Untreated uterine prolapse has been the means of turning many a cheerful hard-working wife into a nagging drudge.

OUR PRIZE COMPETITION.

NAME THREE DIFFERENT CHANNELS OF ELIMINATION BY THE BODY, AND THE FUNCTIONS OF THE ORGANS CONNECTED WITH EACH.

We have pleasure in awarding the prize this week to Miss Nora Windle-Hunter, South Wharf, Rotherhithe, S.E.

PRIZE PAPER.

Three channels of elimination by the body are :—(i) The urinary tract, (ii) the skin, (iii) the respiratory tract.

I.—The urinary tract comprises the following organs :—(a) The kidneys, (b) the ureters, (c) the bladder.

(a) The *kidneys* are composed of numerous small tubules lined with cells whose function is to collect impurities, chiefly urea, salts and water from the blood, deposit them in the tubules, down which they are washed into the pelvis of the kidney by way of the ureters and the bladder.

(b) The two *ureters* carry the urine from the kidneys to the bladder. They enter the latter by valvular openings to prevent the fluid running back towards the kidneys.

(c) The *bladder* receives and acts as a reservoir for the urine, which is passed through the urethra three or four times a day, and in a healthy adult should amount to about 2½ pints in the 24 hours.

II.—The skin is full of innumerable *sweat glands*. Their function is to regulate the temperature of the body by promoting the escape of heat. This is done by moisture containing salts continually escaping from the glands through the small apertures called pores, which open on to the surface of the skin.

At ordinary times the sweat is in so small a quantity it evaporates immediately, but when more is secreted it appears on the skin as "beads" of moisture.

The quantity varies according to the temperature of the air and the amount of exercise taken. Should the kidneys be diseased, these glands practically take their place and remove the poisonous waste products which are continually being formed in the body.

III.—The following are the organs connected with the respiratory tract :—(a) The Nose, (b) Pharynx, (c) Larynx, (d) Trachea, (e) Bronchi, (f) Lungs.

(a) The business of the *nose* is to filter and warm the air before it passes on towards the lungs.

(b) The air passes from the nose to the *pharynx*. The latter contains three constrictor muscles which control the act of swallowing.

(c) The *larynx* contains the vocal chords, which by their vibrations produce the voice. The glottis, the opening by which the air enters from the pharynx, is guarded by a cartilage, the epiglottis, which, like a trap-door, opens during respiration and closes while swallowing to prevent food from passing into the larynx and causing disastrous results.

(d) The *trachea*, or windpipe, is a viaduct for the air between the larynx and the bronchi. It is lined with a mucous membrane, and with the aid of the cilia in this, it prevents the germs in the air being carried into the lungs.

(e) The *bronchial tubes* connect the trachea with the lungs. They are lined with mucous membrane, and in this are a number of small glands which secrete mucus to keep the air passages moist.

(f) The *lungs* have :—(I) The function of respiration, which is involuntary, and controlled by a certain part of the brain. It consists of two distinct acts, *i.e.* (a) Inspiration—with a downward movement of the diaphragm and an upward movement of the ribs, all the air cells expand, and air is drawn into them; then (b) Expiration—the muscles relax, and, owing to its elasticity, the lung tissue shrinks and the air is forced out of the lungs again.

(II) The second function of the lungs is to purify the impure blood brought to the lungs by the pulmonary artery. This is done by the blood taking up the oxygen from the inspired air and giving up its carbonic acid gas to be expired. The now pure blood is taken back to the heart by the pulmonary vein.

Miss Vine writes :—

Solid waste matter is eliminated by the intestines. The contents of the lower intestine are passed at each action of the bowels. This waste matter is made up of indigestible parts of the food taken; also colouring matter from the liver, shreds of mucous membrane, and large numbers of bacteria.

The function of the intestines is to carry away this waste material.

HONOURABLE MENTION.

The following competitors receive honourable mention :—Miss Dorothy Maton, Miss Una M. Dodd, Miss Irene M. Mate, Miss Dora Vine, Miss M. Flick, Miss Jessie Robbins, Miss Gertrude E. Hinchliffe, Miss M. Lang.

QUESTION FOR NEXT WEEK.

Describe the Hydro-Therapeutic treatment of high temperature in pneumonia.

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