Annotated Bibliography


This article is the most recent guidance in the management of non-alcoholic fatty liver disease. The article covers the prevalence and occurrence of NAFLD, high risk groups, natural history and outcomes, screening in adults and children, evaluation for advanced fibrosis and steatohepatitis, and management. A key finding was that overall weight loss is the best available option for improving histopathological features. A 5% weight loss stabilizes some NAFLD features, 7% improves NAS features, and a 10% weight loss improves all features. The Mediterranean diet, rich in monosaturated fatty acids may have a potential edge over a high-fat, low-carbohydrate diet when no weight loss occurs. Pediatric outcomes and best interventions are still not well understood. Cardiovascular disease is the leading cause of NAFLD patient deaths.


This article from the Atherosclerosis Research Program at the Children’s Hospital Oakland Research Institute in Oakland, California features a review on the mechanisms and outcomes of polyunsaturated fats, saturated fats, and carbohydrates in cardiovascular disease and treatment. The article states that saturated fats can reduce LDL-C clearance through the suppression of LDL-C receptors, while polyunsaturated fats have the opposite effects. Carbohydrates in excess are known to increase hepatic stores of triglycerides that lead to small-dense LDL-C particles known to be more atherogenic than large and fluffy LDL-C particles. The paper reviews outcomes with dietary changes on many physiologic processes, including inflammation, blood pressure, and insulin sensitivity. The paper concludes that different saturated fats have different effects; replacement of saturated fats with polyunsaturated fats vs. carbohydrates may be a better strategy; and the weight of epidemiological evidence follows dietary patterns.

This short article reviews prevalence, screening, and management (lifestyle and pharmacological) for Australian healthcare providers. The article showcases the increase in pediatric diabetes mellitus type 2 in the Australian population and its outcomes. The findings are a bit grim: diabetes mellitus type 2 in youth (< 17 years old) increased in 27% 1990-2002, less than 10% of Australian youths meet their glycemic targets with lifestyle modification, and diabetes conversion and diabetes pathologies occur much faster – prediabetes, for example, can progress to diabetes in 12-21 months. They cite morbidity incidence reports in diabetes mellitus type 2 patients diagnosed under 30 years old: dyslipidemia in 85%, hypertension in 10-32%, microalbuminuria in 14-22%, non-alcoholic fatty liver disease in 22%, and retinopathy in 9.3%.


This short Israeli article is a review of literature assessing the translation of childhood obesity into cardiovascular outcomes in adulthood. The linkages are compelling: OR 1.14-1.26 for increased left ventricular mass, OR 10.9 for lone atrial fibrillation in 15-19 year-olds, HR 6.5 for heart failure in adult Swedish men obese as adolescents, and HR 1.8-3.0 for adult and adolescent VTE (including adolescent death from pulmonary embolism) in various studies. The unfavorable cardiac remodeling can occur early with enlarged ventricular chambers, increased left ventricular wall thickness, and increased left ventricular mass. The study concludes that ischemic and non-ischemic cardiovascular risk is increased with childhood obesity.

Non-annotated bibliography portion in Education Handout


Heart Disease Fact Sheet. CDC Website. 