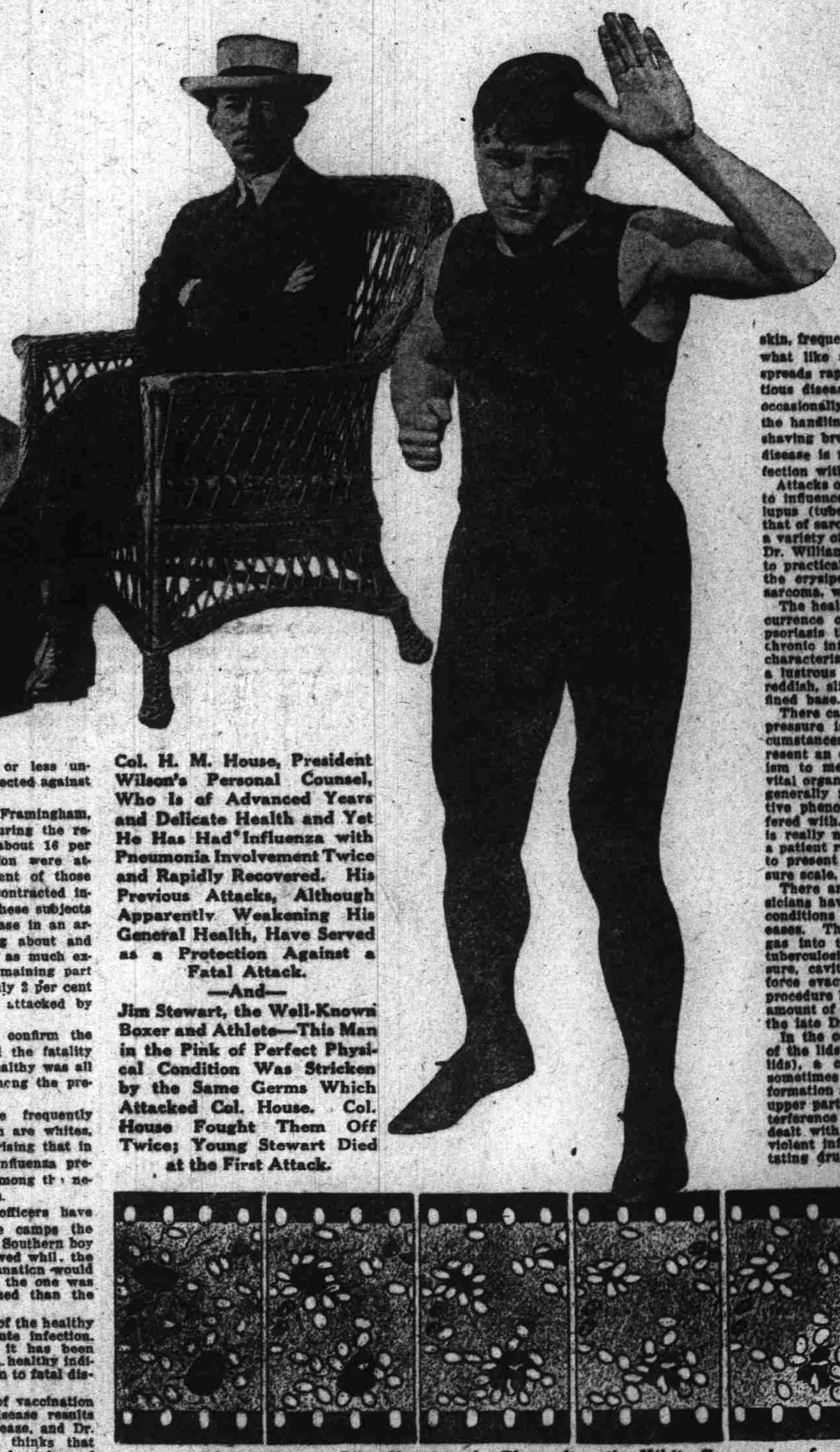
The Disadvantage of Being Perfectly Healthy

Why Influenza and Pneumonia Swept Into Their Graves Vigorous Young People Who Never Had Been Sick Before—While Many Old, Feeble and Sickly Patients Recovered

Miss Josephine Howard, Young, Husky, Never Ill a Day in Her Life, a Perfect Specimen of Physical Vigor, Caught Influenza, Developed Double Pneumonia and Died in Two Days. She Had the Disadvantage of Never Having Had a Severe Illness to Develop the Disease Resisting White Corpuscles of the Blood—She Was Caught Unprepared and Succumbed.



Col. H. M. House, President Wilson's Personal Counsel, Who Is of Advanced Years and Delicate Health and Yet He Has Had Influenza with Pneumonia Involvement Twice and Rapidly Recovered. His Previous Attacks, Although Apparently Weakening His General Health, Have Served as a Protection Against a Fatal Attack.

—And—

Jim Stewart, the Well-Known Boxer and Athlete—This Man in the Pink of Perfect Physical Condition Was Stricken by the Same Germs Which Attacked Col. House. Col. House Fought Them Off Twice; Young Stewart Died at the First Attack.

Motion Picture Film Showing the Phagocites, the White Corpuscles of the Blood, Surrounding and Attacking an Invading Disease Microbe and Finally Breaking Up and Devouring the Hostile Germ.

By Arthur C. Jacobson, M. D.,
Associate Editor of the Medical Times.

SCIENTISTS are still very much in the dark about the recent world-wide epidemic of influenza—but some surprising things developed which have attracted wide attention. And perhaps the one most curious discovery was the fact that robust, vigorously healthy victims of the "flu" often went quickly to their graves, while feeble patients took the disease lightly and survived.

The influenza epidemic has taught us an unquestionable truth, that which a medical writer calls "the disadvantage of being healthy."

Here are some very curious facts:

In a large London hospital for disease of the throat and lungs the patients in the beds escaped the influenza almost unscathed while the big, healthy nurses were severely stricken and many died.

In our American Army camps the boys who were in the pink of physical condition were attacked with special virulence and the death rate was very high, yet only 4 per cent of the tuberculosis patients were attacked in a district where we have statistics.

Here we have the strange anomaly that men with perfect lungs could not withstand the attack of the pneumonia bacillus, while those whose lungs were scarred, damaged and patched with tuberculosis lesions either failed to develop pneumonia at all or had it very mildly.

And this is not the first time medical science has been confronted with the strange phenomenon that perfect health is sometimes a disadvantage. In typhoid epidemics it has been noted that the big, strong, healthy individual falls the readiest victim to the fatal disease.

The explanation of this is that he who has been most diseased is the most resistant to disease, since his survival, even though his experiences have left many evidences of damage, means that he has acquired various kinds of immunity which his "healthy" contemporaries lack.

If to be healthy is to be resistant to infectious disease we have a paradox presented by the vigorous individual who possesses but little resistance to the menace of disease, and the individual who by virtue of the very fact that he has suffered greatly from disease has acquired exceptional resistance.

The defensive mechanisms of the body may be described roughly as leukocytosis, by which the blood drafts additional "policemen" in the shape of white blood-corpuscles; phagocytosis, by which destruction of invading bacteria is effected through white corpuscles specially delegated to cope with the enemy; bacteriolysis, by which dissolution of germs is brought about by substances possessing ferment-like qualities, these substances being elaborated by the body cells in response to the special challenge of the invaders; and the elaboration of anti-toxins, by which the poisonous products of bacterial growth are neutralized.

Now, while it is a fact that the immunity developed against particular disease is specific for that disease, it is wholly reasonable to suppose that one who has successfully resisted many diseases must possess experienced and seasoned tissues and battalions of educated corpuscles, as they have been called, which would not act altogether stupidly even in the presence of an unfamiliar foe; and it is quite conceivable that where an extraordinary variety of these specially trained veteran policemen patrol the blood stream some sort of a combination defense would be put up by these forces.

How else can be explained some of the remarkable facts which have been observed in connection with the recent epidemic of influenza?

It was observed in Cape Town, South Africa, that influenza patients with a previous history of chronic catarrhal conditions of the lungs bore the disease better than people who had never suffered from respiratory ailments of chronic character.

In certain English tuberculosis hospitals the influenza wave left almost all the occupants of beds unscathed, while their healthy attendants, medical and otherwise, were stricken down.

Dr. D. B. Armstrong, writing in a recent issue of the Boston Medical and Surgical Journal, emphasizes the fact that influenza attacks with special virulence and causes a high mortality among those in the prime of life, in the best physical condition, and most free from previous disease. He believes that those whom we ordinarily regard as more or less unhealthy are in some way protected against influenzal infection.

Medical observers in Framingham, Mass., have reported that during the recent epidemic of influenza about 16 per cent of the entire population were attacked, while only 4 per cent of those suffering from tuberculosis contracted influenza. Moreover, most of these subjects of tuberculosis had this disease in an arrested form and were going about and working, and therefore were as much exposed to infection as the remaining part of the population. Indeed, only 2 per cent of the arrested cases were attacked by influenza.

Recent Chicago statistics confirm the Framingham experience, and the fatality rate among the previously healthy was all out of proportion to that among the previously sickly.

Negroes are much more frequently afflicted by tuberculosis than are whites, and it is therefore not surprising that in Washington and St. Louis influenza prevailed to a far less extent among the negroes than among the whites.

American army medical officers have frequently said that in the camps the Northern boy lived while the Southern boy died, and that the city boy lived while the country boy died. The explanation would seem to lie in the fact that the one was more frequently tuberculized than the other.

This greater susceptibility of the healthy is true for all types of acute infection. Thus in typhoid epidemics it has been observed that the big, strong, healthy individual falls the readiest victim to fatal disease.

We may say that a kind of vaccination against acute respiratory disease results from chronic respiratory disease, and Dr. Armstrong, already quoted, thinks that practical advantage will yet be taken of this fact, as by some form of artificial immunization.

It is now in order to amplify and extend our argument as to the advantage of being "unhealthy." Certain aspects of our present knowledge permit us to elaborate somewhat upon this theme.

Brugelman declares that as long as one has asthma he is immune to tuberculosis, and S. West is of the opinion that the subjects of tuberculosis very rarely suffer from asthma, and that if an asthmatic patient does contract tuberculosis, an event which is by no means common, the asthma usually disappears.

F. A. Hoffman says that when asthma and tuberculosis combine, each gives up a part of its peculiarities. The asthma gives up its characteristic paroxysmal character, the attacks becoming weak and indistinct; the tuberculosis gives up its progressive character, assuming a chronic and fibroid type.

Hoffman also considers a lung which is the seat of emphysema to be distinctly unfavorable soil for the development of tuberculosis. Emphysema is a disease characterized by abnormal distention of the lungs with air. Fishberg states that when a emphysematous patient does contract tuberculosis the latter disease, as a rule, pursues an exceedingly mild course and is very difficult to diagnose. Emphysema has been frequently encountered in patients with healed tuberculosis, and has been noted in the unaffected lung or parts of the lung in patients with active tuberculosis, just as though Nature were endeavoring, through this means, to stay the progress of the tuberculosis.

Emphysema is thought to protect against tuberculosis in three ways. The wasting of the tissues induced by it is unfavorable for the growth of the bacilli; the inspiratory current is slow and inadequate, and does not bring bacilli deeply into the lung; and the congestion which is present in most of these cases prevents the development of tuberculosis because of the presence of many white blood corpuscles (phagocytosis).

Enlargement of the heart associated with valvular disease protects against the development of tuberculosis. As long ago as 1844 Rokitansky asserted that diseases of the heart and blood vessels producing congestion of the lungs prevented tuberculosis. Fagge and Traube established that a form of valvular disease known as mitral stenosis is almost a complete bar to tuberculosis. Autopsies upon thousands of cases in which valvular disease existed during life reveal but few instances of lesions due to tuberculosis, and both clinically and post-mortem it is but rarely encountered in the subjecets of tuberculosis. This is not to say that they do not have murmurs, but the murmers are due to causes other than valvular disease, the mechanism of which is well understood. Mitral stenosis causes a mechanical impediment to the pulmonary circulation, thus creating congestion or plethora of the blood vessels in the lungs, which permits of phagocytosis.

Anthrax is a gangrenous condition of the skin, frequently fatal, which appears somewhat like a carbuncle at first but then spreads rapidly. It is primarily an infectious disease of cattle and sheep, but is occasionally transmitted to man through the handling of wool, the use of infected shaving brushes, etc. The course of this disease is restrained by an associated infection with the pus-forming bacteria.

Attacks of erysipelas have been observed to influence very favorably the course of lupus (tuberculosis of the skin) and also that of sarcoma, which may be regarded as a variety of cancer of very malignant type. Dr. William B. Coley has turned this fact to practical account by using the toxin of the erysipelas germ in the treatment of sarcoma, with notable results.

The healthy seem more liable to the occurrence of the skin disease known as psoriasis than the unhealthy. This is a chronic inflammatory disease of the skin characterised by thick, adherent scales, of a lustrous whitish color, situated upon a reddish, slightly elevated and sharply defined base.

There can be no doubt that a high blood pressure is advantageous in certain circumstances. Thus it may at times represent an effort on the part of the organism to meet circulatory requirements in vital organs. High blood pressure is very generally regarded to-day as a conservative phenomenon not to be lightly interfered with. Where a high blood pressure is really needed one would regret to see a patient remain so obstinately healthy as to present a normal reading of the pressure scale.

There are circumstances in which physicians have actually induced pathological conditions in order to combat certain diseases. Thus Forlanini injected nitrogen gas into the pleural cavity in cases of tuberculosis in order to obliterate, by pressure, cavities in the diseased lungs and force evacuation of their contents. This procedure has been carried out with a fair amount of success by many others, notably the late Dr. Murphy of Chicago.

In the course of the contagious disease of the lids, known as trachoma (granular lids), a complication known as pannus sometimes occurs which results in the formation of a kind of membrane over the upper part of the eyeball, with marked interference with vision. This has been dealt with at times by setting up a very violent inflammation by means of an irritating drug called jequirity. Cure is occasionally attained by this heroic measure. The same result has been achieved by inoculation of the lids with pus taken from a case of mild purulent ophthalmia (inflammation of the eye).

Fochier, a French physician, introduced a method of treating grave septic conditions by causing what he called a fixation abscess. Spirit of turpentine is injected into the outside of the thigh and in a few days an abscess forms, which the physician evacuates before rupture. Cures of desperate cases have been claimed in behalf of this method. The explanation appears to be that which has given the method its name: the infectious organisms in the blood migrate toward the artificial lesion and become "fixed" in the abscess. That such migration toward the fixation actually takes place has been proved by Cole and Duvergey.

The classical example, of course, of inducing one disease in order to offset another is ordinary vaccination. In this case we induce a general disease, cow-pox, in order to defeat smallpox.

We have cited the foregoing instances of how disease may be utilized to combat disease in order to show that it may yet be possible to imitate on a wide scale the methods of Nature herself, that most resourceful of all physicians, who seems whimsically to hint, with a humor of fine Hibernian flavor, that in order to be really healthy you must be unhealthy.