iodide excretion delayed in cases with normal function (proven by subsequent history), and excreted within normal limits in cases of the most severe nephritis. The tests which we consider of the greatest value in the excretory group, based upon actual experience, are: phthalein, lactose, and chlorides; and of the tests of retention, blood-urea, rest-nitrogen and cryoscopy. The indication for the specific employment of the individual tests are as follows:

Chlorides, in all forms of nephritis and cardio-renal disease, especially if œdema is present; hyposthenuria being noted, together with its type.

Lactose is indicated for the detection of slight injury to the kidneys, and also in severe nephritis; since its suppression indicates a bad prognosis. It is not particularly helpful in surgical diseases.

Of the retention tests, either blood-urea, rest-nitrogen, or cryoscopy, is indicated wherever a severe lesion of the kidneys is suspected. We consider that one of these should be used as a routine, in conjunction with phthalein, wherever functional tests are desirable—particularly if the phthalein function is low.

Tests in conjunction with ureteral catheterization: In this connection, phthalein, urea and diastase are most serviceable. The diastase and urea give practically the same information, but only give relative functional values, while phenolsulphonephthalein gives both relative and absolute values. The total function should always be estimated by means of phthalein without ureteral catheterization, in order to detect the amount of catheter-inhibition, should this exist. Where severe bilateral lesions exist, one of the retention tests should be used.

Practicability of Tests. The simplest and easiest test is undoubtedly the phthalein test, as it requires the least amount of time and apparatus. The lactose test, if quantitative determination is required, necessitates the employment of an expensive polariscope. Furthermore, the preparation of the lactose for injection requires attention and consumes time. Its use also requires familiarity with the technique of intravenous injection.

Diastase requires the daily quantitative preparation of soluble starch, accurately graduated pipettes, a large series of test-tubes, a water-bath, and one-fiftieth normal iodine solution. For total estimation, it requires twenty-four hours specimens of urine with preservatives. The time necessary for a single determination is scarcely warranted by the information obtained.