

:
/ / :
/ / :

CRP

CRP

CRP

TG, HDL-C

CRP

LDL-C

(/ mg/dl)

CRP

(P< /)

(/ mg/dl)

HDL-C

CRP

(r = / P< /)

CRP

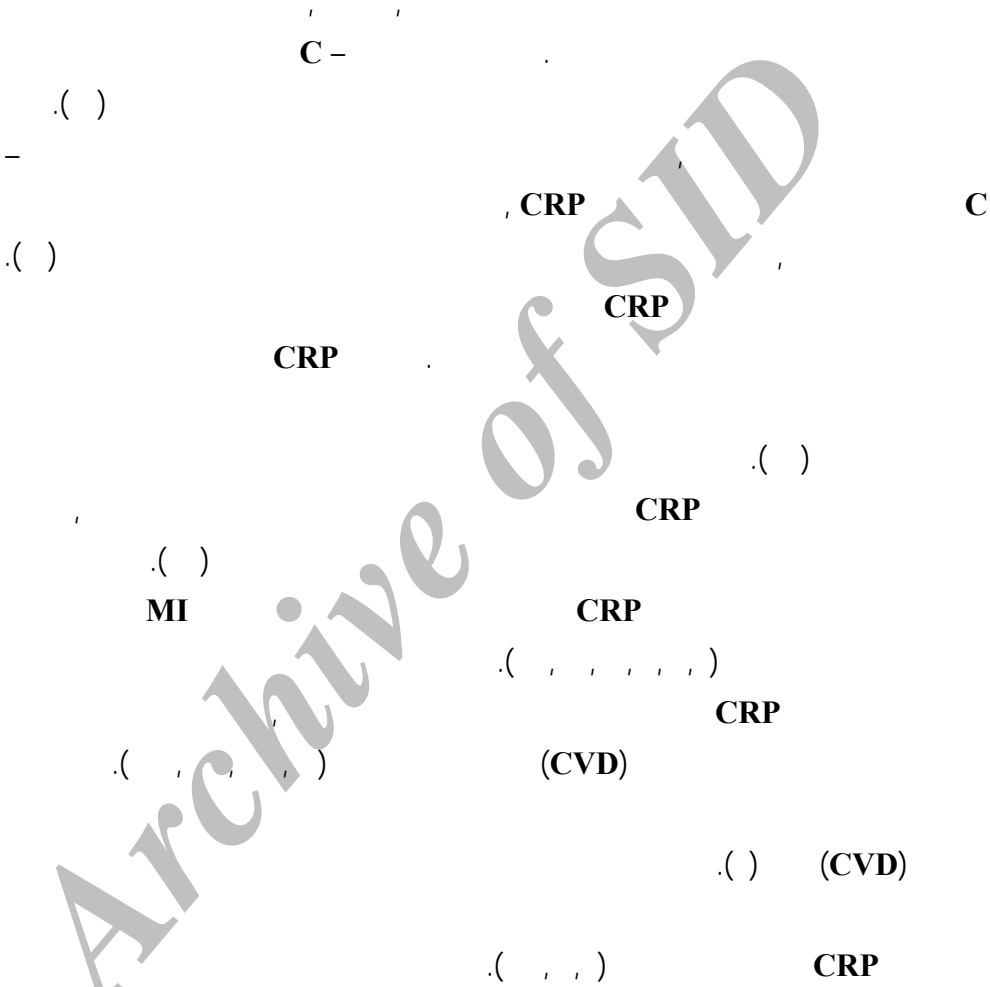
CRP

CRP

Email : md.faramarzi@gmail.com



(APPs)



-
- 1 - Acute Phase Proteins
 - 2 - C-Reactive Proteins
 - 3 - Phosphocholine
 - 4 - Phosphatidylcholine
 - 5 - Geffken et al

		CRP		
		()	CRP	
CRP				
CRP				()
	CRP			
CRP				()
	CRP			
	()	CRP		
		BMI	()	
		CRP		
()	CRP			
				CRP
				CRP
				(
CRP				

1 - Rohde et al
2 - Mattusch et al



Archive of SID

$$\text{VO}_{2\text{max}} \text{ (ml.kg}^{-1}\text{.min}^{-1}\text{)} = \left[\frac{\text{VO}_{2\text{max}}}{\text{D}} \right] \times (\text{D}) - \frac{\text{VO}_{2\text{max}}}{\text{D}}$$

CRP

CRP

CRP

Auto Analyzer R1000

(CRP)

(CRP)

ml

mg/dl

CRP

Auto Analyzer

LDL HDL TG

Ziest Chem Diagnostic

R1000

Atuo Analyzer R1000

mg/dL

,SPSS

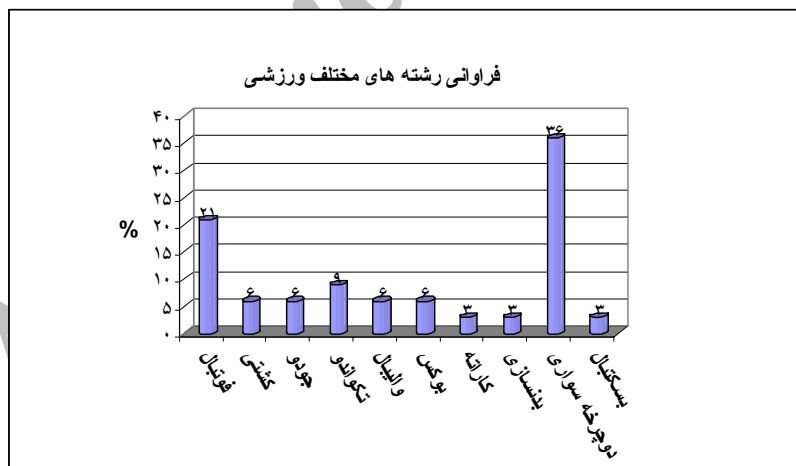
t

TG CRP

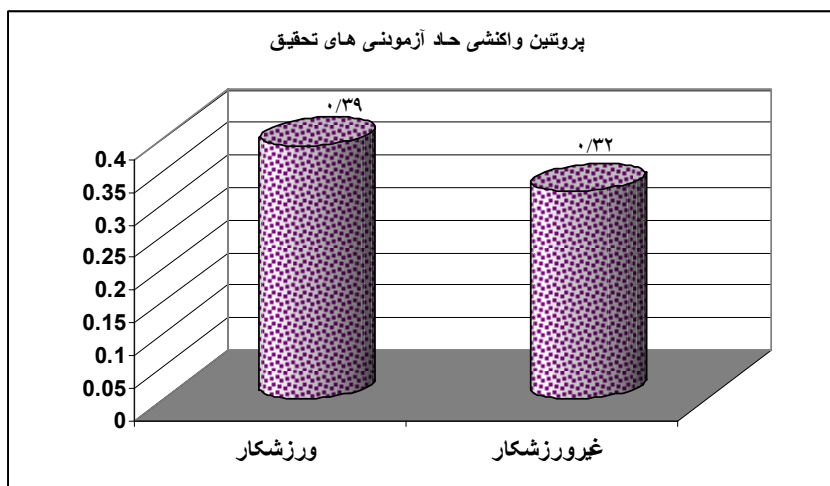
1 - Immunoturbidimetric Method

		/ ± /	/ ± /	()
/	/	/ ± /	/ ± /	()
/	/	/ ± /	/ ± /	()

/	/	/ ± /	/ ± /	(mg/dl)
/	/	/ ± /	/ ± /	(mg/dl)
/	/	/ ± /	/ ± /	(mg/dl) HDL- C
/	/	/ ± /	/ ± /	(mg/dl) LDL-C
/	/	/ ± /	/ ± /	(mg/dl) CRP
/	/	/ ± /	/ ± /	(m)
/	/	/ ± /	/ ± /	(ml.kg ⁻¹ .min ⁻¹) VO _{2max}



CRP



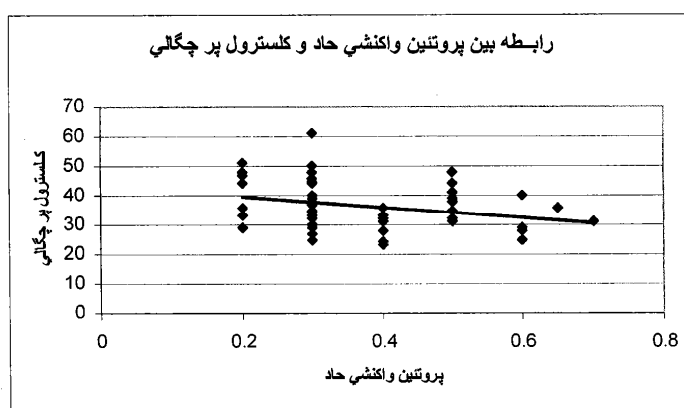
(CRP)

(P < /)

HDL-C

CRP

((r = /)



(CRP)

VO _{2max}	CRP	LDL-C	HDL-C						
						*	/	*	
					**	**	/	*	
				/	/	/	/	**	HDL-C
			/	/	/	/	/	*	LDL-C
		/	*	/	/	/	/	*	CRP
	/	/	/	*	/	**	/	*	
/	/	/	/	*	/	**	/	/	VO _{2max}

P= / *
P= / *

CRP
(P< /)
mg/dL⁻¹ (/ mg/dL⁻¹) C -
(/)
CRP
()
(,)

CRP	
()	()
()	CRP
CRP	
()	CRP
CRP	CRP
CRP	CRP
()	CRP
CRP	CRP
()	CRP
CRP	CRP
()	CRP
(TNF- α)	(IL-6)

Archive of SID

	IL-6	IL-6	TNF- α
		()	CRP
CRP		()	CRP
()			
(P< / r = /)	BMI		CRP
	CRP		
CRP			
()		CRP	
		CRP	
			CRP
		()	CRP
	CRP		
CRP			

Archive of SID

CRP

CRP

(TNF- α IL-6)

HDL-C

CRP

TG LDL

()

CRP

()

(.)

HDL-C CRP

HDL

CRP HDL

CRP

TG

CRP

CRP

CRP

CRP

1. AHA Scientific Statement : Aspirin as a therapeutic Agent in cardiovascular Disease, 71-0129 circulation. 1997; 96 : PP:2751-2753.
2. Albert MA. (2000). "The role of C-reactive protein in cardiovascular disease risk". *Cur Cardiol Rep*; 2(4): PP:274-9.
3. Ballou SP, Kushner I. (1992). "C-reactive protein and acute phase response". *Adv Intern Med*; 37 : PP: 313-36.
4. Bogaty P, Poirier P , Simard S. "Biological profiles in subjects with recurrent acute coronary event compared with subjects with Long-standing stable angina".
5. Barinas-Mitchell E, Cushman M, Meilahn EN, Tracy RP, Kuller LH.(2001). "Serum levels of C-reactive protein are associated with obesity, weight gain, and hormone replacement therapy in healthy postmenopausal women". *Am J Epidemiol*. 153: PP: 1094-1101.
6. Church TS, Barlow CE, Earnest JB, (2002). "Association between cardiorespiratory fitness and C-reactive protein in men". *Arterioscler thromb vasc boil*, 22:PP:1896-1876.
7. Eric S. Rawson , Partty S. Fredson. (2003). "Body mass index, but not physical activity, is associated with C-reactive protein". *Med Sci Sports Exerc*. 35:PP:1160-1166.
8. Gavin J.Blake, Paul M.Ridker.(2001). "Novel clinical marders of vascular wall inflammation", *Circ Res*, 89:PP:763-771.
9. Geffken DF, Cushman M.Burke GL, Polka JF, Tracy RP. (2001). "Association between physical activity and markers of inflammation in a healthy elderly population". *Am J Epidemiol*. 153 :PP:242-250.
10. Koenig W, Sund M,(1999). "C-reactive protein, a sensitive marker of inflammation, predicts future risk of coronary heart disease in initially healthy middle-aged men: result from the MONICA (Monitoring trends and Determination in Cardiovascular) Augsburg Cohort Study", 1984 to 1992). *Circulation*, 99(2) : PP:273-42.
11. Kushner LH, Tracy RP, Shaten J, meilahn EN for the MRFIT Research Group.(1996). "Relation of C-reactive protein and the risk of cardiovascular

disease in the MRFIT nested case-control study". *Am J Epidemiol* 1996 : 114 : PP: 537-41.

12. Ridker P, Cushman C, Stampfer M, Tracy RP, Hennekens C. (1997). "Inflammation, aspirin and the risk of cardiovascular disease in apparently healthy men. *N Engl J med* ; 336: PP:973-9.

13. Lagrand WK, Visser CA, Hermens WT, Nissen HW. (1999). "C-reactive protein as a cardiovascular risk factor: more than an epiphenomenon"? *Circulation*, 100: PP:96-1023.

14. Lindahl B, Toss H, Siegbahn A, Venge P. (2000). "Markers of myocardial damage and inflammation in relation to long-term mortality in unstable coronary artery disease". FRISC study group. *Fragmin during Instability in Coronary Artery Disease. N Engl J Med.* 343 : PP: 1139-1147.

15. Mackinnon, Laurel T.(1999). "Advances in exercise immunology", *Human Kinetics*.

16. Mark B.Pepys and Gideon M. Hirschfield (2003). "C-reactive protein : a critical update", *J. Clin. Invest.* 111 : PP: 1805-1812.

17. Mattusch F, Dufaux B, Hein O, et al. (2000). "Reduction of the plasma concentration of C-reactive protein following nine months of endurance training". *Int J Sport Med.* 21 : PP: 21-24.

18. Michael J. La Monte; J. Larry Durstine ; Frank G. Yanowitz; Tobin Lin. (2002). "Cardiorespiratory fitness and C- reactive protein among a Tri-Ethnic sample of women". *Circulation*, 106 : PP: 403-406

19. Morrow D, Rifai N. antman EM, et al. (1998). "C-reactive protein is a potent predictor coronary syndromes : a TIMI 11 A substudy". *Thrombolysis in myocardial Infraction. Jam Coll Cardial* ; 31(7) : PP: 1460-5.

20. Nader Elgharibi, MD; David S.Chi ;(2003). "Walid Younis, Reactant can flag atherosclerosis and helper predict cardiac events" *postgraduate Medicine*, Vol. 114, No 6.

21. Ridker PM, Hennekens CH, Buring JE, Rifai N. (2000). "C-reactive protein and other markers of inflammation in the prediction of Cardiovascular disease in women". *N Engl J Med.* 342 : PP: 836-843.

22. Ridker P, Cushman C, Stampfer M, Tracy RP, Hennekens C.(1997). "Inflammation, aspirin and the risk of Cardiovascular disease in apparently healthy men". *N Engl J Med*; 336 :PP:973-9.

23. Ridker PM, Hennekens CH, Buring JE, Rifai N. (2000). "C-reactive protein and other markers of inflammation in the prediction of cardiovascular disease in women". *N Engl J Med* . 342: PP:836-843.

24. Ridker PM, Rifai N, Clear Field M, Downs JR. (2001). "Measurement of C-reactive protein for the targeting of statin therapy in the primary prevention of acute coronary events". *N Engl J Med.* 344: PP: 1959-1965.

25. Ridker PM. (2001). "High-sensitivity C-reactive protein : potential adjunct for global risk assessment in the primary prevention of cardiovascular disease". *Circulation.* 103 : PP: 1813-1818.

26. Ridker PM. (1999). "Evaluating novel cardiovascular risk factors: can we better predict heart attacks"? *Ann Intern Med.* 130 : PP: 933-937.

27. Rifai N, Ridker PM. (2001). "High-sensitivity C-reactive protein : a novel and promising marker of coronary heart disease". *Clin Chem ;* 47(3) : PP:403-11.

28. Roger W. Earle, Thomas R. Baechle. (2004). "NSCA essentials of personal training". Human Kinetics Publication.

29. Rohde LE, Hennekens CH, Ridker PM. (1999). "Survey of C-reactive protein and cardiovascular risk factors in apparently healthy men". *Am J Cardiol.* 84 : PP:1018-1022.

30. Vasabkari TJ, Kujala UM, Vasankari TM et al. (1998). "Reduced oxidized LDL levels after a 10-month exercise program". *Med Sci Sport Exerc.* 30 : PP: 1496-1501.

31. Visser M, Bouter LM, Mc Quillan GM, Wener MH. (1999). "Elevated C-reactive protein levels in overweight and obese adults". *JAMA.* 282 : PP: 2131-2135.

Archive of SID