

Vol. LXXXX

No. 4648

THE TOBACCO LEAF

1954

March 13

Contention that Tobacco Causes Disease Does Not Agree with Authentic Biological Conceptions

Calamia Hits Retention Of The \$4 Rate

**"Consumer Should Not Have
To Pay More in Tax Than
He Does for Consumption"**

A vigorous test against the con-



By James Coughlan, M.D., F.A.C.S.
(Written Specially for *The Tobacco Leaf*)

(EDITOR'S NOTE: Much of the validity that has been accorded by the public to the widely publicized opinions that the use of tobacco and lung cancer are connected arises from the fact that these opinions have been launched at the "scientific" level. The average smoker, who has never felt any ill effects from smoking, feels that "if those smart chaps say that, there must be something to it." Dr. James Coughlan, who after a distinguished career in surgery, has spent 30 years in a scientific study of soils, plant growth and agricultural chemistry, has written for this paper an article discussing the nature of the tobacco plant in which he asserts that the theory that tobacco is a causer of disease is utterly incapable of proof.)

Raps False Claims

For thousands of years, primitive and

Raps False Claims

For thousands of years, primitive and aboriginal people used tobacco in different ways without harmful effects, but modern man has been and is trying to prove the plant is harmful and disease forming. That is not so.

Let us consider life and growth. There are two types of life, plant and animal. All the living organisms in both kingdoms are made up of cells bound together by connective tissue. Cells are the units of life and growth.

Almost a hundred years ago, Rudolph Virchow described the cellular structure of man, 50 years ago Olof Hammarsten described the animal cell and more recently R. Buvat wrote of the different cells in plants. E. J. Conway explained the exchange of forms of matter between the cell and its environment.

A cell in every living thing is made up of a membrane, the contents or the cytoplasm, and a dark spot called the nucleus. It draws forms of matter, or elements, from the surrounding liquid medium. The contents of a cell depends on the food supply and on the chemical changes that liberate elements for absorption. Air is taken in by the lungs and broken down to liberate gases. Certain gases from air are vital for the body; oxygen enters red blood cells for transportation to the different parts of the body, and nitrogen enters the protein structures and contents of cells. The inner medium is made of water, food products and their derivatives, and the internal secretions that break down the food products to liberate elements.

If bone cells do not absorb calcium

(Continued on Page 26)

Biology Disproves Lung Cancer Theory

(Continued from Page 3)

from protein food products, softening occurs and accounts for many different diseases. If fluorine gas is not liberated from liquids and foods, the cells that form the dentine and enamel undergo decay or dental cavities. If iodine is not present in water and the earth, it is not absorbed from foods and the thyroid gland suffers from gradations of Hypothyroidism.

What is the role of tobacco? Tobacco is a plant similar to cabbage, lettuce and celery, but the internal secretions of each differ. It is used as a food by millions of different insects and other forms of animal life, by deer, rabbits and woodchucks. Horses and dogs often eat tobacco. No form of animal life suffers from the use of tobacco and its internal secretion nicotine.

The cells of the tobacco plant and leaf contain the three classes of foodstuffs, proteins, fats and carbohydrates. Because the secretion nicotine is somewhat distasteful, the plant is not used as a food by man.

All foods are digested in the stomach and intestines to form food products; the products of proteins are amino acids and other simple combinations, those of fats are known as fatty acids and those from carbohydrates are called simple sugars, such as glucose, dextrose and levulose. The products are absorbed by the intestines and carried by the blood stream to the fluid of the body for the action of internal secretions, decomposition and the liberation of elements. Elements are absorbed by cells in the process of metabolism to produce regeneration. All cells are constantly dying and forming new ones.

Decomposition or the liberation of elements is similar to combustion, the burning of plants. In combustion or burning, gases are liberated, water is dissipated and ash is formed. Ash is made up of mineral elements obtained from protein foods.

Tobacco is used in three ways, for the smoke, the chew and the sniff. It is used in cigarette, pieces of tobacco bound together by paper, in cigars, or pieces of leaves held together by other leaves, and in pipes where broken leaves are used. The smoke liberates gases for absorption by the lungs, the chew and the secretions of the mouth are responsible for the extraction of small amounts of foodstuffs and traces of nicotine, and the sniff, by which fewer combinations are extracted, by the secretions of the nose.

With this introduction it is necessary to consider what tobacco does and does not do.

False Ideas

Since the Spaniards found the Indians using tobacco and after the English adventurers introduced it to Europe, many false ideas have been spread about the use of the plant. Those stories are based on superstition and lack of knowledge. In the past hundred years every disease has been attributed to tobacco. What are the facts?

Tobacco is a plant that contains food combinations and its leaves contain a secretion called nicotine, similar to the secretions formed in other plants and to those formed in the body of man. It aids the digestion of foodstuffs in man and the decomposition of the products formed after digestion. It is normally formed in the body of many by the partial decomposition of protein food combinations. According to the older physiological chemists and to the dictionary, one of the derivatives of proteins is called pyridine, and pyridine is described as

"the nucleus of a large number of organic substances, among which is several plant alkaloids, as nicotine." This nitrogen combination is obtained from the proteins in all forms of plant and animal food, and from the proteins in bone oil and coal tar. Nicotine and pyridine are normal products of the decomposition of protein foods in the body of man. There are many others.

It is said that tobacco and nicotine produce Arterio-sclerosis, Coronary Sclerosis and Thrombosis, Buerger's Disease, or thrombosis of the veins of the legs, Cancer, and in fact practically all the diseases of mankind. Those contentions are false and incapable of proof. They do not agree with accepted physiological and biochemical conceptions.

Practically all the diseases attributed to tobacco are due to faulty metabolism, or to changes in the chemistry of the body. Metabolism means the decomposition of food products, the liberation of elements, the regeneration of cells and the formation of secretions. All cells in the body of man, except the hardened bone cells and those in the nervous system, produce secretions or enzymes for the functions of hollow organs and the hormones and endocrines for the chemical action in the inner medium. All secretions stimulate nerve and brain cells. When the secretions are increased in the hyper conditions, Hyperacidity, Hyperthyroidism, Hyperadrenalism and Hypersexualism, the brain and the body are overstimulated.

Biochemical Facts

Cells live on elements, the simplest forms of matter. Tobacco and nicotine stimulate the activity of cells, more chemical changes and the formation of more secretions. Tobacco increases the secretions of the mouth, the stomach and intestines for better digestion; it increases the internal secretion for better decomposition and the liberation of elements. Fifty years ago, the great pharmacologist Cushman stated that tobacco and nicotine increase most of the secretions. At that time little was known of internal secretions, hormones and endocrines.

It is said that the gases from tobacco are responsible for cancer of the lungs, the so-called Bronchogenetic Carcinoma. Gases in air stimulate, irritate and may produce inflammation, but never change the structures of cells. The composition of the air—dust, dirt, pollen, moisture, dryness, heat and cold—is more often responsible for irritation and inflammation than tobacco. Particles of matter in the air produce Miner's and Grinder's disease, an inflammation with desiccation, but without cancer formation. In the tropics, where people smoke all the time and where climate and atmosphere are uniform, no respiratory diseases occur from tobacco.

For thousands of years primitive people and the more advanced races have taken in gases, similar to those from tobacco, by sitting around fires and fireplaces, without producing cancer. If gases produced cancer, those people would not survive.

The same gases formed by the combustion of tobacco, with the addition of many more, are liberated in the body by the breaking down of food combinations. The action of gases within the body is very different from the action outside the body. Gaseous combinations in air act on cells, separated gases from air, liquids and foods in the body are taken in by cells. Many different gases from foods, such as ginger cheese and garlic, are eliminated from the lungs

THE TOBACCO LEAF for March 13, 1954

and alter the odor of the breath.

It is said that tars from tobacco produce cancer. The same tars occur in cabbage, lettuce, dandelion and meats, and never cause diseases. Overcooked foods produce tars.

Fats are responsible for tars. When fats are digested in the intestines fatty acids are formed. Many products are obtained from fatty acids, such as oils, tars, gums, resins, cleoresins, benzopyrenes. They do no harm in the body; in fact they are necessary for the chemical changes. When benzopyrenes are burned, certain gases, carbon and hydrogen, are freed.

The condensation of nicotine in water, through various methods of smoking, is different from the liberation and absorption of the gases in nicotine by the respiratory system and the blood stream. Gases in the blood stream unite with food combinations.

Biochemically it is impossible to connect cancer and smoking. Cancer is a growth made up of many changed cells. All cells change because of the faulty absorption of the required forms of matter. Thus, a group of cells without a special element becomes deficient, and the same group of cells without protein elements undergoes degeneration, death or atrophy. A cancer cell is one type of degeneration.

One of the most important elements in the formation of normal, abnormal and cancer cells is phosphorus. When the farmer applies phosphates and other combinations to the soil the growth of plants is better. Growth means the multiplication of cells. When tobacco and the paper in cigarettes are burned, phosphorus remains in the ash. Phosphorus in tobacco ash does not effect the cells and structures of the body.

Conclusion

Let us remember that tobacco is a plant used as a food by a great many members of the animal family and that it contains the three classes of foodstuffs—proteins, fats and carbohydrates. Its leaves contain minute traces of a secretion, nicotine, that never causes harmful effects on animals. A concentrated solution of nicotine and many other secretions will kill, but that concentration of nicotine never occurs from the use of the plant. A long and laborious laboratory process is necessary to concentrate nicotine. It must be remembered also, that nicotine forms gases when tobacco is burned.

The paper around the pieces of tobacco in cigarettes is made from wood pulp and other substances. It contains fibers and protein combinations. When burned it liberates similar gases in lesser

numbers. The gases from wood, wood pulp and the other materials that produce paper have been absorbed for centuries without producing any permanent illness.

Tobacco and nicotine are stimulants; by stimulating the production of more secretions, the processes of the body, digestion, decomposition and chemical change, are increased. When the processes of the body and the brain are increased, tobacco helps to prevent diseases.

House Unit Okays Excise Tax Cuts

(Continued from Page 3)

in the first year and thereafter a \$912,000,000 reduction annually.

In the first year, the \$912,000,000 cut in the luxury rates, adopted over the protests of the Eisenhower Administration, will be more than offset by the \$1,077,000,000 to be collected under the extended cigarette, gas, auto and alcohol sales tax.

Under the bill, all excise taxes now pegged at from 11 to 25 per cent will drop to 10 per cent on April 1 of this year. Items affected include cigarette and pipe lighters, mechanical pens and pencils, photographic apparatus and film, toiletries and cosmetics, jewelry, furs, luggage and handbags, admissions, club dues, electric light bulbs and tubes, sporting goods and firearms, cartridges and shells.

Code Bill Recommittal Sought

During debate on the excise measure, Representative John W. McCormack, minority whip, revealed that the Democratic strategy in the lower chamber on the revision of the Internal Revenue Code will be to ask for recommittal with instructions to increase the personal tax exemption by \$100 to \$700, and to strike out the provisions on dividend income credit from the draft.

The tobacco manufacturing industry is anxious for early approval of the Code revision, as this paper has pointed out frequently in recent issues. Among the major provisions in the tobacco section of the proposed revised code is one calling for the payment of excise taxes by return instead of the current stamp method.

Democrats Fire Broadside

Four hours after the 875-page tax revision bill was presented on the House floor yesterday, the ten-man Democratic minority of the House Ways and Means Committee fired a sweeping broadside