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MONOGRAPH
“EFFECTS OF SMOKING AND ALCOHOL
IN THE HUMAN BODY”

STUDENT:
FRANKS ALMACHE

ADVISER:
LCDA. PATRICIA SÁNCHEZ
MISS CLAUDIA LOSSA

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Gratitude

In the first instance, I thank God, who has been my support throughout my life and is the one who has helped me in my difficult moments, also to my parents for giving me all the tools to facilitate my studies during these years and, not less important, to my brother Zinedine, who has helped me and clarified my doubts in certain matters, and finally to my brother Wilpher, who thanks to his medical knowledge has helped me and guided me throughout the process of carrying out this work. Because of this, the work is dedicated to them for its constant support.

Summary

This monograph deals with the effects of tobacco and alcohol on the human body, in order to inform the people who, make up these substances, their relationship with the body, the ideal age to consume them and the consequences that could be acquired by the misuse of these drugs both long and short term. This document presents all this information with the sole objective that young people and adolescents reflect on the excessive consumption of alcoholic beverages and cigarettes.

Alcoholic beverages generate a lot of demand in parties, commitments, but their particularity is the way they affect and suppress the nervous system, which is one of the main causes of why nothing is remembered after a binge, emphasizing the diseases that this would cause the body such as heart disease, appearance of tumors among others. As for the cigarette, it is more harmful to human health because it is composed of several substances of which a small group conditions the appearance of tumors, in addition to gravamen affect the lungs and respiratory system. But the most disadvantaged are minors because, today, most adolescents have already consumed alcohol or smoked once and others abuse these drugs, this causes them a great damage that may impact later years because they are still developing and are not suitable for drinking these drinks.

To conclude, alcohol and tobacco are harmful to the human body due to the composition that both contain in addition to the excessive and uncontrolled use that people give it. But the most affected are adolescents, unaware of the damage it causes them, drink and smoke disproportionately, this hurts both in their health and in their daily lives as they may suffer from personality changes, disorders, decreased academic performance due to poor brain development, and diseases that may appear at a harder age with great negative effects, all this is because his body has not fully developed and costs him to assimilate drugs that enter the body. This is why the monograph seeks to guide these people, especially young people to take care of their health and not ruin their condition at such an early age.

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Introduction

The subject of the monograph is: “*Effects of tobacco and alcohol on the human body*”. This topic focuses on the effects of tobacco and alcohol, exposing the composition of each and explaining which component specifically affects the body and the diseases that can produce and their derivatives. Also it presents information of the negative effects that these drugs produce in the young people and this topic is important because the people do not know the risks that can entail to drink or to smoke excessively, more than everything, the adolescents who yearn to enter the adult world by means of the consumption of alcoholic drinks.

Smoking and drinking have gone hand in hand with parties, accidents and illnesses. The latter can be found both in frequent drinkers and smokers because these drugs are negatively rooted in health. This can be verified in books of medicine, more than all those of urgency and emergency, since they present the clinical picture of the patient, its antecedents and the disease, that is to say, they expose the causes of the disease that in this cases would be to take or to smoke excessively in where diseases like cirrhosis, lung cancer or respiratory problems are presented.

Several studies have been conducted regarding the consequences of smoking or drinking. Such is the case of a radiography of brain activity that was performed on two adolescents, one was an alcoholic drinker and the other was not, the brain of the young drinker had little brain activity, while the brain of the young person who does not consume alcohol has greater activity at the brain level. With this we can see a clear example of how drinking alcohol affects the development of minors. Also a study of the lungs of a smoker and a non-smoker was made, the first one in its radiography presented black coloration in its lungs and certain obstructions, in contrast the other expands healthy lungs without any abnormality.

The study that was carried out in this monograph lies at present, since the rate of people who drink or drink alcohol has increased significantly, more than anything else to that of

adolescents, where more and more young people drink, smoke cigarettes or vapes that are harmful to their health, all this happens because they are not instructed of the negative effects that can have.

Within the structure, the first chapter deals with alcohol: its composition, how it suppresses the nervous system, the short and long term effects of its improper consumption and the different types of cancer that could develop. The second chapter talks about the cigarette, the harmful substances that compose it, the illnesses and negative effects that it causes to the respiratory system, and the consequences that the passive smoker will have. In the third chapter, it was explained how tobacco and alcohol seriously affect the body of young people, as they are not fully developed so that their organism can assimilate them. It also explains how they can affect the social circle of adolescents and their mental and physical health

Chapter I

The tobacco

1.1. Composition of tobacco

Smoking is toxic and addictive, its consumption contains, approximately, 4000 different chemicals where around 69 of them are toxic and carcinogenic. The cigarette is made of nicotine, it is derived from the tobacco plant, this become you an addict and affect the brain and his functions, also the tobacco has tar, it accumulates in the lungs, carbon monoxide, it affects the functioning of the heart and blood vessels, arsenic, used to create insecticides, toluene, it is a chemical used for resins, detergents, and explosives. There is only a part of the components of the cigarette, there are very harmful to health.

1.1.1 Effects on the human body.

Smoking is responsibility for about 3.5 million deaths a year in the world, a great percentage is due to lung cancer like bronchitis and emphysema caused by the nicotine and tar, this tar lodges in the lungs and mixes in the organism, also the cigarette makes problems in the sexual organs in sperm like genetic damage, lower sperm count, so it reduced the fertility. It should be noted the impact that it has in the heart being that accelerates the heart rate and the carbon monoxide reacts with hemoglobin in the blood, adhering to this, provoking the increase of blood pressure affecting the walls of the vessels. In addition to the tobacco reduces two senses, the smell and taste owing to the smoke inhalation.

1.1.2 Problems in the respiratory system Development of tumors.

People that smoke increases their risk to acquire a disease in the respiratory system like chronic bronchitis or emphysema more known as a chronic obstructive pulmonary disease (COPD). “The risk of developing COPD is dose-dependent, it increases as the packets/ year increases (number of packages per day X number of years smoking)” (Fernandez 2015, p.90).

This condition is a progressive and incurable lung disease; it is hard to breathe for smokers.

Mainly there are two obvious illnesses:

- **Emphysema:** Caused for the damage of the air sacs, it produces the disappearance of the walls, causing the transformation of the alveoli and many small sacs in larger, single sacs. These sacs do not do the process of transport oxygen in the right way, so the blood has less oxygen.
- **Chronic Bronchitis:** It consists of the damage of the bronchial tubes when they are irritated and swollen, this caused coughing and difficult to breathe, so these generate mucus and it will accumulate in the lungs and make several damages.

As well in the human presents late complications like alteration in gas exchange and pulmonary hypertension. Fernandez (2015) affirms: “Mild or moderate pulmonary hypertension is a late complication in COPD. Its main cause is hypoxic pulmonary vasoconstriction of the small caliber pulmonary arteries” (p.23).

Also appears non-specific chronic respiratory disease, this consists of the apparition of non-specific respiratory symptoms for a time not determined without serious effects on the functions like cough, expectoration, wheezing and shortness of breath known as dyspnea, it consists in the difficulty of breath that causes a feeling of lack of oxygen in the respiratory system. Filgueiras (2015) states: “dyspnea appears as a consequence of the elevation of the pulmonary venous and capillary pressure, and at the beginning it appears important efforts, which require progressively less effort to appear” (p.42).

1.1.3 Development of cancer and tumors.

Smoking causes the production of cancer in the lungs and it averts the system the capacity of defense of them. “There is a clear link between smoking, especially cigarette smoking, and lung cancer. This association is observed in 90% of patients. The relative risk increases more than 10 times in active smokers” (Fernández, 2015, p.93). The chemicals of the cigarette

affect the immune system avoiding the elimination of cancer cells, also the substances in the smoke reacts with the bloodstream and enter in contact with the entire body for that reason people have the risk of acquiring cancer or a lung disease that affects the respiratory system, the illnesses will be lung cancer, pharynx, oral cavity and other types of cancer.

The lung cancer is composed in two histologic groups: non-small cell cancer and small cell cancer, the first represents approximately 85% cancer with subtypes like adenocarcinoma (40%), squamous cell carcinoma (30%) and cell carcinoma (15%) and the second group represents 15% of the cancers.

Cancer can remain silent for months, so at the time of diagnosis, only one fifth is at a localized stage. The most notable symptom is coughing being that the central tumors increase cough and homotopic expectoration, in smokers over 40 years of age may be an indication of fibro bronchoscopy. In addition, if it is bigger it can generate atelectasis, infecting the distal parenchyma causing obstructive pneumonitis with fever and severe cough. Dyspnea, wheezing and stridor may also be present. This is not completely resolved with antibiotic treatment due to the severity of the disease. (Fernández Francés & Castelao, 2015).

1.1.4 Pancoast syndrome.

Also called pulmonary superior sulcus tumor. Castelao in his text *Manual CTO of medicine and surgery* states the following:

The Pancoast syndrome is produced by the local growth of a tumor of the pulmonary

vertex that easily penetrates the neural canal and destroys the eighth cervical nerve roots and first and second thoracic. It is the most frequent cause is lung cancer, especially epidermoid.

(p. 94) So this illness is dangerous because if the person does not make treatment, the tumor could be perilous and intractable. This disease produces the following symptoms:

- Pain in the ulnar face of the forearm: It is the earliest symptom and is due to the involvement of the eighth cervical nerve and the first and second thoracic. It also

leads to shoulder pain, brachialgia that characteristically radiates to the ulnar edge of the arm. There can even be atrophy of the hand muscles

- Chest pain: Because of destroying the first and second ribs
- The appearance of different syndromes like pour four du petit syndrome, Claude-Bernard-Horner syndrome and superior vena cava syndrome. 1000 words

Chapter II

The alcohol

2.1 what is alcohol and what composes it

Alcohol is one of the most consumed drugs worldwide, composed mainly of ethanol, the effect of this resides in the loss of shyness or embarrassing making people to do acts that were not performed while sober. The alcoholic drink is composed of ethyl alcohol (ethanol), contains more than 2.5 degrees of alcohol, depending on how they are obtained, there are two types:

- **By fermentation:** They are extracted by fermentation of sugars coming from fruits, grains or roots that are transformed into alcohol. (beer, wine)
- **By distillation:** Are obtained by vaporization of a liquid and condensation of formed vapors. (rum, vodka)

2.1.1 Effects of alcoholic drinks.

The drug depresses the nervous system as it affects any function of the brain such as reasoning, judgment, emotions, and feelings of shame. Pérez (2013) states the following:

Ethanol acts as an unspecified depressant of the CNS, and there is a clear risk of potentiation with other depressants. Acute consumption produces a functional depression, first of all of the cerebral and cerebellar cortical functions (with behavioral disinhibition, excitement, increase of sociability, euphoria); in higher quantities it induces sleep and in higher doses it depresses the respiratory center. (p.46)

The human body on having consuming alcohol first feels relaxed and happy, but on continuing consuming it causes blurred vision and to lose the balance. Excessive drinking can cause unconsciousness to the drinker and later a likelihood of poisoning.

Another effect is that it inhibits vasopressin, this hormone equilibrates the fluid balance in the body, sending the kidney to reabsorb water from the urine. If this fails the kidney begins to

eliminate more water than it should, which causes the organism to seek water from other organs, causing headaches to the person.

2.1.2 Disorders associated with acute consumption.

Disorders associated with acute consumption

- **Typical acute intoxication:** The cause is conditioned on the basis of the alcohol reached and the tolerance acquired. The treatment is symptomatic (control of hypoglycaemia), it is essential to monitor complications such as aspiration of vomit, hypothermia.e cause is conditioned on the basis of the alcohol reached and the tolerance acquired. The treatment is symptomatic (control of hypoglycaemia), it is essential to monitor complications such as aspiration of vomit, hypothermia.
- **Lacunar amnesia:** No memory of what happened during drunkenness, without loss of consciousness, is present in 30%-40% of adolescent males.

2.1.3 Disorders associated with chronic consumption.

Neurological:

- **Wernicke's encephalopathy:** A brain disorder caused by a lack of thiamine, and resulting from harmful changes in the brain, thanks to a lack of vitamin B1, common in people with alcohol problems.
- **Marchiafava-Bignami disease:** Degeneration and necrosis of the corpus callosum and the white commissure, which may be related to symptoms of dementia or alteration in mobility.
- **Postural tremor:** Fine distal tremor predominating in the hands and tongue.
- **Central pontine myelinolysis:** Is present, more probably in alcoholic patients, causes demyelination of the cerebral white matter, in addition to destroying the myelin sheaths at the various bridge level.

Psychiatrists:

- **korsakoff psychosis:** The psychosis of korsakoff is presented by the lack of vitamin b (thiamine), one of the main causes of amnesia, among its symptoms, is mental confusion, confabulation or short term memory deteriorate. Pérez (2013) establishes that this disease is an amnesic disorder where diencephalic lesions can be found in the mammary tuberosities, this is treated with high doses of thiamine where only 25% of those affected recover fully.
- Besides, other disorders such as depressive syndrome, sleep disturbances, anxiety, sexual dysfunction.

Gastrointestinal

- **Esophagus:** Esophagitis, varicose veins due to hypertension and vomiting due to Mallory-Weiss syndrome
- **Stomach:** Gastrointestinal bleeding in alcoholics (acute erosive gastritis)
- **Intestine:** First symptom diarrhea caused by increased peristalsis or signs of alcoholic pancreatitis
- **Liver:** In this particular organ. There is steatosis (fatty accumulations in the centrallibullary hepatocytes) and hepatitis (divided into acute, asymptomatic and fulminant). In addition to cirrhosis.

2.1.4 Detoxification and abstinence syndrome.

Abstinence is caused by stopping consuming alcohol, posing a vital risk to the person, especially if it is related to diseases derived from alcoholism such as cirrhosis or myocardiopathy, there are different symptoms, Pérez (2013) affirms that: “It will be observed hand tremor, hyperthermia, autonomous hyperactivity, insomnia with nightmares, anxiety, delirium, digestive alterations, and even epileptic crisis; it reaches its maximum in two or three days, giving way in approximately one week” (p.49). In more severe cases, delirium tremens (alcohol withdrawal delirium) occurs. First, it presents symptoms of confusion, some

disorientation, alteration of the perception of the real such as hallucinations or illusions. Also, the patient may have delusions, restlessness and possible convulsions.

A convulsion is an abrupt behavior that the person has as a result of a failure of electrical activity within the brain, the movements of this condition usually begin with an uncontrollable tremor, fast, followed by the muscles contracting.

2.2 Treatments.

2.2.1 Dehabitation and Rehabilitation.

After having passed the syndrome of abstinence treatment begins, first the psychosocial therapies which are the pillar of the long term treatment, because abstinence can leave sequels in the mind of the individual due to the experience of different symptoms such as delusions or hallucinations, this help to claim the mental health of the patient and his empathy based on the environment, trying to achieve the complete rehabilitation using different methods and tactics.

At present, new treatments have originated based on studies in the neurobiology of dependence, where naltrexone is the most used, which allows appeasing the tendency to relapse related to loss of control.

Prognostic for frequent drinkers

Villamir (2013) says that If the consumption of alcoholic drinks is not stopped, the life expectancy of the person will be shortened approximately 15 years, having a death caused by illnesses related to alcoholism such as the development of cancers or tumors, cardiopathies, accidents or suicides. Suggesting that the best option would be rehabilitation, although you will suffer from abstinence, the health and lifestyle of the individual will improve by forcing him to stop the drug after recovery of about 6 months. 1000 words

Chapter III

Tobacco and alcohol consumption in adolescents

3.1 Causes

Teenagers are very prone to alcohol consumption or smoking because this stage of their lives is driven by their impulses to experience new things. Some only try these substances once and leave them, while others get caught up causing an addiction. The drug most consumed by young people is alcohol. This is conditioned by different factors such as:

- The need for a young person fit into a group or social circle and like the sensations of drugs.
- They think that smoking or drinking will make them feel or look like adults.
- Consumption of alcoholic beverages or cigarettes by family members.
- Lack of support or interest from parents.
- Access, availability and very affordable price for teenagers.
- Low self-esteem.

3.1.1 Consequences of alcohol in teenagers.

Delgado (2013) states that drinking alcohol both, in childhood or adolescence, is harmful, regardless of how often or how much you drink, because this drug causes damage to your body which is not yet suitable for consuming alcoholic beverages. Scientific studies have shown the great difference in the effects that there is between an adult and an adolescent at the time of drinking. The disadvantages that can be presented in the minors of 18 years are:

- The minor is likely to continue drinking into adulthood and even try other substances such as cigarettes, marijuana, and other drugs.
- Consumption also affects memory and learning, teenagers who drink tend to have less academic background than others.

From what we can see, the adolescent's brain is one of the parts that suffer the most from alcohol. This has been demonstrated in many studies and investigations. Bellis (2000) affirms “Adolescents who drink alcohol abusively have a 10% smaller hippocampus (brain organ responsible for memory) compared to young people who never drink, which is evidenced by difficulties in learning and storing new information” (p.157). The brain activity of a teenager who does not drink alcohol is higher than that of the teenager who ingests it because in research it was demonstrated that at the moment of remembering an event the boy who does not drink has greater cerebral activity.

As it is known at the time of drinking alcohol, it travels all over the body, thanks to the blood. If the consumption is not prudent can make people vulnerable to other risks that affect their health or physical condition, for example:

- Affections in the growth and development of the bones
- They are more susceptible to respiratory diseases and have more chance of getting infections
- Endocrine system disorders: principally in decreasing the production of growth hormones responsible for maturation at puberty and growth.
- Cardiovascular problems: high blood pressure, heart rhythm disturbances
- Gastric disorders: irritation of the intestinal wall increasing the risk of gastritis or vomiting.

3.1.2 Ways to Prevent Alcohol Consumption in Adolescence.

- Keep the teen busy with other activities such as sports, parish groups, courses, etc.
- Know your teen's friendships because if he or she has friends who drink alcohol, he or she is more likely to fall into these addictions.

- Talk to the adolescent about the components of alcoholic beverages and the negative impact they would have on the boy because his body is not yet suitable for the consumption of these substances.

3.2 Consequences of smoking in teenagers.

Smoking is harmful to people regardless of age, but in adolescence is where the most damage produces the consumption of cigarettes because this period is one of the most important in the development and growth of human life, it is thought that the consequences of this addiction are long term, but there are certain negative effects that appear quickly. Among the aftermath are:

- Mild obstruction of the airway decreased lung function and slower development of lung functions
- Sleep is affected, teen smokers sleep an average of one hour less, in addition to worsening eating habits and diet.
- It causes an increase in the heart rate in young people, which reduces physical capacity, in addition to increasing the risk of contracting heart or cerebrovascular diseases.
- Accelerates brain deterioration and negatively affects your ability to make decisions and solve problems and affects areas associated with memory, attention, behavior, and language.

3.2.1. Passive smokers, how does indirectly inhaling smoke affect them?

Inside the cigarette, there are more than 4000 substances of which approximately 250 are harmful and 50 produce cancer cells. if a person is inside the smoker's space, they are exposed to tobacco smoke and its harmful effects, mainly affecting children and adolescents, the smoke substances are suspended and remain in suspension for several hours and sometimes days or week that can be attached to furniture, clothing, curtains and even hair.

Passive smoking is the consequence of cardiovascular and respiratory diseases, of which is coronary heart disease, sudden death syndrome in the infant among others, one of the effects that can occur instantly include irritation in the throat, nose, eyes in addition to headache, dizziness and nausea.

Physical effects:

- Short term: cough, dizziness, dental problems, (gum damage, enamel) eye irritation.
- Medium term: arteriosclerosis, COPD, pulmonary emphysema, asthma, infertility.
- Long term: cancer (breast, tongue, lung, esophagus)

Psycho Emotional effects:

- Adhesion of bad habits, conditions feelings of low self-esteem and emotional deprivation.
- Impairment of cognitive ability. Also, make changes in the conduct of children and adolescents.
- Isolation, anxiety that leads to addiction.
- The possible presence of cardiovascular problems and the development of dementia in elderly people.

Amosa (2013) states that:

Dementia is the leading cause of long-term disability in old age. It affects 2% of the population aged 65-70 and 20% of those over 80. It is defined as a chronic deterioration of higher functions, acquired (as opposed to mental retardation) and in the presence of a normal level of consciousness and attention (as opposed to delirium). (p.14)

3.2.2 Ways to Prevent cigarette Consumption in Adolescence.

- To warn and inform adolescents about the consequences of smoking through graphic and explanatory tests and warnings about their health and long-term risks.
- Set an example to minors and stop smoking as children of smokers are more likely to become smokers

- Be aware of the times when children see smoking in movies, video games, or programs. 1026 words

Conclusions

At the end of carrying out the research of the monographic work I have reached the following conclusions:

- Alcohol can suppress the nervous system, so shame is gradually lost. And excessive consumption of alcoholic beverages leads the person to do unusual things of which he will not remember much since his system is suppressed.
- Cigarettes contain harmful substances that can condition the appearance of malignant tumors. It has also been shown that the passive smoker can have worse consequences than the active smoker because the passive inhales the smoke produced by the cigarette which causes greater contact with substances harmful to the human body.
- Higher alcoholic beverages cause worse damage to the human body
- Alcohol and tobacco affect young people more abruptly because they are in full development and their body is not yet suitable for the consumption of alcoholic beverages or smoking because it has been shown that these drugs affect their bodies in such a way that prevent the full development of their brain, causing a low performance in the academic field. They also begin to have signs of heart or respiratory problems, their behavior may begin to change and is isolated from society by their addiction and may present greater problems at a much older age to mature.
- With a correct explanation of the negative effects of smoking and drinking alcohol on young people, you can make them reflect to stop these vices
- The cigarette mainly affects the respiratory system, concentrating on the lungs and conditioning the appearance of any lung cancer
- People can drink alcohol or smoke with a prudent and controlled frequency that does not seriously affect human health. But if these drugs are consumed in an imprudent

and excessive way it will bring bad consequences such as short, medium or long term illnesses, which in some cases could be difficult to treat.

Recommendations

1. Adults can consume alcoholic beverages but in a moderate way, in order to avoid the appearance of diseases or tumors such as cirrhosis or liver cancer.
2. If you have a family member or someone who lives in your space who smokes, try to make it outdoors or away from people because the passive smoker is the one who suffers most from the consequences of smoking, even more than the active smoker, to be in closer contact with gases or substances from tobacco
3. Smoking or drinking can be harmful to teens because they are not informed of the consequences of using drugs and do not know that their body is not yet fully developed, is not able to consume alcoholic beverages and worse smoking.
4. Watch teenagers, as they are more likely to drink alcohol or smoke because they want to experience new sensations. Also be aware of clues, to know if you drink or smoke. These can be red eyes, strange behavior, among others
5. Watch teenagers, as they are more likely to drink alcohol or smoke because they want to experience new sensations. Also be aware of clues, to know if you drink or smoke. These can be red eyes, strange behavior, among others

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