14	0.16	39	10.9%	0.93 [0.46, 1.40]
Cadore 2014	294	285.491	11	-164	218.477	13	9.4%	1.76 [0.79, 2.73]
Hess 2006	32.7	7.47	13	-4.3	17.6	14	9.0%	2.62 [1.55, 3.69]
Kryger 2007	23.08	8.3	15	-3.08	4.9	15	8.4%	3.73 [2.49, 4.98]
Giné-Garriga 2010	0.15	0.04	22	-0.04	0.04	19	8.4%	4.66 [3.43, 5.88]
Subtotal (95% CI)			522			495	100.0%	1.25 [0.57, 1.94]
Heterogeneity: Tau ² = 1.07; Chi ² = 142.49, df = 9 (P < 0.00001); I ² = 94%								
Test for overall effect: Z = 3.57 (P = 0.0004)								

Study or Subgroup	Experimental			Control			Weight	Std. Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
1.1.3 >12 weeks								
Ng 2015	1.76	2.79	49	1.13	2.97	50	36.9%	0.22 [-0.18, 0.61]
Gudlaugson 2012	28.5	43.12	48	-13.9	35.9	58	36.6%	1.07 [0.66, 1.48]
Ikezo 2005	0.13	0.17	13	-0.14	0.16	15	26.5%	1.59 [0.72, 2.46]
Subtotal (95% CI)			110			123	100.0%	0.89 [0.14, 1.64]
Heterogeneity: Tau ² = 0.36; Chi ² = 12.91, df = 2 (P = 0.002); I ² = 85%								
Test for overall effect: Z = 2.34 (P = 0.02)								

Study or Subgroup	Experimental			Control			Weight	Std. Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
1.4.1 RM prescription								
Rosendahl 2006	10.9	18	24	8.2	24.7	23	13.4%	0.12 [-0.45, 0.70]
Ng 2015	1.76	2.79	49	1.13	2.97	50	13.9%	0.22 [-0.18, 0.61]
Gudlaugson 2012	28.5	43.12	48	-13.9	35.9	58	13.9%	1.07 [0.66, 1.48]
Serra-Rexach 2011	10.6	10.57	20	-4	12.5	20	13.1%	1.24 [0.55, 1.92]
Cadore 2014	294	283.45	11	-164	193	13	12.0%	1.85 [0.87, 2.84]
Hess 2006	32.7	7.47	13	-4.3	17.6	14	11.7%	2.62 [1.55, 3.69]
Kryger 2007	23.08	8.3	15	-3.08	4.9	15	11.0%	3.73 [2.49, 4.98]
Giné-Garriga 2010	0.15	0.04	22	-0.04	0.04	19	11.0%	4.66 [3.43, 5.88]
Subtotal (95% CI)			202			212	100.0%	1.81 [0.96, 2.66]
Heterogeneity: Tau ² = 1.31; Chi ² = 89.24, df = 7 (P < 0.00001); I ² = 92%								
Test for overall effect: Z = 4.17 (P < 0.0001)								



Study or Subgroup	Experimental			Control			Weight	Std. Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
1.4.2 RPE prescription								
Lustosa 2011	-1.1	8.9	32	6.72	6.23	16	19.0%	-0.95 [-1.58, -0.31]
Lee 2013	1.5	10.6	313	2.2	6.75	303	23.4%	-0.08 [-0.24, 0.08]
Kim 2015	8.81	28.79	33	2.27	33.18	33	20.7%	0.21 [-0.28, 0.69]
Kim 2012	0.02	0.18	39	-0.14	0.16	39	20.9%	0.93 [0.46, 1.40]
Ikezo 2005	0.13	0.17	13	-0.14	0.16	15	16.1%	1.59 [0.72, 2.46]
Subtotal (95% CI)			430			406	100.0%	0.30 [-0.32, 0.91]
Heterogeneity: Tau ² = 0.42; Chi ² = 38.12, df = 4 (P < 0.00001); I ² = 90%								
Test for overall effect: Z = 0.94 (P = 0.35)								

Conclusão

O TF se mostra como uma ferramenta eficiente para melhorar os aspectos físicos relacionados à síndrome de fragilidade. Entretanto, é importante ter atenção na prescrição do treinamento, sendo que períodos iniciais (≤12 semanas) e prescrições por repetições máximas podem influenciar a magnitude dos ganhos na força máxima.