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A REVIEW ON PREVALENCE OF HEART ATTACK IN YOUNG GENERATION

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ABSTRACT

Epidemiological studies have identified several risk factors for coronary heart disease, many of which are present in young people. One such risk factor is hypertension. In adults, exercise is thought to have a positive effect on blood pressure levels; however, findings are inconclusive for young people. Despite its association with heart attacks, obesity is on the increase in Western society's young population; prevention and intervention during early years is needed. An active lifestyle is considered to have a beneficial effect on body fatness. Lipoprotein profiles are directly associated with heart disease status. In adults, there is some evidence that physical activity and/or fitness have a favourable effect on lipoprotein levels. Although information regarding the younger population is more ambiguous, it tends to concur with these findings. High levels of lipoprotein are considered an independent risk factor for heart disease. Relatively little has been written on young people, although some studies have postulated a favourable relationship with physical activity.

KEY WORDS: Coronary Heart Diseases, Young people, Obesity, Diabetes

AIM: To find out the causes of heart attack prevalent in young generation.

INTRODUCTION

An inverse relationship between aerobic fitness and heart attack has been confirmed in adults; an association is not as easily verified for young people. Physical activity is similarly deemed to have a beneficial effect on health status. A high-fat diet has been linked to heart attacks in adults and evidence to date reports similar findings for young people. Smoking increases the risk of heart diseases and even moderate smoking during youth could have damaging long-term consequences. There is some evidence that smoking is related to physical activity and fitness levels in young people.

In adults, high levels of homocysteine have been associated with heart attacks. Yet, little has been written on the relationship between physical activity or physical fitness and homocysteine status in young people. High levels of plasma fibrinogen have been linked to heart diseases. Several studies have explored the relationship between plasma fibrinogen and physical activity and/or fitness in adults, but findings are inconclusive; for young people, the ambiguity is even greater. C-reactive protein is a molecular marker for heart attack but, to date, little attention has been given to this aspect, especially amongst young people. The link between high levels of plasminogen activator inhibitor-1 and heart attack has been confirmed, although the essence of this relationship is not established. There is a paucity of data on the younger population and the relevance of collating such information is questionable. For the younger population, most research is limited to the established heart attack risk factors and further investigations of recently identified heart attack risk factors are needed. For the last several decades, aging has been established as one of the biggest risk factors for heart attacks, typically affecting men 50+ and women 65+. Now, people in their 20s, 30s and 40s are more often falling victim to these cardiovascular attacks.

Smoking, lack of exercise, and a poor diet have all been linked to an increased risk of coronary heart disease (Bovens *et al*. 1993; Posner *et al*. 1993; Eaton *et al*. 1995; Woodward & Tunstall Pedoe, 1995; Robertson & Platt, 1996; Bjerregaard *et al*. 1997; Singh *et al*. 1997; Byers *et al*. 1998; Gartside *et al*. 1998; Gensini *et al*. 1998). work stress and several well-known physiological risk factors for heart disease, such as hypertension, excessive glucose, and high cholesterol levels (Peter *et al*. 1998; Tsutsumi *et al*. 1998).

"There's a few reasons why we're seeing the rise of heart attacks in young people," says cardiologist Luke Laffan, MD. "But one of the biggest risk factors is the increasing incident of type 2 diabetes."

CONTRIBUTORS TO TYPE 2 DIABETES INCLUDE

Dietary choices such as exposure and access to ultra-processed food. Weight fghjklm; and obesity. Sedentary lifestyle and decreased physical activity.

"We're now seeing heart attacks occurring in young men who are only 25 or 35," says Dr. Laffin. "Twenty years ago, this wasn't the case and was rarely discussed in medical school." Dr. Laffin attributes this new development to the change in lifestyle over the past several decades.

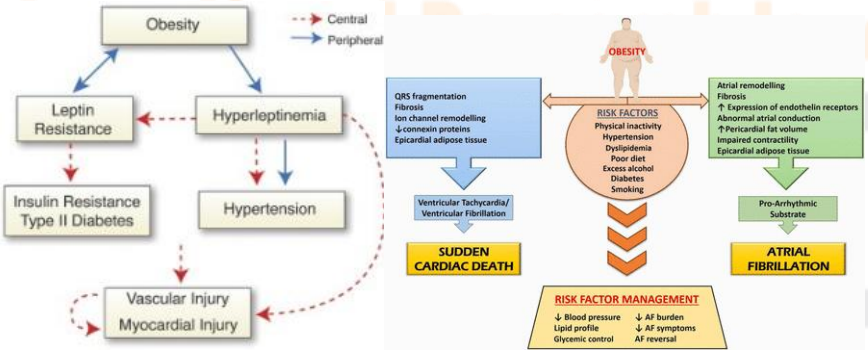
There's been a shift in people's day-to-day – too much Uber Eats and not enough cardio. Increased screen time has dramatically impacted how much we move as well. Even jobs are more sedentary and require less physical activity than in past decades. So much, in fact, has shifted over the past several years that some experts aren't surprised by the fact that heart attacks are climbing in young people. "These bad habits are starting in early childhood now," explains Dr. Laffin. "There needs to be attention brought to how important prevention and modification is." Heart experts always thought about primary and secondary prevention when it comes to heart attacks, Dr. Laffin says. That's trying to prevent the first heart attack and then trying to prevent the second heart attack. But recently, there's been a shift to the idea of primordial prevention. This means trying to prevent the progression of the heart attack risk factors themselves. Dr. Laffin says it includes trying to change the social and environmental conditions that could develop and progress risk factors. These are things we have control over such as exercising, eating nutritious foods, not smoking, managing stress and blood pressure.

Primordial prevention also includes education about what behaviours put you at risk for cardiovascular disease.

These include:

OBESITY

Obesity refers to a condition of excess body fat or a state above normal adiposity at which health problems are likely to prevail. Confirmation of it include a body mass index (BMI) ≥30 kg/m2, 130% of ideal weight, or skinfolds ≥95th percent. Obesity is a chronic condition that evolves over several years.



THE RELATIONSHIP BETWEEN JOB STRAIN AND CORONARY HEART DISEASE

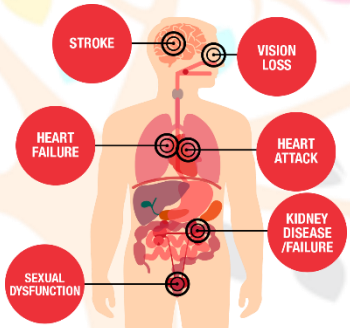
It is unclear what role of job strain has in the aetiology of coronary heart disease (CHD), which is defined as high job demands coupled with little choice or control over how the task is carried out. Despite the fact that several research have found links between occupational stress and CHD morbidity and death (Alfredsson *et al*. 1982, 1985; Karasek *et al*. 1982, 1988; Johnson & Hall, 1988; Johnson *et al*. 1989; Hammar *et al*. 1994), Few research have looked at the link between occupational stress and CHD in the UK. The Whitehall II research on British public officials looked at the role of job demands and job control in the aetiology of psychological and

physical ill-health, such as CHD (North *et al.* 1993; Bosma *et al*. 1997; Stansfeld et al. 1997, 1998).

Those with high levels of stress in their work regularly reported being in worse health than males with lower levels of stress. Men who reported low job stress were also less likely to report having poor health in 5 out of 6 health outcomes. The incidence of ill health was more prevalent at moderate levels of strain. Workplace stress and CHD were linked in a fashion that was unrelated to coronary risk variables.

HIGH BLOOD PRESSURE

A process originating from early years, there remains no direct evidence that increased blood pressure in young people is related to heart disease in adulthood. Also, the importance of not labelling adolescents as hypertensive too prematurely has been mentioned Children who are diagnosed as hypertensive will often become normotensive without any intervention, the higher-than-normal recorded values having been a function of growth.



HIGH CHOLESTEROL

The genesis and progression of atherosclerosis is a complex inflammatory process that is dependent on low-density lipoprotein (LDL) cholesterol intimal entry. Although several genetic and environmental variables influence this process, the importance of LDL cholesterol in the physiology of Plaque formation, development, and instability result into the idea that lowering blood LDL cholesterol may be an effective strategy to minimise or even eliminate avert the sickness

SMOKING

Smoking exerts direct toxic effects on myocardium, produces endothelial dysfunction and promotes premature atherosclerosis. smoking is the commonest risk factor in young patients having CAD. Smoking cigarettes can raise the risk of peripheral arterial disease by seven times and the risk of coronary artery disease by at least two times. These two primary types of cardiovascular disease are the consequences of atherothrombosis. The pathophysiological processes through which smoking causes atherothrombosis are unknown. Endothelial disruption, changes in fibrin production and turnover, changed blood rheology, alterations in lipids and lipoproteins, and decreased antioxidant availability are all proposed explanations. In several

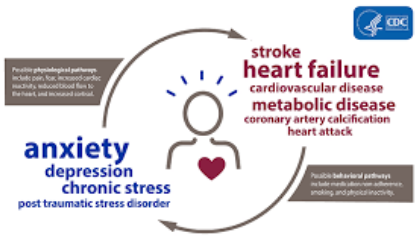
studies, smokers were shown to have higher plasma levels of von Willebrand factor (an endothelial dysfunction marker), higher plasma fibrinogen (the precursor of fibrin), and haematocrit, as well as altered blood lipid and lipoprotein profiles and lower circulating antioxidants (Price *et al*,1999).

MORTALITY

Coronary artery disease is a leading cause of sudden mortality in young people. Coronary disease was'silent' in this series, and sudden death was the first clinical sign. The incidence of mortality at rest in the absence of an acute coronary lesion with preservation of the coronary tunica media implies that the fatal result might be attributable to anomalies in coronary vasomotor tone culminating in ischaemia-induced cardiac arrest (Noeman *et al*, 2007).

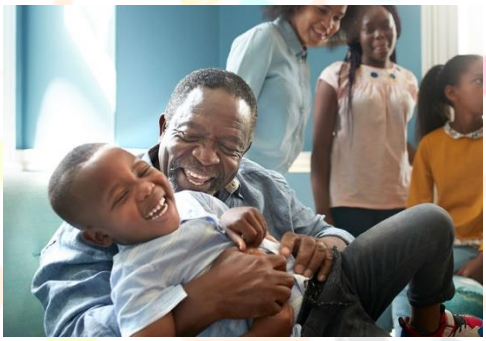
ANXIETY AND DEPRESSION ASSOCIATED WITH RISK OF CARDIOVASCULAR DISEASE

Anxiety and sadness significantly linked to physical inactivity in both sexes, as well as a poor diet in males but not in women. In men, both anxiety and depression were strongly associated to smoking patterns, but only depression was attributed to smoking in women. The global score representing unhealthy lifestyles was related with higher levels of anxiety and sadness in both sexes. In multivariate analysis, anxiety and depression both showed up as independent predictors of an unhealthy lifestyle in both sexes, with depression having a higher impact. The difficulty of changing lifestyle in individuals with anxious-depressive illnesses is suggested by the association between depression and, to a lesser extent, anxiety, and a group of harmful behaviours in persons at risk of cardiovascular disease.



FAMILY HISTORY OF CARDIOVASCULAR DISEASE

Heart attacks can happen to anyone – but the risk is especially high when genetics come into play. Primordial and primary prevention is crucial for those with a family history of heart disease. Your hereditary risk of heart disease is defined by having a first-degree male relative (like your father, brother or son) under the age of 55 with heart attack or stroke history, or a first-degree female relative (like your mother, sister or daughter) under the age of 65 with heart attack or stroke history. Guidelines recommend that people ages 20 to 39 without hereditary risk have their cardiovascular health assessed every four to six years. For those that have a genetic risk, it's critical to be engaged in your health and speak with your doctor early. It's important to understand what your risk factors are – high blood pressure, waist circumference, unhealthy BMI – and work to correct them early. The dramatic increase of young adults having heart attacks is evidence, he says, that our lifestyles need to change.



CONCLUSION

Smoking, hypertension and dyslipidemia if present in young individuals play an important role in the development of premature coronary artery disease. In our youthful population, premature coronary artery disease is fairly widespread. The most prevalent risk factor is smoking, followed by hypertension, dyslipidemia, and obesity. Early coronary artery disease can be avoided by changing our lifestyle, eating habits, and exercising regularly. Patients having a family history of premature coronary artery disease should be screened early and on a frequent basis.

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