

The Nursing of Children's Diseases.

BY J. PORTER PARKINSON, M.D., M.R.C.P.,
*Physician to the North-Eastern Hospital for Children ;
 and to the London Temperance Hospital, etc.*

(Continued from page 448.)

LECTURE VI.

THE RESPIRATORY SYSTEM.

Artificial Respiration. There are times when it may be useful to a nurse to know how to perform artificial respiration, and every nurse should know how this is best done when necessary. The first thing is to ascertain that the mouth and throat are clear of any foreign substance, then draw forward the tongue and see that it does not slip back again, place a small pillow beneath the shoulders, the child being placed on its back; stand behind the head, take both arms by the elbows, press them against the sides of the chest, then raise them slowly above the head, then lower and press again against the sides of the chest. This should be done sixteen or seventeen times a minute steadily, and, if necessary, the process may have to be kept up for an hour or more. If another person be present the feet and legs may be rubbed in an upward direction, and hot water bottles applied to the body and limbs.

THE BLOOD AND CIRCULATION.

Before going into the nursing of diseases of the heart and circulatory system it will be useful to scan through the chief anatomical and physiological points, a knowledge of which is essential for the understanding of the principles of treatment of diseases of the system and of their intelligent nursing.

The blood consists of corpuscles and liquor sanguinis; the corpuscles are of two kinds, red and white; red corpuscles being flat discs containing the colouring matter of the blood, hæmoglobin, and white corpuscles being, more or less, rounded bodies frequently changing their shape, and much less numerous than the red corpuscles, there being about one white to five hundred red corpuscles. The fluid in which the corpuscles float is called liquor sanguinis, and contains a substance easily converted into fibrin, which is the essential element in blood clot. The blood normally remains fluid in the body, but under certain circumstances it clots in the vessels, this is called "thrombosis." A portion of the clot may be washed away in the blood stream and block some artery, this is called "embolism."

The use of the hæmoglobin in the blood is to take up oxygen from the air inhaled by the lungs and to give it up to the tissues in exchange for carbonic acid gas which is formed there; this carbonic acid gas is carried to the lungs and there exchanged for the oxygen again. Hæmoglobin contains iron, and a want of iron in the blood is called anæmia. Arterial blood is bright red, and contains much oxygen and very little carbonic acid gas, while venous blood is dark, and contains much less oxygen and much carbonic acid gas.

The heart is a conical hollow organ about the size of the closed fist, it lies in the centre of the chest between the lungs and behind the breastbone, the broader part or base is inclined upwards and to the right, and the apex is inclined downwards, forwards, and to the left. The apex beat is to be seen in the space between the fifth and sixth ribs, just inside the line of the nipple. The heart is enclosed in a membranous bag called the pericardium, and resembling in many ways the pleura which covers the lungs; this pericardium is attached below to the diaphragm, and as the stomach is immediately below this, it will be seen that when the stomach is distended with fermenting food it is likely to press upon the heart and derange its action.

The heart is composed of muscle and has two sides, right and left, each of which contains two cavities, an auricle and a ventricle, which communicate with each other by a valvular opening. The valve on the left side between the auricle and ventricle is called the mitral valve, from its resemblance to a bishop's mitre, having two flaps, while the similar valve on the right side is called the tricuspid, from having three flaps. These valves allow the blood to go from the auricle to the ventricle, but not backwards, the blood is then forced from the ventricle into arteries, the entrances of which are also guarded by valves preventing the blood from returning to the heart. Starting from the right auricle the blood goes to the right ventricle, and then by the pulmonary artery to the lungs, where it is aerated, it returns by the pulmonary veins to the left auricle, then through the mitral orifice into the left ventricle, which, on contracting, sends it into the large artery called the aorta, which distributes it to all parts of the body, then after passing through the smallest capillary bloodvessels it is returned by the veins into the left auricle by two large vessels called the superior and inferior venæ cavæ.

(To be continued.)

[previous page](#)

[next page](#)