

## OUR PRIZE COMPETITION.

WHAT ARE THE EFFECTS ON THE HUMAN BODY OF (a) SUNSHINE; (b) A HOT BATH; (c) CONSTIPATION; AND (d) MOUTH BREATHING?

We have pleasure in awarding the prize this month to Miss Amy Phipps, 13, St. Dunstan's Road, Feltham, Middlesex.

### PRIZE PAPER.

The effect of external influences, such as those under consideration, upon the human body, varies considerably with the age, constitution, temperament, race, general health, &c., of the individual.

The effects of sunshine on the human body are numerous, and these are particularly pronounced in the prophylactic and curative treatment of certain diseases, such as rachitis, tuberculosis, &c.

*Sunlight* is really a series of wave motions, the waves being of various lengths, those at the red end being long, and at the violet end short; in addition, there is the most powerful part of all, the ultra violet rays, which possess great actinic powers, and are highly beneficial in the treatment of diseases so much so that when they cannot be obtained otherwise, they are artificially produced for this purpose (heliotherapy).

Sunlight is also a great source of radiant heat, and its restorative and re-creative value puts the body in the best possible condition to fight disease.

It also has a tremendous influence over our bodily metabolism; it increases the oxidation processes, so that waste products are removed more readily, and absorption is kept at its exact balance; it also has a considerable germicidal power.

Sunlight causes convection currents in a room, this resulting in an accelerated interchange of air, which directly affects the body tone.

The effect of sunlight on the circulation is that by drawing the blood from the internal organs to the surface of the body, the former are relieved of congestion, and able to work at their best; in the blood itself the numbers of red corpuscles carrying oxygen are increased; and so all the functions of the body, including the mental processes, are stimulated, and all tissues and musculature are developed and strengthened, and the digestive functions and appetite are stimulated.

Treatment of disease by sunlight has certain local effects. It is analgesic, partly by virtue of its power of drawing the blood to the surface from deep-seated organs. It is germicidal, gradually killing the bacilli in open wounds, and aids the cell defences and re-vitalisation of these parts; promoting the re-absorption of infiltrations, and the formation of strong and healthy scar tissue.

The effects of strong sunlight on the unprotected head is injurious, resulting in sunstroke in one of its forms, caused by disorganisation of the central normal heat-regulating mechanism.

The effects of a *hot bath* on the body are at first a relaxation of the nerves and muscles of the body, resulting later in a reactionary stimulation; it opens and cleanses the pores of the skin, thus assisting in the excretory functions of the latter, this again reacting beneficially upon all the other organs of excretion by assisting their work. It also stimulates the blood vessels, thus helping the general functioning of the body.

A hot bath is particularly beneficial to avoid stiffness after excessive exercise, or to treat symptoms of shock, and in the treatment of certain diseases such as rheumatism, kidney disease, constipation, difficult micturition, sleeplessness, &c.; it is also sometimes prescribed to induce perspiration under various conditions.

A very hot bath in some instances results in faintness, and has a bad local effect upon the skin of certain individuals.

The effects of *constipation* upon the human body are the general disorganisation of the functions, due to a toxic blood supply; the digestive system becomes impaired, and the other excretory organs are overworked; there is headache, loss of appetite, lassitude, debility, restlessness, &c., locally, abdominal pain, intestinal pain on defæcation, later thickening and blocking of the lower part of the colon, with resulting colitis, a diminished bowel lumen, and probably mechanical obstruction, with all its attendant evils.

Further, the hard material causes friction of the delicate internal membrane of the intestine, and this predisposes to cancer, appendicitis, peritonitis, piles, &c.

The bad blood supplied to the bowel wall interferes with peristalsis, and excretory and other functions are at a disadvantage.

*Mouth breathing*.—In nasal breathing, the air is warmed in its passage over the turbinal bones of the nose, and filtered by its passage over the ciliated lining of the nasal cavity. In mouth breathing, this warming and filtration is absent, and consequently frequent colds, and tendency to respiratory affections, and all the evil results of the imperfect interchange of gases in the lungs are present. There is a tendency to deafness, due to infection passing along the Eustachian tubes, from the frequent colds, &c.

The palate becomes arched, and the teeth tend to project in front, so that mastication is interfered with; the nose gets broader, and the nasal cavities smaller from want of use, and adenoid growths are likely to increase. The mental processes are usually slow of development, and general nutrition is impaired, and usually there is marked nervous irritability.

### HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss P. Thomson, Miss A. Ransome, Miss L. James.

### QUESTION FOR NEXT MONTH.

What is meant by (a) Amenorrhœa; (b) Dysmenorrhœa; (c) Menorrhagia; (d) Metrorrhagia.

### JUBILEE OF THE ROYAL SANITARY INSTITUTE.

The Royal Sanitary Institute came into being in 1876 for the purpose of aiding the carrying out of the provisions of the general Public Health Act of the previous year.

The jubilee of the Institute falls in 1926, and it has been decided to celebrate this occasion by holding a congress in London as the centre most appropriate for representing its widespread work, and it is hoped to make it an opportunity for gathering together those engaged in Public Health work from all parts of the Empire, and for bringing responsible opinion to bear on the many questions affecting the health of the people.

The Mothercraft Training Society has purchased Cromwell House, Highgate, and has moved there from 29, Trebovir Road, Earl's Court, to Cromwell House.

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