

**Lectures on Elementary Physiology  
in relation to Medical Nursing.**

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## LECTURE I.

*(Concluded from page 248.)*

**O**THER diseases of the blood vessels which may occur in patients requiring your attention are the formation of a clot of blood in a vein, forming what is called a THROMBUS, or the plugging of an artery forming what is called an EMBOLISM, and the dilatation and thickening of the walls of the veins forming what are known as VARICOSE VEINS. A *thrombus* or clot of blood may occur in the larger veins in certain weakened conditions of the patient, and is usually followed by very alarming symptoms. The most common instance of this condition is that which is known as "*white leg*," in which there is extreme swelling of the thigh, leg, and foot, in consequence of the blocking of the femoral vein by a clot, and the prevention, therefore, of the proper circulation of the blood through the veins of the limb, while at the same time, the circulation through the arteries being unimpeded, the blood continues as usual to flow into the limb. After a time, the smaller veins become enlarged, and so what is called a "collateral circulation" is established; then the swelling, which has been caused by the squeezing out from the engorged blood vessels and the lymphatics of the fluid which they contain, diminishes as the fluid is gradually re-absorbed, and the patient will probably quite recover.

This condition is most frequently found after a confinement, but it also occurs in patients who have been greatly exhausted by illness, such as typhoid or typhus fevers, or severe attacks of *Pneumonia*—or inflammation of the lungs. As a rule, the patients in whom this accident occurs are women; it is comparatively infrequent in men. The patients generally are very anæmic as well as weak. In patients, therefore, recovering from confinements or exhausting diseases, if severe pain in the groin is complained of, the fact should be immediately reported to the doctor, and until his directions have been obtained, the patient should not be allowed to make the slightest movement. You will understand that the clot of blood in the vein of the thigh is much less dangerous to the patient than it would be if by any exertion on the patient's part, or, perhaps, by the well-meant action of the Nurse, the clot of blood became detached, and was whirled along in the circulation, into the heart and so into the lungs.

For, then, a block in the pulmonary artery might be caused, which would prevent the passage of the blood through the lungs, and so the patient might suddenly die. Such cases as this, indeed, have actually occurred, and it is worth while referring to one for the sake of impressing a most important fact upon your memory. A lady who was slowly recovering from a bad confinement, during which she had been blanched by excessive flooding, complained, on the third day after delivery, of sudden extreme pain in the right groin. The Nurse, who probably had never had the condition explained to her, considered that it would be harmless, and might be beneficial, to apply friction—a course to which she was the more inclined because a rapid swelling of the patient's thigh and leg became manifest. If she had been acquainted with elementary physiological facts, she would have reasoned that the rapid swelling was probably due to the return of the blood from the thigh being somehow obstructed, and she would have known, therefore, that it was of the utmost consequence to prevent any disturbance of the patient's blood vessels until the doctor's directions had been obtained. Instead of sending for him, however, she rubbed some stimulating liniment, with considerable activity, into the groin and up and down the thigh, and was horrified when, in a minute or two, her patient sprang up in bed, with a sharp convulsive cry, threw out her arms, and fell back on the bed—quite dead. The *post-mortem* examination showed that a clot of blood which had been formed in the femoral vein had been broken up by the Nurse's efforts, and part of it, carried into the circulation, had become impacted at the pulmonary orifice, preventing, therefore, the flow of blood from the heart.

Now, as this accident may occur under conditions of the most careful treatment, and may easily happen if the clot in the vein is interfered with, it is essential that the condition which has been described should be borne in mind, and the slightest movement on the part of a patient suffering from "*white leg*" or any other form of thrombus should be prevented until permission has been given by the doctor. The formation of a thrombus or of an embolism is a very serious occurrence in any of the internal organs. In the lungs, for example, the blocking of a blood vessel means that the lung tissue which is supplied by that artery with blood is deprived of its nourishment; or in the case of a vein that the blood is unable to return easily from that part of the lung back to the heart. So, this condition is usually followed by acute inflammation, if not by speedy death. In the spleen or the kidney it is often followed by high fever and the formation of an abscess. In the brain,

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