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- 1- Robert
 - 2- Wang
 - 3- Ding
 - 4- Yannakoulia
 - 5- Christopher
 - 6- Nicklas



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1- Jason

2- Soluble Vascular Cell Adhesion Molecule-1



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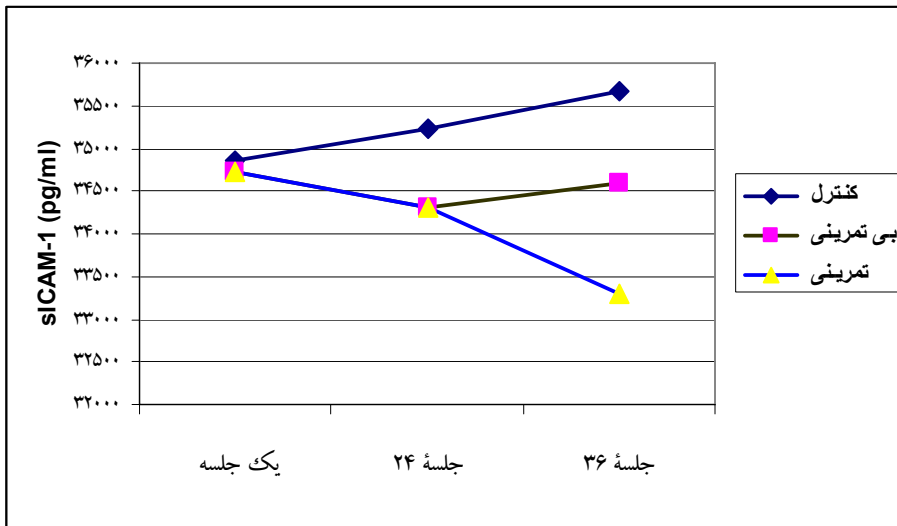
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1- Mastro

2- Nielsen



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3. Abramson J.L and Vaccario V. (2002). "Relationship between physical activity and inflammation among apparently healthy middle-aged older us adults". *Arch. Intern.Med* . 162(11). PP: 1286-92.

4. Adamopoulos S. Parissis J.Kroupis & et al. (2001). "Physical training reduces peripheral marker of inflammation in patients with chronic heart failure". *Eur heart J*. Vol . 22.Isse 9, PP: 791-797.

5. Akimoto T.Furudate M, Saitoh M & et al. (2002) ."Increased plasma concentrations of intercellular adhesion molecule -1 after strenuous exercise associated with muscle damage". *Eur J Appl Physiol*. 86(3). P:763.

6. Anna Maria Witkowska. (2005). "Solubl ICAM-1:A marker of vascular inflammation and lifestyle: Cytokin. Vol 31, Issue 2, PP:127-134.

7. Blake and Ridker. (2001). "Novel Clinical marker of vascular wall inflammation": *Circulation research*: 89(9). 763.

8. Bauer J.J. and Snow C. M. (2003). "What is the prescription ofr healthy bones? *J Musculoskel Neuron Interact*. 3(4): PP:352-55.

9. Blake and Ridker . (2002). "Inflammatory bio-marker and cardiovascular risk prediction" : *J Intern. Med*. 252(4): PP:283-94.

10. Christopher JK. Hamett et al. (2006). "Effects of exercise training on 5 inflammatory markers associated with cardiovascular risk ". *American heart J*.Vol 151, Issue 2, 367.e 7-367.e16.

11. Demerath E, Towne B, Blangero J, Sierrogle RM. (2001). "The relationship of soluble ICAM-1, VCAM-1, P-selectin and E-selec in to cardiovascular disease risk factors in healthy men and women. *Ann Hum Biol*. 28(6) : PP: 664-78.

12. Dierenfield, yamada and et al. (2003). "Physiologic metabolic comparison of older (>50Y.O.) triathletes to healthy normal part 1: Women : *Med sci. Spo . Exer*. 35(5) : P: 205.

13. Ding YH, Young CN.Luan X, Li J, & et al. (205). "Exercise preconditioning ameliorates inflammatory injury in ischemicf rats during reperfusion". *Acta Neuropathol (Berl)*. Mar ; 109(3) : PP:237-46.

-
14. Geffken D F, Cushman M. and et, al. (2001). "Association between physical activity and marker of inflammation in a health elderly population". *American J of epidemiology*. 153(3) ; PP:242-50.
15. Hopper C.A.,M.B. Gruber, K.D. Munoz, S.E.MacConnie, Y.M.Pfingson, and K.Nguyen. (2001). "Relationship of blood cholesterol to boy composition physical fitness and dietary intake measures in third-grade children and their parents.), *Res. Q*. 72 : PP:182-188.
16. Jason M.R. Gill, Muriel J. Caslake, Craig McAlister, Fotini Tsoflion , William R.Ferrell, Chris J. Packard and Dalia Malkova. (2003). "Effects of short-term detraining on postprandial metabolism endothelial function, and inflammation in endurance-trained men : dissociation between changes in triglyceride metabolism and endothelial function, *J of Clinical endocrinology & Metabolism* Vol. 88, No. 9, PP: 4328-4335.
17. Jessica L, Clarke & et al. (2005). "Comparison of differing C-reactive protein assay methods and their impact on cardiovascular risk assessment": *The American Journal of cardiology* : 95(1) :PP:155-58.
18. Mastro, Andrea M; Schlosser David A; and et al . (1999). "Lymphocyte subpopulations in lymphoid organs of rats after acute resistance exercise". *Med. Sci. Spo. Exer* . 31(1); PP:74-81.
19. Nicklas BJ, Ambrosius W, Messier SP, and et al . (2004). "Diet-induced weight loss, exercise and chronic inflammation in older, obese adults". *Arandomized controlled clinical trial. Am.J.Clin.Nutri*.79:PP:544-551.
20. Nielsen HG, Lyberg T. (2004). "Long-distance running modulates the expression of leucocyte and endothelial adhesion molecules". *Journal of Immonology*, 60. PP: 356-362
21. Piro M, Giubilate G, and et al. (2005). "Endothelium and in flammation *Panminerum Med*. 47(2) : PP: 75-80.
22. Ridker P.M, Rifai N, and et al.(2002). "Camparision of C-reactive protein and LDL cholesterol levels in the prediction of first cardiovascular events". *New England J. Medicine* : 347. PP:1557-65
23. Roberts CK, Won D, Pruthi S, Lin SS, Barnard RJ. (2006). "Effect of a diet and exercise intervention on oxidative stress, inflammation and monocyte adhesion in diabetic men". *Diabetes Res Clin pract*. Apr 6.
24. Simpson RJ, Florida-James GD, Whyte GP, Guy K. (2006). "The effects of intensive, moderate and downhill treadmill running of human blood lymphocytes expression the adhesion activation molecules CD54(ICAM-1), CD18(B2integrin)and CD53.

-
25. Smith LL, Amwar A, Fragen M, and et al. (2000). "Cytokine and cell adhesion molecules associated with high-intensity eccentric exercise . *Eur J Appl Physiol.* 82(1-2) : PP:61-7.
26. Somani SM. Husain K. (1996). "Exercise training alters kinetics of antioxidant enzymes in rat tissues". *Bioche.* 38:PP:587-95.
27. Turk J.R, and Layghlin M.H. (2004). "Physical activity and atherosclerosis which animal model"? *Can , J.Appl.Physiol.*29(5) : PP: 657-83.
28. Wang R.Y, Yang Y.R,Yu S.W. (2001). "Protective effects of treadmill training on infarction in rats, *Brain Research* 922, PP:140-143.
29. Wisloff U, Helegerud J and et.al. (2001). "intensity controlled tread mill running in rats: VO₂max and cardiac hypertrophy". *Am . J.Physiol heart circ. Physiol.* 280: PP:H1301-10.
30. Womack C.J. Ivey F.M and et al. (2001). "Fibrinolytic response to acute exercise in patients with peripheral arterial disease: *med. Sci. Spo.Exer.* 33(2). PP:214-19.
31. Yannakoulia M, Chrousos GP, Sidossis LS. (2005). "Aerobic exercise training improves insulin sensitivity without changes in body weight, body fat, adiponectin, and inflammatory markers in over weight and obese girls". *Med.Sci.Spo.Exer.* 33(2): PP:214-19.
32. Ziccardi P, Nappo F, Giugliano, and et al. (2002). "Reducing of inflammatory cytokine concentration and improvement of endothelial functions in obese women after weight loss over on year". *Circulation.* 105;PP:804-809.