

the age of the child till it reaches the adult standard of 1,015 and 1,025. If the specific gravity be very high it suggests the presence of diabetes.

The specific gravity may be taken by a urinometer similar to that used in general nursing, but it is convenient to use one of a very small size, which will take the specific gravity of very small quantities of urine. The best specimen of urine for purposes of examination is that passed first thing in the morning.

After examining the specific gravity of the urine, its reaction to litmus paper should be tested. The urine of children is generally more acid than that of adults, turning blue litmus paper a bright red.

Next the urine must be examined for albumen. A couple of inches of urine should be poured into a test tube, and if not acid, a drop or two of acetic acid added; it is then boiled over a spirit lamp. If albumen be present in any quantity, a cloud or deposit may form, or the urine even become solidified; if on the contrary only a trace of albumen be present the urine will shew a very slight cloud, best seen by holding the test tube up against a black surface. Occasionally if the urine be not acid, or only slightly so, a deposit of phosphates may occur on boiling, but this is distinguished from albumen by their rapid disappearance on addition of an acid. After boiling, if the test tube be put aside for some hours the precipitate may have deposited to the bottom of the tube, and its amount may be read off in fractions of the whole, such as a half, a quarter, an eighth, and so on; this gives some indication as to the amount of albumen the urine contains.

Another test for albumen is called the cold nitric acid test, and consists in pouring an inch or so of urine into a test tube, and pouring drop by drop down the side of the inclined tube nitric acid, so that the acid will fall through the lighter urine and form a layer at the bottom of the test tube, then at the line of juncture of the two liquids a white cloud will appear if albumen be present. This test has some fallacies, one of which is very likely to occur in the urine of children, containing as it does proportionately more urea and uric acid, which substances may be acted upon by the nitric acid to produce a precipitate in the urine resembling albumen, this cloud, however, disappears on heating, while albumen remains.

Still, this test is not as good in children's urine as it is in that of adults.

In testing for sugar "Fehling's solution" is used, this, if kept mixed, decomposes and leads to fallacies in testing, hence it should be kept in two solutions, and mixed when wanted. This is put into a test tube, and an equal quantity of urine added, and the mixture boiled, when if sugar be present, the blue colour will disappear, and a copious reddish yellow precipitate be deposited.

*Hæmaturia* means the presence of blood in the urine, and in children under two years of age the commonest cause is infantile scurvy. It may also occur as a sign of hæmophilia, a disease already alluded to, or from purpura, acute Bright's disease, or growths in the kidney or stone in the kidney or bladder; and occasionally as the result of the administration of certain drugs, as chlorate of potash, cantharides or turpentine.

Pus may appear in the urine as a result of inflammation of any part of the urinary tract, and is very often in children due to stone.

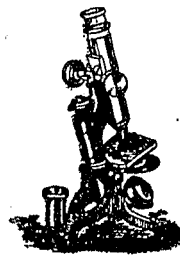
(To be continued.)

## Medical Matters.

THE BEST SPITTOONS TO EMPLOY ARE THOSE COMPOSED OF "HYGIENIC PAPER," THE PAPER TO BE BURNT IMMEDIATELY AFTER EXPECTORATION.\*

By DR. ESPINA Y CAPO,

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In the whole category of this new crusade of civilisation against ignorance, perhaps nothing is so important as this fight against tuberculosis. If one accepts the principle that the destruction of the bacillary germ is the safest means of avoiding the spread of this calamitous disease, much may be done, no matter how modest may be the intital efforts. By training all people to use the spittoon, it is possible, in some degree to limit the infection; but the difficulties connected with obtaining these spittoons and with their subsequent sterilization, induce us to present this report to the British Congress, in the hope

\* Read in State Section, British Congress on Tuberculosis.

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