

ALL THE KIND WISHES OF THE SEASON.

One advantage of being in control of a journal is that we can send our heartfelt good wishes to hundreds of friends all over the world which we know many reciprocate.

It is a happy thought that on Christmas Day we know that nurses in every land are lifting up their hearts in praise and gratitude that they belong to a profession where all their energies and skill can be devoted to the service of others. This still is the impulse which inspires our work and makes it so real a consolation. Let the younger generation realise that no material benefit can compare with the joy of the spirit in pouring out the balm of hope and consolation to others. This way is to be found the inner meaning of existence in the eternal struggle towards light. A Happy, Happy Christmas and a hopeful New Year.

BLOOD PRESSURE.

BY MISS D. K. GRAHAM, S.R.N., F.B.C.N.

This term is generally used for arterial pressure, but blood pressure may be arterial, capillary or venous.

Arterial pressure has been defined as "that pressure exerted by the blood at a given instant upon a given point of the arterial wall." It is dependent on the force of the heart-beat and the peripheral resistance, and to a less degree upon the elasticity of the arterial walls, the volume of the circulating blood, and the consistency of the blood. It may be within normal limits; it may be high, as in arterio-sclerosis or chronic interstitial nephritis; or it may be low, as in the *acute infectious diseases*.

Arterial pressure is measured by an instrument called a sphygmomanometer. There are several types—*e.g.*, the Baumanometer, the Tycos instrument, and the Martin sphygmomanometer.

Probably the best is the Baumanometer, with which very accurate readings can be obtained. It consists of a rubber bag inside an armlet. The bag is connected by a rubber tube with a mercury manometer, and by another tube with a rubber inflating bulb provided with a needle valve to release pressure.

The technique of estimating arterial pressure by the auditory method is as follows:—The patient should be seated in a comfortable position with the arm bared. All the muscles should be relaxed and the patient should as far as possible be in a condition of mental repose. The patient's arm lies outstretched upon the table or desk at the level of the heart. Next, the armlet containing the pressure bag is wrapped around the arm, as high up as possible, so that its upper border touches the axillary fold, the pressure bag being centred over the brachial artery. By means of a rubber tube the armlet is connected with the instrument, and the release screw of the rubber bulb is tightened. The position of the brachial artery is then found, and over it, immediately below the lower edge of the armlet, a light and even pressure is maintained with the bell of a

stethoscope. By successive squeezes of the bulb the armlet is blown up to a point which is well above the level at which sounds are audible, then gradually and evenly the pressure is released by turning the screw-valve attached to the bulb. In the mercurial manometer the column of mercury begins to fall, whilst the needle of the aneroid begins to move counter clockwise round the dial. According to the type of instrument used an accurate note is made of the height of the mercury column or the figure reached by the dial needle at which the first sound is audible. The first click heard on decompression following obliteration of the artery denotes the systolic pressure. As the pressure continues to fall, the first few clicks give place to a soft murmur of variable duration, which is followed by a longer phase of thuds, which increase in intensity to a maximum, and then tail off into a few dull muffled sounds, preceding complete silence. The first dull sound after the last loud thud indicates the diastolic pressure. The minimal (diastolic) pressure as well as the maximum (systolic) should be taken, since it is a more definite and constant indication, not only of the propulsive force of the heart and of the eliminatory capacity of the body, but also of the peripheral resistance, including conditions under which abdominal venous stasis occurs, and of vaso-motor nervous tone. The maximal systolic pressure is more liable to variations due to fatigue, posture, excitement, and the taking of food. When estimating the systolic pressure, it is therefore necessary to see that the patient is comfortably seated and, as far as may be, easy in mind and body. The difference between the systolic and diastolic pressure is called the *pulse pressure*.

At 25 years of age the average normal pressure is 125 m.m. To estimate pressure at succeeding ages, add one for each five years by which the patient's age exceeds 25, and the number will give approximately accurate values up to 55 years.

At 60 years of age, the pressure has risen 10 m.m., and at 70 another 10 m.m. It will be noted, that the pulse pressures increase but little between 25 and 60 years (44-47 m.m.).

It should be remembered that the blood pressure of normal women before the menopause is distinctly lower than that of men, on the average about 10 m.m.

After the menopause the pressure rises above that of men.

Dr. Halls Dally gives the standard pressure for males of medium physique as follows:—

Age.	Systolic pressure in mm. of mercury.	Diastolic pressure in mm. of mercury.	Age.	Systolic pressure in mm. of mercury.	Diastolic pressure in mm. of mercury.
At birth	20-60	?	40 years	128	84
2 years	81	45	45 "	129	85
5 "	86	50	50 "	131	86
10 "	95	55	55 "	133	87
15 "	110	67	60 "	135	88
20 "	123	80	65 "	140	90
25 "	125	81	70 "	145	92
30 "	126	81	75 "	150	95
35 "	127	83			

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