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The significance of the uric acid, urea and creatinine of the blood in early and late nephritis.

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Typical cases of gout show, as a rule, blood uric acid values from 2 to 5 times the normal. The amounts of urea and creatinine are normal or in the case of urea, only slightly above normal. Many early cases of nephritis, especially of the interstitial type, give blood pictures which differ little from those of gout. The uric acid findings are quite as high and the urea content varies from only slightly above to more than double the normal amount. The creatinine is only slightly increased. As the condition of cases of this type becomes more severe, the retention of urea increases, until we have high values for urea as well as for uric acid. If improvement takes place the concentration of urea gradually falls until the picture is that of the preceding group. If, on the other hand, the case goes on to a fatal termination, the retention of uric acid and urea is followed by that of creatinine, the concentration of which may reach twenty times the normal. Here the phthalein output is practically zero.

From the foregoing it would appear that as the permeability of the kidney is lowered it becomes evident in the blood, first, by an increase in the uric acid, second, by that of urea and lastly, by that of creatinine. That this should be the case seems quite plausible when we consider the ease of excretion of these constituents, as determined from a comparative nitrogen partition of normal urine and blood. Uric acid nitrogen forms 2 per cent. of the non-protein nitrogen of both urine and blood, urea nitrogen about 85 per cent. in urine but 50 per cent. in blood and creatinine nitrogen 5 per cent. in urine but only 2 per cent. in blood.