

# THE ROLE OF REGULAR SCREENINGS ON TOTAL CHOLESTEROL FOR CORONARY HEART DISEASE PREVENTION



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## INTRODUCTION

- High blood cholesterol level is associated with increased risk for coronary heart disease (CHD), especially in middle-aged and older adults.<sup>1,4</sup>
- While the Asian Americans/Pacific Islanders (AAPI) population has a slower progression rate of coronary heart disease compared to other races, hyperlipidemia is often overlooked for this population.<sup>5</sup>
- This study investigates the role of regular screenings on total cholesterol and fasting triglycerides concentrations in the AAPI population in Madison Heights, Michigan.

## METHODS

- Serum fasting total cholesterol and triglycerides concentrations were measured from 34 patients.
- All 34 patients received preventive screenings at least twice within six months at the Asian Pacific American Medical Student Association (APAMSA) student clinic.
- If the total cholesterol concentration exceeded 251.35 mg/dL, we took triglyceride concentration into consideration to prevent overestimating CHD risk.<sup>3</sup>
- Changes in total cholesterol and triglycerides concentrations over time were statistically analyzed. (Figure 3)

## PRELIMINARY RESULTS

- 23 (67.6%) patients showed decreased total cholesterol concentration at their most recent screening compared to their first screening. (Figure 1)
- 4 (11.7%) patients showed total cholesterol concentration exceeding 251.35 mg/dL, prompting for triglyceride concentration consideration.
- Within these 4 patients, all 4 (100%) showed decreased total cholesterol concentration at their most recent screening compared to their first screening, and 3 (75%) patients showed decreased fasting triglyceride concentration at their most recent screening compared to their first screening. (Figure 2)

CHANGES IN TOTAL CHOLESTEROL LEVEL WITH REGULAR SCREENINGS

■ Unchanged or Increased Total Cholesterol ■ Decreased Total Cholesterol

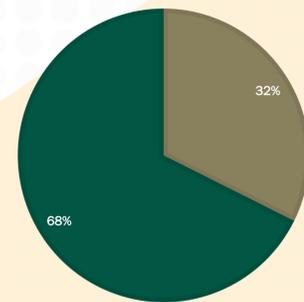


Figure 1: Comparison of changes in total cholesterol level in patients who receive regular screenings

CHANGES IN FASTING TRIGLYCERIDE LEVEL IN PATIENTS WITH TOTAL CHOLESTEROL > 251 MG/DL

■ Unchanged or increase fasting triglyceride level ■ Decreased triglyceride level

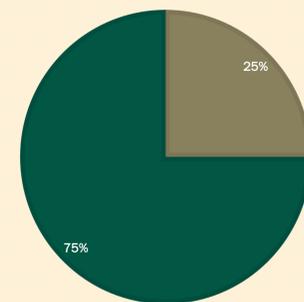


Figure 2: Comparison of changes in fasting triglyceride level in patients with total cholesterol > 251 mg/dL who receive regular screenings

Date	BMI	Sex	DOB	Ht	Wt	SBP	DBP	Breakfast?	Glucose	Triglycerides	Cholesterol	HDL	LDL
2/10/22	26.94604492	F	1/14/50	64	157	135	90	N	115	193	278	69	170
4/20/22	25.79053254	F	1/14/1950	65	155	144	78	N	117	56	125	57	57
5/17/22	27.11767578	F	1/14/50	64	158	160	82	Y	113	97	121	53	48
6/15/22	25.12497041	F	1/14/1950	65	151	145	82	N	108	165	158	54	71
7/19/22	24.59252071	F	1/14/1950	65	147.8	140	90	n	106	124	191	48	120
9/13/22	24.95857988	F	1/14/1950	65	150	154	82	N	115	76	123	56	52
2/10/22	31.92890311	M	2/5/51	68	210	140	100	N	104	369	166	39	53
4/20/22	32.99113322	M	2/5/1951	68	217	180	96	N	117	216	173	30	100
5/17/22	33.04366229	M	2/5/1951	67	211	162	87	Y	100	450	204	38	
6/15/22	31.4708045	M	2/5/1951	68	207	162	86	N	106	149	181	33	118
7/19/22	31.10592561	M	2/5/51	68	204.6	172	85	n	104	499	188	35	N/A
9/13/22	31.31877163	M	2/5/1951	68	206	150	86	N	111	96	121	31	70
2/10/22	19.75130073	F	4/29/1959	62	108	124	82	Y	73	178	207	52	119
4/20/22	18.7750063	F	4/29/1959	63	106	128	80	N	102	251	215	65	101
5/17/22	19.53184183	F	4/29/1959	62	106.8	118	82	Y	93	266	194	62	79
6/15/22	18.7750063	F	4/29/1959	63	106	106	72	N	105	133	212	67	118
9/13/22	19.1292517	F	4/29/1959	63	108	108	77	Y	140	178	181	64	82

Figure 3: Sample data collection

## CONCLUSION

- Having regular screenings on total cholesterol and triglyceride concentrations may decrease risk for CHD in the AAPI population.
- Ongoing screenings can show patients their progress, suggest suitable diets, and refer high-risk patients to local primary care practitioners (PCPs).<sup>2</sup>
- Screenings can also raise awareness of the prevalence of CHD risks in the AAPI population, which is often overlooked, especially with patients who are low-income and/or have a language barrier.<sup>5</sup>

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