

## OUR TONGUES AS HEALTH-REGISTERS.

BY A FAMILY DOCTOR.



**I**T has been the custom from time immemorial for the doctor to feel the pulse and look at the tongue of his patient. The condition of the tongue has always been thought to give valuable indications of the state of bodily health; and a foul or dirty tongue is popularly regarded to denote some disturbance of the digestive organs, particularly of the liver. I propose in this paper to inquire how and why the appearance of the tongue is affected by different conditions.

First of all, however, a few words about the tongue itself. It is a muscular organ, freely movable in the mouth. It is covered with mucous membrane and epithelium, like the rest of the mouth. The mucous membrane projects on its upper surface in numerous fine processes (technically called *papillæ*), and its roughness or smoothness depends upon the number and size of these projections. It is plentifully supplied with nerves. It serves for the prehension of food, assists in the act of swallowing, and is necessary for distinct speech.

The typically healthy tongue is clean, firm, and of a red colour; but even in the most robust health, it is not wholly free from a coating of fur. The origin of this fur is important. It is generally described as consisting of epithelial scales, and the remains of food and other *débris* in which there are to be found numerous micro-organisms belonging to the great class of fungi known as Schizomycetes. In reality, the fur chiefly consists of masses of these micro-organisms. They enter the mouth by the air or by means of the food. Caught by the rough projecting *papillæ*, they are placed under circumstances favourable for rapid growth and development, having warmth and plenty of moisture.

In adults, fur forms rapidly during the night (especially if they sleep with the mouth half open), and in the morning almost everybody has a thin film of fur on the tongue. During the day the greater part of this layer is cleaned off, in consequence of the friction of the tongue against solid food or the roof of the mouth and teeth, or by actual cleansing of the mouth. The back part of the tongue cannot be as effectually cleaned as the front and sides, and so fur is most

frequently seen over that area. It will be obvious that free movement is essential for thorough cleansing. In colour, fur varies from white through varying shades of yellow and brown, even to black. The colour depends partly upon accidental causes, partly upon the colour-producing properties of the organisms. If the tongue be very smooth, organisms will not collect upon it; if it be not freely movable, the fur will tend to become very thick.

The relation between the growth of micro-organisms and the development of fur is easy to illustrate. Children—especially those reared on artificial food—are peculiarly liable to a disease known as “thrush.” White patches are seen on the tongue and elsewhere in the mouth; and if a small quantity be removed and examined with a microscope, it is seen to consist of a delicate fungus.

The tongue is rarely injured in health. Its nervous mechanism is so delicately adjusted, although so intricate, that it is very seldom bitten, in spite of the constant movement of the jaws and its own restlessness. If it be bitten severely, there is usually some nervous disease, or else the person has fallen with the tongue protruded.

Trivial burns are of frequent occurrence both in children and adults, from taking food which is too hot into the mouth. In the course of a few hours the redness and tenderness disappear, and seldom is any treatment required. Scalds occur in children who attempt to drink out of the spout of a teapot or of a kettle. These are more serious. The tongue swells, is painful and tender; and even blebs may be formed. The greatest danger results, however, from the consequent interference with the breathing.

If the movements of the tongue are interfered with, there is generally grave disease. It becomes fixed in cancer. In paralysis there may be either inability to protrude it, or it may deviate to one side. Speech in such cases is usually seriously affected. Sometimes the movements are not under control; and we have the tremulous tongue of delirium (especially from excessive indulgence in alcohol) or the jerky irregular movements so characteristic of St. Vitus's Dance.

The tongue may become acutely inflamed—swollen and very tender; even ulceration may occur. Careful dieting and a suitable mouth-wash, combined with an aperient,

generally subdue the inflammation in a few days.

In many illnesses care of the tongue is all important. It first becomes dry and red, then heavily coated. The less solid food taken the greater the care that is necessary. The mouth should be rinsed out several times a day with lukewarm water containing a little tincture of myrrh, which stimulates secretion. If necessary, the hinder part of the tongue should be cleaned with a wad of cotton-wool fastened to a stem. The air in the room must be kept moist. Something to drink must be given frequently—weak lemonade is very grateful to the patient. The lips should also be rubbed several times a day with a little glycerine and spermaceti.

Lastly, we have to consider how the tongue is affected, sympathetically, as it were, in disease. Its appearance is supposed to afford valuable indications in febrile conditions and in affections of the digestive organs. What has already been said concerning the development of fur must be borne in mind—that the state of the tongue depends mainly upon its mobility; and this, in turn, depends greatly upon the strength of the patient, who is also restricted to liquid food. His mouth is continually half open. In acute illnesses, differences in the appearance of the tongue

depend upon differences in these conditions and in the length of the illness. In scarlet fever, however, the tongue has a more or less typical appearance. The papillæ are large and prominent, and project through the thick white fur, giving rise to the "strawberry tongue." In affections of the digestive organs the furring is by no means constant. Usually, however, a more or less furred tongue which is pale, large, and flabby, and marked by the teeth, is associated with some form of dyspepsia. A furred tongue and dry mouth often follow a night's dissipation. In all probability the mouth has been kept open during the night, and the tongue shares in the general feeling of *malaise* experienced in the morning. Its movements are not so active as usual, and the fur developed through the night is not removed.

We are now able to understand—in part, at least—what the doctor sees when he looks at the tongue. He notices its movements: whether it is flabby and indented by the teeth, whether the papillæ are raised and swollen; and although, as I have shown, many of the differences in its appearance may be traced to one cause, nevertheless, the tongue is able to give valuable information to the trained observer. The success of a physician depends largely upon his skill in noticing minute details.



## THE EXPERIENCES OF A LADY BICYCLIST.



It is still more or less of an open question in England whether ladies can with propriety ride the bicycle, although it has been emphatically decided both in America and in France that they can. But we are not much given to copying other nations in matters of sport, and are therefore quietly pursuing our own course in the matter; and during the last few years the lady's machine has gradually been improved, and the number of lady cyclists has increased steadily, and even

rapidly. Now a lady bicyclist hardly attracts attention, either on country roads or in town streets, unless there be something unusual in her costume or appearance.

Any lady, therefore, who is willing to run the slight risk of being considered "not quite nice" by some few of her friends may now indulge in this very enjoyable, if not conspicuously graceful, form of exercise.

This was the conclusion which I reached last July, and having thereupon made up my mind that I would become a cyclist, I found myself greatly embarrassed by my ignorance as to how to set about it. Perhaps the story of my experiences may afford others the information I lacked, and smooth away some of the difficulties that beset my path.

In the first place, I did not know how or where to learn. Being a Londoner, I could not hire a machine and get a friend to teach me on the public road; so I had recourse to advertisements, and after writing to a few cycle makers for price lists and catalogues, I ascertained that most firms will teach you