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## Is Smoking Detrimental to Boys and Young Men?

Attention is being attracted anew to the use of tobacco by the decisions of some of the great commercial organizations. Newspaper reports announce the condemnation of cigarette smoking by some railroads on the part of their employes on the ground that the habit dulls the intellect. A prominent automobile manufacturer, who recently came into public notice by his profit-sharing plan, has roundly condemned cigarettes, and is said to be forbidding their use among his men.

The latest to decry the unfortunate "coffin nail" is Thomas A. Edison, who has posted signs bearing this warning all over his plant in West Orange, N. J.:

\* . . . . \*  
: Cigarettes NOT TOLERATED. :  
: They Dull the Brain. :  
\* . . . . \*

Mr. Edison analyzed more than a score of different brands of cigarettes, and the newspapers say he found that while they contained many grades of tobacco, all the cigarettes were poisonous.

The New York Times thus quotes Mr. Edison on the subject:

"That poison attacks the brain and works havoc with a man's mental activity. His mind becomes clouded. Evaristo Madero, brother of the late President of Mexico, told here a few days ago that men, women and children are inveterate smokers of cigarettes in the southern republic. That is why Mexicans as a race as not clear headed."

### NOTED BALL PLAYER ABJURES TOBACCO.

EDWARD T. COLLINS, A.B.,  
SECOND BASEMAN OF THE PHILADELPHIA AMERICAN BASEBALL TEAM  
(WORLD'S CHAMPIONS).  
Philadelphia.

I do not feel that I am in a position to judge as to the merits or demerits of the use of tobacco, as I have never used it in any form. Throughout my course at Columbia University, where I engaged in athletics, and in my career as a professional base ball player, I have found it incumbent upon me to be in prime physical

There is nothing sentimental or paternal about this matter so far as Mr. Edison is concerned, as he is reported by the press to smoke cigars and chew tobacco. He regards it largely from the standpoint of business, although we suspect from his previous career that he is quite concerned with the moral welfare of his people. From a business viewpoint it is necessary that his men should be possessed of keen brains, and that they should be in a state of physical and mental perfection at all times. He believes cigarette smoking renders persons less able to exercise their faculties, and he therefore banishes the offending cigarette.

As we see it, the inhalation of smoke is attended with danger when persistently practiced, and as practically all cigarette smokers inhale, the constant use of the weed in this form, in any considerable quantities, is likely to be attended with bad results.

It is not the use by adults, but the abuse of cigarettes that figures. Moderation in cigarette smoking is difficult of performance. One calls for another, on account of the shortness of the smoke. It is easy to consume a number in the course of a day. Inquiry among users shows that the average cigarette smoker gets rid of a box of ten each day. If this is true, physical deterioration, especially of a circulatory and respiratory nature, will generally follow in due course.

The concensus of opinion is that smoking is harmful to boys and young men, no matter in what form the tobacco may be, and that immoderate cigarette smoking is injurious to adults as well as youths.

condition at all times. I did not take up smoking as a boy, and as I have no desire for it, I have carefully refrained from the use of tobacco as a man, in the belief that I should conserve my powers to the fullest extent.

Smoking may or may not be harmful to young men, but why should a boy take a chance on something which might have a deteriorating influence, when he can get along as well without taking that chance. In these days of active competition, it is necessary for a man to put forth his best efforts if he is to attain success, and he should do nothing which will detract from his natural and physical abilities in that direction.

## A REVIEW OF AUTHORITIES OPPOSED TO TOBACCO.

EDWARD H. CLEVELAND, M. A.  
CHAPLAIN OF RIVERSIDE HOSPITAL,  
New York.

An unprejudiced inquiry into the mental and physiological effects of tobacco smoking establishes the conviction that this habit, even in moderation, is definitely and permanently injurious to both mind and body. So many, indeed, are the scientific facts that point directly to this conclusion that it is difficult to select the most important ones.

The defenders of the habit, in their efforts to find excuses for it, have furnished some of the strongest arguments against it. No one doubts that these arguments, when presented fairly and without exaggeration, would have greater influence in correcting the evil were it not for the positive effects of the poisonous drug in dulling the senses of those who use it.

We are not speaking of excessive use, but of moderate use, be it noted. Aside from the well-known principle that moderate use leads to excess, and always tends in that direction, as experience abundantly proves, no one defends the excessive use or abuse of tobacco. Not a single advocate or apologist for its use will venture to claim that the excessive use is beneficial.

All agree that tobacco is a poison, to be used in moderation, if at all. This article is written to remind its readers of the very simple proposition that the habitual smoking of tobacco in moderation will, if given time enough, produce similar results in the heart, brain, stomach, lungs and other vital organs to those brought about more rapidly by smoking to excess.

The burden of proof lies with the smokers. It is for them to prove what has never yet been proved, that the habitual drugging of the organs and faculties of this wonderfully delicate human organism, even moderately, is without serious and permanent ill effects. Either this position must be successfully established or tobacco smoking is suicidal. In the face of facts, only too apparent, there is no loophole of escape from this alternative.

The following are well recognized direct results of moderate habitual smoking: Tobacco blindness, a most stubborn form of permanent affection of the eyes; cancer of the lips and of the tongue and of the throat, diseases almost wholly confined to smokers; Bouchard of Paris, an authority on diseases of the heart and blood vessels, names tobacco as one of the leading causes of these deadly maladies, which have increased enormously in the last ten years; 10 per cent. of all smokers have albumen in the urine; Dr. Wright of London showed that nicotine lowers the power of resistance of the human body against tuberculosis, and post-mortem examinations at Phipps Institute showed that smokers are twice as subject to tuberculosis as non-smokers. Standard works on the practice of medicine in relation to the cause of Bright's disease, arterio-sclerosis, angina pectoris and other maladies involving the heart and blood vessels, indicate that the death rate from these diseases during the past 30 or 40 years has kept even pace with the increase in the use of tobacco.

The *London Lancet* attributes the toxicity of tobacco smoke to poisonous products other than nicotine evolved in the process of smoking, notably to carbon-monoxide gas, one pint to four pints of which are given off by one ounce of tobacco smoked in the form of cigarettes, and two and one-half pints by a single pipe of tobacco. When we remember that two-tenths of one per cent. of carbon monoxide mixed with air has proved fatal

to animals, and four-tenths of one per cent. has destroyed human life, we need no longer marvel that habitual smokers succumb to unexpected attacks of disease in far greater proportion than non-smokers. Where one smoker survives to a good old age, thousands of death certificates should read, "Resistance reduced by smoking."

Some results of observations, published by the Russian National Health Society, throw light on the effect of smoking on the health of boys and young men. The average number of cigarettes smoked daily by the medical and technological students of St. Petersburg was 21.26. Of these students, 16 per cent. were found to be suffering from some disease of the respiratory tract, while but 10.7 per cent. of non-smokers among them were thus affected. As to diseases of the alimentary tract, the proportions were about 12 per cent. of smokers to 10 per cent. of non-smokers. Where both tracts combined were found diseased in one individual, the proportions were 8.77 per cent. of smokers to 3.22 per cent. of non-smokers.

Those young men who had acquired the cigarette habit before the age of 16 years gave higher percentages of illness than those who had begun at or after that age.

At Yale University, Dr. J. W. Seaver gives the following results of tobacco tests among the students:

Non-smokers during the four years of college life gained, in height, weight and chest measurement, 18 per cent. more than regular smokers, and 12 per cent. more than irregular smokers.

In actual lung capacity, and this fact is very significant, the non-smokers gained 50 per cent. over regular smokers, and 35 per cent. over irregular smokers.

In regard to the effects of smoking on the nervous system, Dr. J. Leonard Corning, the eminent nerve specialist of this city, declared that tobacco smoking causes nervousness, dyspepsia, tremulousness, listlessness, a distaste for work and a difficulty in concentrating attention upon a task when once it has been begun. He relates this habit also to arterio-sclerosis, and even to insanity.

Dr. Corning further states that users of cigar holders and cigarette holders escape to a certain degree the direct absorption of poisonous products through the mucous membranes coming in contact with the tobacco. In France, where the Government has a monopoly of the manufacture and sale of tobacco, a variety of pipe and cigarette tobacco has been prepared from which the nicotine is extracted by a special process. An infusion of this denatured tobacco was injected into the veins of a rabbit with no apparent effect upon its arteries. Whereas an injection of ordinary tobacco infusion into another rabbit produced large areas of sclerosis in the aorta, from which the rabbit died in a few weeks.

To determine the primary effect of tobacco upon the vaso-motor system, and through it upon systemic circulation, let any man time his pulse just before smoking a strong cigar, and after smoking it time it again. The accelerated action will be clearly demonstrated, and the effect of driving an already enfeebled heart to thus work overtime, by beating with increased frequency, may readily be understood.

Eighty per cent. of applicants for admission to army service, both in England and in the United States, were rejected as unfit owing to what is known as "tobacco heart." This is appalling, for if three-fourths of our young men are unfit for army service, they are certainly unfit to assume the responsibilities of progenitors of a fit race. So says Dr. Kress of Washington, D. C.

It is well established that the narcotic poison of tobacco not only tends to produce hardening of the arteries, but also what is known as glandular degeneracy. The offspring of tobacco users commonly show signs of this degeneracy, and these signs become more marked in succeeding generations if the habit is continued. Dr. J. H. Kellogg says that in his opinion the tobacco habit is the worst vice of civilization. The great English surgeon, Dr. Abernethy, declared that tobacco stupefies the moral sense. Dr. Keeley states that tobacco enfeebles digestion, produces emaciation and general debility; it lays the foundation for nearly every nervous disorder now common to the American people; it produces color blindness, partial or total loss of vision, various forms of insanity, epilepsy, bronchitis, rheumatism and asthma, dyspepsia and catarrh, tobacco heart and cancer of the stomach.

Dr. George Critchett, a distinguished London oculist, says he is constantly consulted for blindness occasioned solely by great smoking.

Dr. Woodward of the Massachusetts Insane Asylum reports as follows: "That tobacco produces insanity, I am fully confident."

Dr. Nathan Allen of Lowell, Mass., gives this evidence: "Tobacco perverts the taste, impairs mental capacity, corrupts the moral sense and stimulates the animal nature; its dreadful evils, through the law of inheritance, extend to offspring even to the second, third and fourth generation."

Dr. O. M. Stone of Boston declares: "A tobacco user's chances of recovery from malignant diseases is lessened 50 per cent."

Dr. Cowan gives it as his belief that next to transmitted tendencies, the use of tobacco is the great cause of both moderate and excessive alcohol drinking.

Dr. Willard Parker concurs in this testimony, with many others prominent in the medical profession.

The professors in the University of Michigan, who have had a long experience among thousands of young men, regard tobacco as having a worse effect than even liquor, affirming that more young men break down in body and mind, and finally go astray as a result of smoking, than of drinking, while the former often leads to the latter.

Cigarettes have clearly the most to answer for, in the opinion of competent judges. A superintendent of city schools in the Middle West brings a severe charge against them: "The effect of the cigarette is greatly injurious to the body, deranging the stomach, reducing the vitality, unsettling and weakening the nerves, causing palpitation of the heart, checking the growth. It injures the mind, dulling the powers of observation and reflection, producing a weak and treacherous memory, benumbing the sensibilities, always destroying the finer feelings, and greatly enfeebling the will. It injures the morals, tending distinctly to make a boy untruthful, and in many instances these boys become petty thieves."

The Supreme Court of Tennessee, in declaring the law constitutional which forbids the sale or giving away of cigarettes in that State, said: "We think cigarettes are not legitimate articles of commerce, because they are wholly noxious and deleterious to health. Their use is always harmful, never beneficial. They possess no virtue, but are inherently bad, and bad only. Beyond question their every tendency is toward the impairment of physical health and vigor."

Two prominent witnesses from Europe will serve to conclude the present article, by way of summing up.

The president of the Paris Medical Academy, M. Orfila, declares that tobacco is the most subtle poison known to the chemist, except the deadly prussic acid.

And Professor G. von Bunge of the University of Basel, after characterizing chronic nicotine poisoning as one of the causes of severe illness and as a source of degeneration, speaks of the tremendous economic waste which exhausts great areas of fertile soil in producing narcotic poison, and says: "The real reason of all this disgusting slavery to smoking is simply thoughtless imitation," worthy of monkeys, not of men.

### SYMPTOMATIC EFFECTS OF TOBACCO USING.

T. D. CROTHERS, M. D.,

SUPERINTENDENT OF WALNUT LODGE HOSPITAL.

Hartford, Conn.

The effects of smoking on boys and young men have been matters of observation and study for a great many years. I have sought to find evidence that would verify or disprove some of the extravagant literature concerning tobacco.

There are several symptoms which are unmistakable, and will be found in a large proportion of boys and young men who smoke. Of these, tics and palsies of the lips, eyes and muscles of the face are common.

There is pallor and anemia associated with it. I have found faults of sight and hearing that were measurable, and sensory changes of touch, taste and smell which could be observed from day to day, and were particularly noticeable after the use of strong cigars or cigarettes.

In many instances I have verified this fact, that sensory activities were affected, noticeable in slowness and reaction to impressions; also inaccuracy of statements. The consciousness of truth seems to be blurred. Minute statements and accuracy of details is considerably altered after smoking.

Events cannot be described exactly in the same way as they would be before. Of course there are wide variations in this, but these occur so frequently as to confirm the recognized fact that the physiological action of tobacco is a depressant to the nerve force and senses.

The tension is always higher after the use of tobacco, and then is lowered, and this fact alone is very significant. To a great many persons there is much confusion and ignorance as to what degree of depression tobacco may have on vitality.

The effort to draw dividing lines and say that tobacco is safe up to a certain point in some persons, and beyond that in excessive quantities it is a veritable poison, is always a failure. The extreme poisonous effects of tobacco have a beginning and growth and development, the same as any other toxins. There can be no question that cigarette smoking is a most perilous of all forms of tobacco. The principal reason is that the products of combustion are drawn directly to the mouth and absorbed, and while the quantity is small, the effects are accumulative.

Experience and observation are united in this conclusion that the cigarette smoker is the most degenerate and palsied of all users of tobacco. Some laboratory experiments show conclusively that tobacco contains aldehyde and other substances which are exceedingly dangerous when introduced into the system, and the anomaly of finding one man very seriously affected from smoking and another scarcely injured by it, affords no criterion from which to judge.

My conclusions, based on the study of a very large number of persons, are that the effects of smoking on young men and boys are decidedly injurious and dangerous in the long run. In this I have seen no exceptions.

**SMOKING IS DETRIMENTAL.**

WILLIAM G. ANDERSON, DR. P.H., M.D.

PROFESSOR AND DIRECTOR OF THE YALE UNIVERSITY GYMNASIUM.  
New Haven, Conn.

I made an investigation some time ago to learn the effects of smoking upon a freshman class in Yale, and I can do no better for the purpose of this most helpful symposium for THE MEDICAL TIMES than use the figures I compiled at that time. Out of 389 members of the class of 1909, there were 148 smokers. Of these, 120 gave the following data as to the kind of smoking:

Pipe only.....	35
Cigarettes only.....	7
Cigars and cigarettes only.....	2
Pipe and cigars only.....	5
Pipe and cigarettes only.....	47
Pipe, cigars and cigarettes.....	17
Sworn off, but smoked in prep. school..	7

120

Of the 120 men, 110 smoked in their preparatory schools. Fifty-eight schools were represented by the smokers. The average height of the entire class was 68 inches; the average weight, 138 pounds; the lung capacity, 268 inches, and the strength test, 2,400 units. A further study of the men who were above and below the average of the class showed that fifty-five of the smokers were above the average strength test, fifty-four below; sixty-seven were above the average height, fifty-one below; fifty-four were above the average weight, sixty-four below; forty-seven are above in lung capacity, seventy-one below. That is, over half of the smokers are above the average in strength and height; considerably more than half are below in weight and lung capacity.

Dr. J. W. Seaver, who made careful observations along this line, found smokers deficient in height and lung capacity. The smokers in the class of 1909, who were noticeably above the average records of their class, were athletes, football players and gymnasts; they were select men, with good bodies and more than usual strength. It would be interesting to know what their records would have been if they had not been smokers.

A study of "Academic standing" shows that, out of 112 cases, thirty-five smokers were above the average standing of the class, which average, 2.68, was based upon three sets of examinations taken during the year, seventy-six were below and one man equaled the average. One hundred and twelve of the smokers took these examinations; the other six did not finish their course.

Of the 221 non-smokers who took the three examinations, one hundred and one fell below the average, one hundred and nineteen were above, and one man equaled the average.

Students who make an average of 3.30 out of a possible 4.00 are in the honor class, known as Philosophical Orations; those who make 3.15 receive High Orations, and those who make between 3.00 and 3.15 receive Orations. Men above the 3.14 mark are eligible to Phi Beta Kappa. It is probably understood that, to receive the honors mentioned, men must maintain these standards during their college course. Of the one hundred and twelve smokers, five made over 3.15, of which number one made 3.30 and one 3.23; six men made marks between 3.00 and 3.15. Of the two hundred and twenty-one non-smokers, seventeen made 3.30, forty-six made 3.15 and seventeen made between 3.00 and 3.15.

Of the 148 smokers whose hearts were examined, 19

showed irregularity, and were classified as follows: Irritable, 5; irregular, 7; weak, 2; regurgitation, 5. Of the 241 non-smokers whose heart condition is recorded, 66 were slightly abnormal, and were thus classified: Irritable, 22; irregular, 27; weak, 7; regurgitation, 10. Of the 148 smokers, 12.83% showed heart uncertainty. Of the 241 non-smokers, 27.38%. It is possible that the smoking may have exerted some influence on the heart, but how shall we dispose of the heart of the student who never touches tobacco?

A comparison of the statistics of the smokers, with these averages shows the number of smokers above or below the average as follows:

	Above.	Below
	Average.	Average.
Smokers (112).....	31.1%	67.8%
Non-smokers (221).....	45.7%	53.8%

The investigation of the heart of the smoker was not made to defend the freshman, but to approximate facts relative to his habit of using smoking tobacco. Much has been written against cigarette smoking, and much harm, and that the cigarette smoker suffers much from that it is the excessive use of tobacco that does great harm, and that the cigarette smoker suffers much from associate evils. A few conclusions are deduced. The 1909 man was a pipe and not a cigarette smoker. He smoked cigarettes on the streets because the use of a pipe by him is tabooed. This custom gives him the reputation of being a cigarette smoker. His health and heart are not injured to the extent generally believed, but his lung capacity is deficient and his weight is below the average. It is the concensus of opinion among most athletes that smoking is detrimental, and the majority of men training for teams do not use tobacco. And, finally, "Academic standing" of the smoker is lower than that of the non-smoker.

**NO SMOKING UNDER 21.**

GRANTLAND RICE, A. B.,  
SPORTING EDITOR OF THE EVENING MAIL.  
New York.

Smoking, in athletics, certainly has a very harmful effect on a boy. It cuts into his condition, makes him inclined to be short-winded and takes away energy and vitality.

For a young man over 21, who has lived cleanly up to that period, I do not consider moderate smoking harmful. Theoretically, any sort of smoking should be harmful in athletics, but, in fact, it is hard to prove such a case.

Smoking is supposed to be hard upon the nerves. It is so in my own case. Yet I know of no game that requires steadier nerves or better nerve control than golf. The best natural golfer in America is Charles Evans of Chicago. He doesn't smoke nor drink. Yet the only weak spot in his play is nervousness on the greens. The four steadiest and most effective golfers I know are Travers, Ouimet, Hilton and Travis—all champions now except Travis, who has won for several years in the past. And all four are hard smokers. The first three smoke cigarettes—the latter long, black cigars.

Mathewson, the steadiest pitcher in baseball, smokes cigars. Most ball players smoke, without showing any bad effects.

But I explain that in this fashion—after a man passes the buoyancy and natural elasticity of youth, he has a tendency, through a long siege of training and work in athletics, to become stale. If he attains too keen a training edge it brings his nerves too close to the sur-



face. He needs something to settle these nerves. A man cannot get into any fine condition and hold this indefinitely. He will crack if he attempts it. He must ease up somewhere along the way.

"Form" is best explained by some one as "the short interval between getting ready and going stale." To reach the very crest for one brilliant achievement I should say that smoking and all such should be eliminated. But over the long grind it is a different case. I would like to say that all smoking is injurious. But I doubt it in those who have passed the natural resourcefulness of youth. These can only stand so much hard training. If they play baseball seven months on a stretch or golf eight months on a stretch they must indulge in something to break this strain upon their nerves.

I have the cases before me of Gibson of Pittsburgh and McLean of Cincinnati and New York. Both started about the same time in the big league as catchers. Both were big, powerful men. Gibson neither smoked nor drank. He kept perfect training. McLean both smoked and drank, not steadily in his drinking but in spots. In theory Gibson should outlast him. But he broke under the strain of maintaining too keen an edge while McLean did not. Gibson rose to greater heights for two seasons. But he was the first to slip for McLean had never reached the taut point of condition.

English teams in training smoke pipes and take their Scotch and soda in moderation. And they are good on the long distance running game.

I do not think there is any question but that smoking is bad athletically for a boy under 21 years of age. He needs no nerve-soother. He has no nerves to soothe. But beyond this smoking in moderation is not likely to hurt an older man.

#### THE EFFECTS OF TOBACCO ON BOYS.

GEORGE L. MEYLAN, A.M., M.D.,

MEDICAL DIRECTOR, COLUMBIA UNIVERSITY IN THE CITY OF  
NEW YORK.

New York.

Twenty-four years' experience in teaching hygiene and physical education to boys and young men has convinced me that tobacco is injurious to growing youths. The class of boys and young men coming under my observation includes very few who begin smoking before the age of sixteen or who smoke excessively.

The effects produced by the use of tobacco vary over wide limits according to the individual's temperament, the age when he begins smoking, and the quantity of tobacco consumed. It is difficult in many cases to determine accurately the effects produced by tobacco because such factors as lack of exercise, insufficient sleep, and abuse of coffee, tea and other drugs are often present in individuals who use tobacco.

The effects which may be attributed at least in part to the use of tobacco by adolescents are: rapid and irregular pulse (100-120); poor circulation, manifested by pallor of skin and cold extremities; poor "wind" and lack of endurance; nervousness and irritability. These abnormal conditions are most marked in youths who are of a nervous temperament, lead an unhygienic life, and use much tobacco. Some cases have come under my observation where the excessive use of tobacco was undoubtedly the chief cause in producing unfavorable symptoms. This was proved by the rapid and marked improvement which took place when the use of tobacco was discontinued. One case, a boy 18

years old, smoked 25 to 30 cigarettes a day; his pulse was 128 and irregular; he was a candidate for pitcher on the baseball nine, but found that nervousness, irritability, and lack of endurance interfered seriously with his efforts to win a place on the team. After three weeks of total abstinence from tobacco, his pulse was 90 and regular, he improved rapidly in steadiness, control and endurance, and won the coveted place on the team. Many similar cases could be cited to show that tobacco is injurious to growing youths and to prove the contention that no efforts should be spared to influence boys and young men to abstain from its use.

#### SMOKING TO THE BOY SPELLS WORTHLESSNESS.

CHARLES B. TOWNS,  
SUPERINTENDENT OF THE TOWNS HOSPITAL,  
New York.

Tobacco has no greater foe than I. I view the subject from the standpoint of a man who was born and raised in the South, where every boy was expected to smoke, "chaw" and "cuss" some as soon as his parents thought he was old enough to do so.

Very fortunate for boys who came along about my time, '62, there were no cigarettes. I was brought up on a farm, and my first smoking of tobacco was behind a barn—keeping out of sight of the elders. Had I been raised in this age in a big city, I unquestionably would have smoked cigarettes, for a time at least, until I was able of my own accord to learn that the use of tobacco is bad business.

I voluntarily gave up tobacco twenty years ago, in disgust! I have never wanted to smoke since, and have always felt sorry for those who did.

There is nothing done at the present time to give the boys and young men of this age the right mental attitude about the use of this drug.

We must class the tobacco user as a whole among the most selfish of the animal kingdom. He thinks that his family should tolerate his smoking as often and as long as he pleases, that he should have a perfect right in private and public places, to use it irrespective of others feelings.

Tobacco, directly and indirectly, is the biggest possible factor in bringing about the boy's undoing. He must submit to his father's using it in his presence as he is growing up, and is told that he must not use it. We all know what this means sooner or later, and generally it is sooner.

The boy who begins smoking never does so in his parents' presence, nor with their consent. The boy beginning to use tobacco these days, begins with the worst form possible—cigarettes; as he must conceal his smoking it means he must begin to lie and this in the end will lead up to the boy's undoing.

The boy that will lie to his father about tobacco will lie about anything. He immediately cultivates that class of boys who are doing the same thing. We all know that with the fewest possible exceptions such boys are not looking for the clean things in life, nor discussing clean people and clean things. Not only is it the beginning of a systematic poisoning of the physical man, but it means a distortion of the moral man. In a short time you can begin to add gambling, loose morals, drinking and everything else that is not worth while, and which, sooner or later, spells "worthlessness."

Materia medica tells us that nicotine, next to prussic acid, is the most powerful poison known to medicine. The only medical use that it can really be put to is to

produce nausea; there are other drugs very much more desirable to meet such a condition.

Tobacco is harmful to every one who uses it, old or young. It cannot in any way contribute to anyone's physical or mental uplift. Some men are not so susceptible to the action of this drug as others; some are more economical in its use, and in the way in which they use it.

The reason that some men who have been using it for years apparently are in good health is that they are just a little harder to poison than others. The use of tobacco in any form is a useless, stinking, dirty and injurious habit, and should be classed as the *world's worst form of drug habit*. It is more surely contributing to the degeneracy to the race than alcohol or opium! I believe that if we could eliminate the use of tobacco, we would lessen the excessive use of alcoholic stimulants 75%.

I hope some day to see nation-wide legislation which will compel the teaching to the young in public and private schools what tobacco, stimulants and drugs really are, and their action upon the human system. It should be made part of the school curriculum. If boys really knew what tobacco is, and what its effect would be on their health in the future, they would not want to use it.

Let us start out and give the boy an honest chance. Sooner or later the old tobacco-soaked individual will pass away. We must look to the new crop of youngsters for any real reform in this direction.

#### SMOKING INCOMPATIBLE WITH EFFICIENT NERVOUS SYSTEM.

DUDLEY B. REED, M. D.

MEDICAL EXAMINER OF THE UNIVERSITY OF CHICAGO.

Chicago.

A considerable number of boys and young men are apparently unfavorably affected by smoking. In my experience the pernicious effects seem to be chiefly noticeable on the nervous system, and manifest themselves in an increased irritability of the nervous system and heart, and a decreased power of continued mental concentration.

Not infrequently a young man calls, complaining of difficulty in going to sleep at night, inability to study effectively, and, perhaps, of "nervousness." Examination may reveal tremor of tongue and fingers and a pulse rate of 90 or more, with a marked acceleration of the heart rate upon moderate exercise (hopping forty feet is used here), and a slow return to the original rate after the exercise. Questioning elicits the information that he is smoking five or six cigars a day, or more probably; a dozen pipefuls or two or three boxes of cigarettes.

If such a young man, continuing his regular regimen with the exception of tobacco, finds himself sleeping and studying better, and if the objective evidences of undue nervous irritability are much less marked after two weeks or a month, it is a fair inference that smoking was a cause of his condition. If, after two or three months of abstinence, a renewal of the smoking is followed by a recurrence of the previous symptoms, the inference is further justified.

There are other symptoms referable perhaps to the eyes or the stomach, which one may be inclined to attribute to smoking in college men, but the type of case outlined above has come to my attention most often, often enough to lead me to believe that in many young men habitual smoking is incompatible with a thoroughly efficient nervous system and maximum mental output.

#### TOBACCO IS INJURIOUS TO BOYS.

HARRY L. HILLMAN,

DIRECTOR OF ATHLETICS IN DARTMOUTH COLLEGE.

Hanover, N. H.

Smoking is certainly harmful to boys and young men. Athletic sports are the best means of finding this out. An athlete who uses tobacco is very apt to injure his heart and usually the blame is labeled "athletics."

A tobacco user lacks energy, his training is hard work rather than a pleasure, his digestion is not what it should be, he is unreliable in competition or in a pinch, he cannot recuperate rapidly after a hard struggle and he does not repeat as readily as one who does not use tobacco. Invariably a smoker thinks he can run a 100-yard dash, a mile run or any other distance and do as well as a non-smoker. He will perhaps for a number of times but the double strain of the use of tobacco and strenuous exercise is likely to permanently injure the heart action.

It is rather a difficult proposition to explain these things to a young fellow; but if we could tell him the same thing ten years later or after he has learned from experience he would undoubtedly agree with us.

#### SMOKING AFFECTS THE HEART.

MICHAEL J. DONOVAN.

FOR THIRTY YEARS ATHLETIC DIRECTOR, NEW YORK ATHLETIC CLUB.

New York.

I consider a man is very much better off physically if he does not smoke. It goes without saying that a boy or young man, who has not attained his full growth, should never consider smoking. I cannot give better advice to anyone than I do to my own son, to whom I have already said, "Don't smoke and don't drink and your battle is half won." When it comes to an adult, if he feels he must smoke, he will find pipe smoking the least harmful. The cigar comes next, and the cigarette is a very poor third, because it is most injurious. This is due to the fact that cigarette smoke is inhaled. I do not consider that smoking affects the wind, but it does affect the heart and nerves.

One reason why business men are so often in bad physical form is that they smoke to excess. If a boy or young man expects to amount to anything in athletics, he must let smoking and all kinds of liquor alone. They are rank poison to his athletic ambitions.

#### A LAW AGAINST SMOKING BY BOYS.

NATHAN P. STAUFFER, M. D.,

SOMETIME PROFESSOR OF HYGIENE IN DICKINSON COLLEGE, AND HEAD COACH OF THE UNIVERSITY OF PENNSYLVANIA BASEBALL TEAM;

MEMBER OF THE EXECUTIVE COMMITTEE NATIONAL COLLEGIATE ASSOCIATION, ETC.

Philadelphia, Pa.

Smoking positively effects young boys and men injuriously. Smoking irritates the nervous centers, which over-stimulates the whole nervous system, accelerates the heart, thus tiring it, and when the supreme test of the race comes it cannot stand the strain and the competitor falters and loses what he most desires to gain. I believe a law should be passed prohibiting young men under 21 years of age from smoking; by that time they have attained their growth and if they desire to run the risk of ruining their health after 21 years it is their affair. In over fifteen years of experience and contact with athletes, I have come to the conclusion that to excel one must follow the strict rules of training, abstinence from smoking, drinking, gambling, overeating, sexual excesses and late hours.

## TOBACCO HAS A DEFINITELY BAD EFFECT.

JOSEPH E. RAYCROFT, M. D.,  
PROFESSOR OF HYGIENE AND PHYSICAL EDUCATION IN PRINCETON  
UNIVERSITY.  
Princeton, N. J.

I am satisfied that the habitual use of tobacco does have a definitely bad effect upon the majority of growing boys and on many adults. The kind and amount of damage that is done varies in each case, depending upon individual differences in temperament, physiological tolerance, and extent of the habit.

The campaigns against the use of tobacco in various forms have been based too largely upon general observation and too little upon the results of careful and reliable investigations. Such investigations are greatly needed as a basis for a sane educational campaign.

If your symposium results in the collection of such material you will have done a great service.

## SMOKING IS DETRIMENTAL.

WALTER CAMP, A. B.,  
OF ATHLETIC COUNSEL TO YALE UNIVERSITY,  
New Haven, Conn.

Smoking is detrimental to young boys from an athletic standpoint.

## Anti-Cigarette League of America.

The first annual conference of the Anti-Cigarette League of America, Eastern Division, for race conservation, will be held at Lake Mohonk, June 2, 3 and 4. The habitual use of tobacco in some form has reached a large portion of boys and young men, even some girls and women. This is reported among grade school boys up to a maximum of 90 per cent., and among sub-normal types 100 per cent. is common. This habit injures not only the present, but future, generations, because it reduces the birth rate, prevents normal development of body, mind and character. Not only does it postpone the production of higher types of men and women, but it robs us of present standards.

Athletics, child welfare, education, efficiency, economics, eugenics, hygienics, industry, longevity, sanity, sociology and many other subjects are vitally involved in the use of cigarettes and other more abundant, if less poisonous, forms of nicotine products. The nicotine habit, so closely related to the alcohol habit, gives the friends of humanity one of its most vital and serious problems. Mansfield P. Welcher, of 23 West Ninth Street, New York, is the field secretary.

## Primary Sarcoma of Lip.

A. J. Markley, Denver, reports a case of primary round-cell sarcoma of the lower lip, which, according to Professor W. H. Welch, who confirmed the diagnosis, is exceedingly rare, though lymphangiomas with sometimes sarcomatous structure are not uncommon in that situation. The clinical diagnosis without operation in such a case as the one reported is very difficult but still very important, as the rapid growth and the widespread metastases of sarcoma make it specially perilous. Hence biopsy should be the rule in such cases, whenever the clinical manifestations are not so clear as to be unmistakable. About six months after the removal of the growth a nodule appeared at the anterior borders of the sternomastoid, which was removed, but unfortunately lost before examination. There has been no subsequent relapse up to the date of reporting, a period of five or six months.—(J. A. M. A.)

## General Scientific

### SHOES FOR ALL PEOPLE BY PRESCRIPTION

WILLIAM W. RENO, A.M., M.D.  
MAJOR, MEDICAL CORPS, UNITED STATES ARMY,  
Fort D. A. Russell, Wyo.

Barefoot and sandal wearing races are notoriously better marchers than shoe-wearing peoples. History is full of testimony of this fact. To quote from Butler, "Whenever shoe-wearing people are matched against shoeless people in marching the barefooted people show superiority." It seems that one of the penalties of civilization is decreased marching and walking power. And one of the principal causes of this is not hard to find. A shoe limits the freedom of the foot and in time causes atrophy of certain foot muscles.

The normal foot is very flexible. Great freedom of action is needed in walking, running, jumping and climbing. The large joints of the foot must not be confined. The grasp of the toes against the ground, and the backward push of the great toe are of value at every step. The longitudinal and transverse arches must be free to contract or expand with every variation in the load.

But the shoe has overwhelming advantages and is a necessary adjunct to civilization. After all, the great disadvantage of the shoe in walking or marching is not so much from the fact that it is a shoe but that from childhood to old age the average person does not wear properly fitting shoes. His feet have become so deformed and so far removed from nature that great walking or marching capacity is a physical impossibility. Fashion rules the foot as it does the woman's waist, and while it encases one in an unnatural vice of whalebone and steel, it encloses the foot in a leather covering that seldom fits. Modern society regards the small and narrow foot as beautiful. But if society could see the corns, ingrowing nails, bunions, hammer toes, and generally deformed feet that small shoes conceal, the styles would quickly change.

At the present time the fashionable shoe is an attractive one, almost correct in shape, and a great improvement over anything heretofore placed on the market. This excellent shoe, however, is no doubt ephemeral. It will disappear as soon as a new style arrives, as the demand for it is not based upon its excellent lines, but upon the fact that it is now *a la mode*.

The following extracts from letters from prominent shoe manufacturers explain the situation very clearly:

No. 1. "The man who will buy purely anatomical shoes is the man who has arrived at years of maturity and discretion, but he is not the fellow who creates volume in shoe manufacturing. The fellow we have to cater to to-day is the young man who buys a pair of shoes because they are the latest thing, who will wear them a couple of months until they are a bit shabby, and then buy another pair.

"The dictates of fashion in this respect run in waves, and we find that in going after the faddish stuff we have to change the type of our lasts about every six months and the patterns to match.

"As the average profit to the manufacturer to-day in men's shoes that retail at \$3.50 and \$4 is not over 5 cents per pair, you can readily see that he has got to get a big volume in order to make a decent profit."

No. 2. "The difficulty, however, in building shoes along anatomical lines is not usually a difficulty of manufacture, and is not due to the manufacturers not knowing what constitutes at least some of the principles of anatomical footwear, but it has been amply proven in our case that the public does not want, at least in any great numbers, shoes so made.

"To be successful in the shoe manufacturing game you have got to give the public what they want, and not what you think they ought to have. Years ago we tried to give them a line of anatomically constructed shoes, built of good materials, and in the winter weights practically waterproof, at a price that