not be removed by acidulation, filtration or sedimentation. The bacteria may be sedimented by centrifugation after the addition of alcohol. There may or may not be a trace of albumin. Microscopic examination shows a field swarming with actively motile bacteria.

The local symptoms when present are: Generally slight frequency of micturition, mild *ardor urinæ*, occasionally incontinence, and in children there may be nervous disturbances. Rarely a slight mucoid urethral discharge may be noted. So long as the epithelium of the urinary tract remains healthy there is no absorption of bacterial toxins. If abrasions exist, or if from the imperfect drainage incident to prostatic hypertrophy or urethral stricture, the bladder epithelium from prolonged contact with the concentrated toxins loses its vitality, absorption occurs, and mild fever, with lassitude and digestive and nervous disturbances, may be noted. In many cases there are no subjective signs.

DIAGNOSIS.

It is essential to distinguish simple bacteriuria from that in combination with pus. In the latter there is always positive pyuria, in the former never so. Pyuria implies an area of suppuration in some part of the genito-urinary tract and is generally associated with symptoms referable to its location.

As to the point of entrance of the micro-organisms into the urinary tract, it may be said that whenever they enter through the kidneys as in septicemia, typhoid or scarlet fever, there is always a positive albuminuria. When they enter below the renal pelvis, as from the genitalia and from the lower intestinal tract, from instrumentation, ascending inflammation, pelvic disease, colitis or proctitis, the presence of albuminuria is dependent on the previous condition of the kidneys.

As to the nature of infection, alkalinity of the urine always means infection by either the staphylococcus or bacillus proteus vulgaris. All other organisms, save when mixed with these, produce an acid urine. The history of the case will suggest the probable causative organism, though it must be remembered that the colon bacillus is by far the most frequently found germ.

TREATMENT.

Treatment has for its purpose removal of the cause, prevention of true inflammation and elimination of the organism.

Intestinal and urinary antiseptics, such as urotropin salol or boric acid, with large amounts of drinking water, are indicated. Vesical instrumentation and (unless cystitis is actually present) irrigations are to be avoided. The traumatism incident to these procedures is apt so to diminish local resistance as almost certainly to result in true inflammation. Many cases of postoperative cystitis can be avoided by judicious efforts to avoid catheterization. In patients with spinal cord lesions associated with paralysis of the compressor urethræ muscle, bacteriuria is a constant attendant affection; and when, in addition to this, ammoniacal urine is allowed to be retained, cystitis is sure to result. Since in these patients the cause of death is so commonly ascending urinary infection, the dangers of bacteriuria should be recognized. Every one knows the importance of thorough, gentle and rigidly aseptic bladder drainage as a part of the treatment of these cases.

For the cases so frequently dependent, especially in old people, on colitis and constipation, free purgation, with regulation of diet and intestinal antiseptics, are essential. Janet often practices, in addition, colonic lavage for two or three months.

REPORT OF A UNIQUE CASE.

History.—An obese, slightly sclerotic, ignorant, partially deaf maiden, aged 55, suffered during the summer of 1905, a rather severe attack of dysentery. Within a month after this, she began to notice frequent burning urination and the passage of foul, intensely turbid urine, the act of micturition being followed by a sensation of having incompletely emptied the bladder, but at no time did she pass blood or gravel. These signs became progressively but gradually more marked and caused her great mental anxiety, fearing that she was suffering from some dreadful disease. She consulted her local physician, who at once made a vaginal examination. She was told that there was a peculiar "growth" in her vagina, and the physician removed a piece of this and sent it to a pathologist for microscopic examination. The latter reported the tissue to be fibroid in character. Ever since the tissue was removed she has concentrated her mind on the genital apparatus and has been in constant fear of cancer.

She was referred for treatment to Dr. Stuart McGuire, to whom I am indebted for the privilege of studying and reporting the case.

Examination.—Vaginal examination showed a small, rigid canal with the hymen present and save in the upper portion intact. In the upper portion there was a wedge-shaped deficiency of about one-half inch. When she stands erect, there is slight bulging of the anterior vaginal wall.

Cystoscopic examination showed slight general redness of the mucous membrane of the bladder, but no real sign of disease.

Urine.—The first specimen was so extremely turbid as to give at first sight the appearance of chyluria. This material, however, was not present. The turbidity was diffuse and did not precipitate on long standing. The urine was foul and penetrating in odor, acid in reaction and contained no albumin. Microscopic examination showed amorphous acid urates, and every field was swarming with motile bacteria, but pus was absent.

REMARKS.

A diagnosis of bacteriuria was positive and this was the source of all the trouble. The growth in the vagina was the hymen, from which a wedge-shaped piece had been removed. The slight bulging of the anterior vaginal wall which was not sufficiently marked to be called cystocele was doubtless due to the incision in this structure produced for removing the wedge-shaped piece of hymen. The woman was the victim of pronounced cancerophobia.

The bacteriuria in this case definitely followed dysentery; the organisms entered the urinary apparatus below the kidney, as shown by the absence of albumin.

506 East Grace St.

THE STRENUOUS LIFE AND ITS EFFECTS IN DISEASE.*

S. T. RUCKER, M.D.

MEMPHIS, TENN.

At the outset I desire to state that I am not opposed to the strenuous life when it is safeguarded by proper diversion and sufficient rest; but there is a wrong way to live the strenuous life, and it is of this I desire to speak. Work, *per se*, never kills, but it is the way one works. A bank account kept by continuous deposits in excess of the checks drawn is a good business method. It is when the account is overdrawn that one receives notice to make good the deficit. Mental and physical exercise in legitimate channels is good. It promotes health, happiness and a long life, but when by prolonged endeavor under high pressure an individual overdraws

* Read at the Seventy-third Annual Meeting of the Tennessee State Medical Association, Memphis, Tenn., April 10-13, 1906.

his supply of energy he must replenish it or suffer the consequence. The temperate life, the systematic methods of diversion and relaxation as practiced by Mr. Gladstone, the great English statesman, and Grover Cleveland, twice president of the United States, is well known and will serve to illustrate the proper way to live the strenuous life and to succeed without sacrificing health and strength. Mr. Gladstone not only had regular times for diversion and recreation, but when the affairs of state became too onerous and tiresome he would turn loose all duties and go to his country home to rest. There he would walk, run, chop wood and do other exercises to divert the mind and to invigorate the body. At 85 years of age he retired from the premiership of England in good health and with a clear, active mind. We are all familiar with Mr. Cleveland's fondness for fishing and hunting, and remember while he was president how often he would lay aside official duties and go to the bays of Virginia or North Carolina to indulge in his favorite sport. At 70 years of age he is still in active life, hale and hearty. The quality of a man's thought, energy and ideals depends largely on the condition of his health. The now famous saying credited to Dr. Osler that a man is practically useless after 60 years of age is true of most men, but it should not be, and would not be, if we would remember that "all work and no play makes Jack a dull boy." Every busy man should have a hobby to which he can devote his leisure; he should also have seasons for sport in the country, like hunting and fishing. A married man should spend more time with his family and in reading wholesome literature. Sunday, the best day of all for rest and recreation, is perhaps the most neglected. It is not only a religious duty to cease all labor every seventh day, but it is essential to the health and well-being of man. He will do better work and live longer.

HIGH PRESSURE OF EDUCATION.

The physiologic functions of the human economy are governed by the simple law of demand and supply. The executor of this law is the cell. It contains a life principle called the nucleus. The nucleus gives the cells energy and the power to reproduce themselves rapidly and manifold, when supplied with the proper food, as found in the healthy blood current. Every tissue and part of the body is an aggregation of cells, like the bricks that make up a wall. The process called metabolism is cellular activity. By thought and muscular action tissues are consumed; by cell proliferation they are replenished. In order that the proper equilibrium be maintained in this process and the cells be not consumed faster than they multiply, it is decreed that we must take time to eat, rest and sleep. Prolonged endeavor, overwork and worry, with insufficient food and rest, break the equilibrium, exhaust vitality and invite disease. This condition is too prevalent in our American life. We go under high pressure and our pace is too rapid. Our schools and colleges, where we should be taught how to live, are not free from this spirit of stress and strain. Students are goaded to tasks beyond their powers, and, being anxious to stand at the head of their classes, they hurry their meals, overstudy, take little time for rest and, as a natural consequence, many become nervous wrecks. I have under observation now a patient who is a sad illustration of this forcing method of pedagogy. He had an active mind and bright prospects ahead for a useful career. He studied hard and was stuffing for his final examinations before graduating from college, when a collapse came, and his mind

was left a chaotic wreck. There is a mental inco-ordination and an inability to concentrate his thoughts. His talking and writing are centrifugal and erratic. I have undertaken the task of re-educating him into mental co-ordination and concentration, with probabilities of never succeeding.

Analyze the graduating classes of the best female colleges, and the crop of neurasthenic girls will outnumber those who are able to enter on the duties of married life. I have under treatment now one of these unfortunate girls. She is anemic and her brain is not properly nourished. Her mind is unstable and her ideas are erratic. She has overdrawn her account and is now trying to make good the deficit by rest and forced feeding.

BUSINESS LIFE TOO STRENUOUS.

In business and professional life the conditions are even worse. The average business man is always worried and overworked. He has no leisure. He sees so little of his family they scarcely know him. He is chained to commercialism of thought and taste. He worships it by day and dreams of it by night. His business methods become questionable and pernicious. He takes all the law allows, and does the other fellow if he can. He makes money, makes it honestly if he can, but makes it. After all, it does not pay. It is like chasing a phantom. He pursues his business to a certain point, then his business pursues him. He is no longer in control. He thinks in a circle and acts like an automaton. He is a slave to his business and can't turn loose—until perhaps he is released by sudden death or is sent to a sanitarium, broken in health, to die without enjoying the pleasures of a long life that is due him.

A striking coincidence is that as our strenuous civilization progresses the number of cases of mental and nervous diseases increases. There is hardly a state institution that is not overcrowded. Texas is just completing additional buildings to accommodate the increasing number of insane patients, and applications now on file show more than 600 patients seeking admission that can not be accommodated when the hospital is completed. Besides these state institutions, there are scores of private sanitariums for treating the milder cases of these unfortunate patients. Nervous breakdown has been called our national disease, and not without good reason. Arteriosclerosis, a disease largely due to nervous strain and hyperarterial tension, formerly a rare disease, is now prominently and extensively treated of in leading text-books on practice.

Another striking illustration of the effect of our strenuous civilization in producing disease is the rapid increase in the number of deaths from heart disease. One hundred and twenty-five persons died recently in one week in New York City from heart disease, while the deaths for the corresponding week in 1904 were 56.

Another phase of this subject I would like to treat of at length, but for lack of time I will only say enough to provoke discussion or start you to thinking. The stress and strain, worry and anxiety attendant on fierce competition in business and professional life is enervating and devitalizing. It embarrasses or suspends organic function and lessens resistance to morbid influences. As a consequence we fall easy victims to almost any disease, such as pneumonia, tuberculosis, typhoid fever, cancer and grave kidney lesions. If a man who lives this kind of life undergoes a surgical operation of any consequence, it is exceedingly hard for him to recover. His vitality is so lessened that any traumatic lesion will probably undergo necrosis or gangrene instead of healing.