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DEPARTMENT: HUMAN NUTRITION AND DIETETICS.

COURSE TITLE: INTRODUCTION TO HUMAN NUTRIRION AND DIETETICS

COURSE CODE: NTD 212

ASSIGNMENT: 1) Obesity, Diabetes and Cancer are non- communicable diseases (NCD) prevalent in Nigeria but which can be prevented or managed by health workers.

a) Discuss the prevalence of these diseases in Nigeria.

b) Discuss the factors responsible for the prevalence of these diseases in Nigeria.

c) Highlight steps that can be taken in the dietary management of this diseases.

LECTURER: DR OLAGUNJU

**1a (i) OBESITY**

Data from the WHO shows that the prevalence of overweight and obesity in Nigeria increased by approximately 20% between 2002-2010 in Nigeria.

In Nigeria, the prevalence of overweight individuals ranged from 20.3%–35.1%, while the prevalence of obesity ranged from 8.1%–22.2%. With this information, there is a need for to pay attention to this disease. About two-thirds of urban, professional, high socio-economic status Nigerian adults are either overweight or obese. The prevalence of overweight and obesity among this population of adult Nigerians, is as high as it is in the United Kingdom. Female gender and older age were independent predictors of overweight and obesity; while middle or high socio-economic status were independently associated with obesity.

Obesity seem to be responsible for the occurrence of noncommunicable diseases among health-care workers. This study was conducted among health-care workers in the University of Benin Teaching Hospital (UBTH).

**(ii) DIABETES**

Nigeria has the highest number of people with diabetes with an estimated 3.9 million people (or an extrapolated prevalence of 4.99%) of the adult population aged 20-79-year-old. Studies conducted in Nigeria indicated that the prevalence of diabetes ranged from low level of 0.8% among adults in rural highland dwellers to over 7% in urban Lagos with an average of 2.2% nationally.  As already pointed out, the sixth edition of IDF diabetes Atlas, shows that Nigeria is the leading country in Africa in terms of the number of people with diabetes, 3.9 million had diabetes with 105,091 diabetes-related deaths in 2013 which is estimated to increase annually by 125,000 between 2010 and 2030 even though the prevalence of 4.99% is far less than that of Reunion (15.38%), Seychelles (12.11%), Gabon (10.71%), Zimbabwe (9.73%), and South Africa (9.27%); in addition, there are still about 1.8 million Nigerians with undiagnosed diabetes in 2013.

**(iii) CANCER**

In Nigeria, some 100 000 new cases of cancer occur every year, with high case fatality ratio. With approximately 20% of the population of Africa and slightly more than half the population of West Africa, Nigeria contributed 15% to the estimated 681,000 new cases of cancer that occurred in Africa in 2008.

It has also been recorded that Cervical cancer is the most common genital cancer in Nigeria.

B (i) **Changes in diet:** In most people obesity, Diabetes and cancer is caused by eating too much and working less. A lot of obese patients consume high amounts of energy from their meals and end exercising or engaging in physical activity to help them burn down excess calories.

(ii) **Cigarette smoking:** Smoking's effect on body weight could lead to weight loss by increasing the metabolic rate, decreasing metabolic efficiency, or decreasing caloric absorption (reduction in appetite), all of which are associated with tobacco use. The metabolic effect of smoking could explain the lower body weight found in smokers. Despite the general weight-reducing effects of cigarette smoking, there are many smokers who, in addition to tobacco dependence, also have metabolic syndrome, including obesity. Smoking and obesity are important cardiovascular risk factors and act synergistically to cause cardiovascular disease.

(iii) **Alcohol consumption:** Alcohol consumption increased the circulating estrogen and leptin levels. In conclusion, alcohol and estrogen treatment can modify mammary tumor growth, possibly through the regulation of estrogen and leptin, especially in obese mice. Beer and sweet wine contain carbohydrates and may raise blood sugar.

(iv) **Inadequate exercise:** This generally increases the risk of diseases. The sugar, carbohydrate, fatty food consumed needs to be burn in other to maintain good health and that is done through physical activity.

C) It includes:

1. Engage in more physical activities and exercise
2. Eat a variety of low energy foods from the six food groups every day.
3. Eat unrefined foods such as whole grain bread instead of white bread.
4. Eat legumes such as beans, pigeon peas, cow peas, ground beans.
5. Reduce the intake of oil rich nuts such as ground nuts, soya, and cashew nuts.
6. Eat low-fat animal foods such as meat without fat, white meat such as chicken, low fat or skimmed milk, lean fish.
7. Reduce the intake of fatty foods including fat rich animal foods such as cheese, fatty beef, fatty pork, full cream milk.
8. Eat plenty of vegetables at each meal.
9. Eat small regular meals to avoid feeling very hungry and eating too much food.
10. Preparing meals with other various cooking methods like roasting, grilling, boiling and steaming.
11. Consult a dietitian to help you create meal plans that will be suitable to you.