

results are, however, not opposed to an antagonistic action between insulin and pituitrin.⁴

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² Burn, J. H., and Dale, H. H., *J. Physiol.*, 1924, **lix**, 164.

³ Boyd, J. D., Hines, H. M., and Leese, C. E., *Am. J. Physiol.*, 1925, **lxxiv**, 656.

⁴ Burn, J. H., *J. Physiol.*, 1923, **lvii**, 318.

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Placental Transmission. IV: The Protein Fractions in Fetal and Maternal Plasma.

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The total protein and its albumin, globulin, and fibrin fractions were determined by the method of Wu in the plasmas from 15 mothers and infants, the blood specimens having been obtained at the time of birth.

The total protein in the fetal plasma was uniformly lower than in the maternal plasma, the average difference being 1.00 gram per cent. In maternal plasma, the albumin content was higher than in the fetal specimen in all but two instances. Serum globulin was always higher in the mother. The fibrin content of the maternal plasma was uniformly greater than that of the fetal plasma, the average figure for the former being 0.44 gram per cent and that for the latter 0.27 gram per cent. The plasma of the parturient woman contains less total protein and less albumin than does that of non-pregnant women, whereas the globulin is approximately the same and the fibrin is considerably increased during the latter part of pregnancy. The albumin, globulin, and fibrin percentages of total plasma proteins were strikingly constant in the various bloods, irrespective of the differences in their total protein content.

It was suggested that perhaps the excess of protein in the maternal blood compensates for the higher concentration of certain crystalloid substances in the fetal plasma, so that equal osmotic pressures may obtain on the two sides of the placental barrier.

The low fibrin values in fetal plasma may be related to its diminished viscosity, and to its lowered surface tension, as well as to the slower clotting time of fetal blood and to the increased stability of the fetal red cells.