



NUTRITION IN CARDIOVASCULAR DISEASES (CLN 436) 1437-1438H

A- COURSE INFORMATION:

Course Code	Course Title	Credit Units			Study Level	Pre-requisites
		Total	Theory	Practical		
436	Nutrition in Cardiovascular Diseases	2	2	-	8th	-
Course Coordinator		Extension		Email Address		
Prof: Manal salah ELgandy		8680		mgandy@taibahu.edu.sa		

B- COURSE DESCRIPTION:

The course focuses on the relationship between nutrition and cardiovascular diseases. It will describe the role of obesity, hyperlipidemia, diabetes, hypertension, thrombosis, and aging in atherogenesis. It will mention in details the dietary management of cardiovascular diseases, the scientific as well as the clinical evidence behind the etiopathogenesis of ischemic heart disease, peripheral and cerebrovascular disease.

C- COURSE OBJECTIVES:

- 1- Gain in-depth understanding of the relationship between diet and cardiovascular diseases.
- 2- Develop nutrition intervention plans for prevention and reversal of atherosclerosis.

D- THEORY TOPICS:

Week	Theory Topic	Hours
1	The etiology of cardiovascular diseases (CVD): Pathogenesis of atherosclerosis, blood clotting, raised blood pressure. Coagulation, platelets, fibrinolysis and inflammation related factors. Adipose tissue derived factors.	2
2	The epidemiology of CVD: The burden of CVD globally and in the KSA.	2
3	Risk factors of coronary heart disease, cerebrovascular accidents and peripheral vessel disease	2
4&5	Metabolic syndrome, insulin resistance, obesity, diabetes, hypertension, physical inactivity and genetic factors.	4
6	Lipid related risk factors: Atherogenic lipoproteins, HDL-C, Lp A, fatty acids, homocysteine	2
7	The emergence of new risk factors.	2
8	Endothelial dysfunction as an integral pathway for coronary heart disease. Dietary modulation of endothelial function (macro and micronutrients)	2
9	Oxidative stress, free radicals, molecule targets for oxidation (protein oxidation, lipid oxidation, DNA oxidation), reactive nitrogen species.	2
10&11&12	Diet that can prevent and stop the progression of heart disease.	6



13	Diet that can reverse atherosclerosis (chelation therapy).	2
14	Looking for future gene – nutrient interactions	2
15	A public health approach to prevention of CVD.	2

F- ASSESSMENT TASKS:

#	Type of assessment task	Week	Total Grades
1	Quiz 1	Week 5	15%
2	Mid term	Week 7	20%
3	Exam 2	Week 10	15%
4	Research	Weeks 13-14	5%
5	Participation	Weeks 1-15	5%
6	Final theory	Week 17-18	40%

G- LEARNING RESOURCES:

1- Required textbook:

- Mancini M, Ordovas J, Riccardi G, Rubba P and Strazzullo P: Nutrition, metabolism and cardiovascular disease Publisher: Blackwell Pub (2010); ISBN-10: 1405182768; ISBN-13: 978-1405182768
- Caldwell B. Esselstyn: Prevent and reverse heart disease: The revolutionary, scientifically proven, nutrition-based cure. Publisher: Avery Trade; 1st ed (2008); ISBN-10: 1583333002; ISBN-13: 978-1583333006

2- Essential references:

- Patrick L. Remington, Ross C. Brownson, Mark V. Wegner, editors. (2010) Chronic Disease Epidemiology and Control, 3rd Edition. APHA Press. Washington <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3044036/>
Journal articles:
- Shara NM Cardiovascular disease in Middle Eastern women Nutrition, Metabolism & Cardiovascular Diseases (2010) 20, 412e418
- Akbar DH, Ahmed MM, Algamdi AA. Cardiovascular risk factors in Saudi Arabian and non-Saudi Arabian diabetic patients in Saudi Arabia. East Mediterr Health J 2003;9:884e92.
- Musaiger Abdulrahman O. Diet and prevention of coronary heart disease in the Arab Middle East Countries. Med Princ Pract 2002;11(Suppl. 2):9e16.
- Saleem T, Mohammad KH, Abdel-Fattah MM, Abbasi AH. Exercise capacity of Saudi with symptoms suggestive of cardiovascular disease in a military hospital in Western Saudi Arabia. Saudi Med J 2008;29:896e900.
- Aghaeishahsavari M, Noroozianavval M, Veisi P, Parizad R, Samadikhah J. Cardiovascular disease risk factors in patients with confirmed cardiovascular disease. Saudi Med J 2006;27: 1358e61.
- Alwakeel JS, Sulimani R, Al-Asaad H, Al-Harbi A, Tarif N, Al-Suwaida A. Diabetes complications in 1952 type 2 diabetes mellitus patients managed in a single institution in Saudi Arabia. Ann Saudi Med 2008;28:260e6.

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Notes:

- Assignments topics and requirements shall be announced by the end of Week-1, the deadline for submission is 12pm Thursday of Week-10 (each semester).
- Continuous assessment methods may include quizzes, periodical exams, midterm exam as well as presentation of report based on hospital kitchen visit.
- Practical exams may contain questions based on management of nutrition services in hospital- specific situational cases.
- Written exams will include multiple-choice questions (MCQ), short essay questions, and long essay questions.