those who listen to, them? A glaring example of this has recently come to our knowledge, of a person employed by a well-known Society, and who has never had one day's instruction or experience in a Hospital, who lectures and demonstrates, with the knowledge and consent of her Society, in full Nursing uniform. And another worker under the same organization was, we are assured, distinctly instructed that, seeing she was sent out as an expert Lecturer, she must not explain to her employers that she had never had any Hospital training.

As we have previously stated in this journal, we strongly object to the suggestion which has recently been made, that young ladies should be trained as lecturers in order to teach Nursing under the County Councils, until they are old enough to be admitted into Hospitals for a regular training as Nurses. The very suggestion is destructive of every argument which could be advanced in support of the present system; for it acknowledges that those who are to be engaged in teaching others how to nurse, require subsequently to undergo such instruction themselves—the very need of such teaching proving their preliminary ignorance whilst instructing others. And the idea of young ladies who have been Professors of the art of Nursing, condescending to enter a Hospital ward and submit to the discipline of Probationership, is a proposal which can only be described as the acme of farcical absurdity.

Lectures on Elementary Physiology in relation to Medical Nursing.

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Lecture II.—The Lungs.

(*Continued from page* 288.)

HERE it is in the closest connection with the single cells of blood, each of which is squeezing its way, as we have already seen, through the minute capillaries in the thin walls of the air cell—only a thin layer of membrane existing between the air and the blood. So, in these air cells, the most important process in the body takes place. The oxygen of the air passes into the cell, is sucked up by the blood, and changes the dark looking fluid which has just come from the tissues of the body, into a bright scarlet liquid; meanwhile the carbon which the blood has brought away as a waste product from the tissues passes, through the membrane, from the blood, and mixing with part of the oxygen in the air cells, is converted into a poisonous gas called carbonic acid and which rushes out through the tubes, through the bronchi, and the mouth in the expired air. This process then is constantly taking place and the lungs are, you will observe, really doing for the body what in the illustration used in our Introductory Lecture we saw that fire does to the burning coal. The carbonic acid which is given off from the lungs removes from the blood a waste and poisonous product. The oxygen from the air purifies the blood just as the oxygen maintains the burning of the coal. And just as the coal by its combustion, causes heat, so the chemical process and formation of the complex substance, carbonic acid, from the simpler elements, carbon and oxygen, gives out a considerable part of the heat which maintains the temperature of the blood and therefore of the whole body.

If the poisonous carbonic acid is not rapidly and completely removed from the lungs of any animal, it will speedily die. The skin becomes dark and then almost purple, the brain becomes overloaded with blood and numbed, and unconsciousness follows; the heart may continue to act spasmodically for some minutes, but gradually falters and ceases. This is the method of death which is known as *asphyxia*, and it may briefly be said to occur in any case in which the action of the lungs is prevented. In those cases of pneumonia, or of pleurisy, in which the air cells are completely blocked, pressed upon, or otherwise obstructed and so are unable to carry on the oxidation of the blood; in the case of tumours which press upon the bronchi and prevent the free entrance and exit of air to and from the chest; in cases of suffocation by hanging or drowning or from the effect of poisonous gases; and in cases of heart disease in which the blood does not circulate properly through the pulmonary capillaries—in one and all of these the blood is not probably aërated, or oxygenated, the carbonic acid is not sufficiently removed, and the patient therefore dies asphyxiated. You will therefore understand that the immediate necessity in all such cases is to secure the removal of the carbonic acid gas, and the access of oxygen to the air cells, and the blood circulating around them. So, in the case of a suicide who has been cut down while hanging, the doctor immediately feels and listens to the heart in order to discover if it is still beating, and, if the slightest flicker of movement in its walls can be felt, there is a chance of saving life. In like manner, men who have been rescued unconscious from beneath water or from exposure to poisonous gases, are all treated for the same reason on the same physiological principles.

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