

The history about blood pressure health and social care essay



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Blood pressure is commonly measured using a sphygmomanometer, where the height of a column of mercury is used to determine the arterial pressure. Due to the hazardous nature of mercury, electronic blood pressure measuring devices are now becoming the norm. A person's blood pressure is expressed in terms of systolic pressure over diastolic pressure and is measured in millimetres of mercury (mmHg). Various studies have been conducted to determine the normal values for blood pressure. It has been found that the ideal blood pressure for a healthy adult ranges from 90-120 (systolic) over 60-80 (diastolic). Other factors, such as age and sex, influence the average values of a person's blood pressure. In children, the average blood pressure is generally lower and depends on their height. As a person ages, systolic pressure increases while diastolic pressure decreases because of reduced flexibility of the arteries and veins. In older people, blood pressure values are normally above average. The time of day, sleeping patterns, level of fitness, stress levels, emotional state and diet are also factors which greatly affect a person's blood pressure. Clinical trials have proven that people who maintain blood pressures at the lower end of the spectrum, generally have much better cardiovascular health over the long term. With increasing blood pressure, the risk for cardiovascular diseases greatly escalates. Low blood pressure, referred to as hypotension, is only considered dangerous if physical symptoms are visible, such as dizziness, fainting and in extreme cases, shock. Causes of hypotension include sepsis, eating disorders, hormonal abnormalities and haemorrhage. High blood pressure is a chronic medical disease known as hypertension. Elevated blood pressure causes the heart to work harder than normal to circulate the blood through the vessels of the human body. Hypertension is a serious risk factor

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for stroke, heart failure, aneurysms of the arteries, heart attacks and arterial disease. Hypertension is sometimes referred to as the "silent killer" as it has no noticeable symptoms and can go undetected for years, while damaging tissue and vital organs. Even a moderate rise in blood pressure can considerably lower a person's life expectancy. Hypertension is divided into two groups - primary (also known as essential) and secondary hypertension. About 90% of cases are classified as primary hypertension, where there are no obvious underlying medical causes. Secondary hypertension is caused by specific diseases or factors that affect the endocrine system, heart, kidneys and blood vessels, and affects the remaining 10%. Secondary hypertension is curable in some cases. Hypertension is usually identified through screening as obvious symptoms in most cases are not visible. A high percentage of people with high blood pressure suffer from headaches, fainting, tinnitus, altered vision and vertigo, but they usually associate these symptoms with anxiety and stress rather than hypertension. Severely elevated blood pressure (blood pressure 180/110 mmHg and higher) is known as hypertensive crisis. A hypertensive crisis can lead to direct damage to one or more of the vital organs and surrounding tissue. This may include brain swelling and dysfunction, renal failure, heart muscle damage, pulmonary oedema or aortic dissection. Primary or essential hypertension is often caused by genetic factors, exercise and diet habits and elevated stress levels. Extensive epidemiologic studies have been conducted to investigate the correlation between caffeine and blood pressure. Many of the results have remained inconsistent, but consumption of caffeine appears to have a notable effect on blood pressure in most cases. There is meagre evidence that coffee drinkers develop a tolerance toward caffeine. Several community

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studies by the Medical Research Council (MRC) showed that one out of every four people between the ages of 15 and 64 suffer from high blood pressure. According to Dr. Krisela Steyn, MRC researcher and project leader of several blood pressure studies, unhealthy lifestyle habits and eating habits play a great role in the development of hypertension. More than 6.2 million South Africans have blood pressure higher than 140/90 mmHg, while 3.2 million of these have blood pressure higher than 160/95 mmHg – levels that are unacceptably high. It is estimated that 53 men and 78 women die in South Africa each day due to hypertension. Worldwide, the level of control of blood pressure is shockingly low. In South Africa, only 21% of men and 36% of women with hypertension, use medication to lower their blood pressure. Only 10% of men and 18% of women have their blood pressure levels lowered to the point where the risk for targeted organ damage is eliminated. A study by Wits University showed that 40% of the black population suffers from hypertension, but only 20% are being treated. Hypertension is the most preventable risk factor for premature death. High blood pressure can be controlled by dietary changes, physical exercise and weight loss. Research has shown that a diet low in sodium and rich in nuts, whole grains, fruit, vegetables, fish and poultry had a significant lowering effect on the blood pressure of Caucasians. A wide variety of antihypertensive medication is currently available for the treatment of hypertension. Health care providers face many obstacles to achieving blood pressure control as The World Hypertension League (WHL) have recognised that more than 50% of the hypertensive population worldwide are unaware of their condition. People also face challenges regarding to adhering to medicine schedules and making major lifestyle changes. Nonetheless, the achievement of blood

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pressure goals is possible, and most importantly, lowering blood pressure significantly reduces the risk of cardiovascular diseases, other debilitating medical conditions and the cost associated to advanced medical care. In Figure 2. 1 the results of four studies done by the National Health and Nutrition Examination Survey (NHANES) is shown, regarding the awareness, treatment and control of hypertension.

PREVIOUS STUDIES

Although many previous studies that have been done to investigate the effect of dietary caffeine on a person's blood pressure, most have been inconclusive. However, according to an article by Professor Jack E. James from the Department of Psychology of the National University of Ireland, published in 2004 in the Journal of Psychosomatic Medicine, there is a definitive relationship between the intake of caffeine and blood pressure. This leads to great concern regarding the dietary habits of the population as caffeine is a prevalent stimulant. Many people are unaware of the risk that caffeine poses to their cardiovascular health.