

## ABSTRACT

Leucocyte and Erythrocyte Sodium and Potassium  
Levels in Pregnancy: Prediction of Pre-eclampsia

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The pathogenesis of the hypertension in pre-eclampsia, although obscure, has been related by many authorities to excessive sodium retention. However, there are very few documented records of measurements of intracellular ionic levels and there is no consensus as to whether the levels are indeed elevated.

In this thesis, a study of the leucocyte and erythrocyte sodium and potassium contents and blood pressures of two groups of pre-eclamptic primigravidae is presented.

In both controls and patients who had or developed pre-eclampsia, leucocyte and erythrocyte sodium content increased with gestational age, peaking just before term and falling post partum. The potassium levels displayed the opposite pattern. These changes were of greater magnitude in patients with pre-eclampsia and were more pronounced in the leucocytes. The changes in blood pressure mirrored those in leucocyte sodium in both pre-eclamptics and controls.

These data suggest that the excessive blood pressure changes in pre-eclampsia might be related to the changes in cell ionic content.