Pacific Coast Branch.

Lane Hospital, San Francisco, December 15, 1926.

3350

Iodine and Pulse Rate of Normal Individuals.

J. MARION READ, P. J. WALKER AND A. C. McKENNEY.

From the Medical Division of the Stanford University Medical School.

The belief exists and the statement has been made that the administration of iodine to normal individuals will produce slowing of the pulse rate. Since no satisfactory information upon this point could be obtained from text-books upon pharmacology and *materia medica,* it was determined to ascertain the effect on the normal pulse of ingesting the same amount of iodine as we have been administering to patients with Graves' disease.

Twelve internes, laboratory workers and physicians, without signs or symptoms of thyroid disease, and with normal basal metabolic rates, volunteered as subjects. There were 4 females and 8 males, 22 to 36 years of age. The pulse rate before arising in the morning was recorded for 10 days to ascertain the normal for each individual. On the next succeeding 10 days Lugol's solution (10 drops) was taken once daily before breakfast. During this period and continuing through another period of 10 days after taking iodine the pulse rate was recorded as in the preliminary period. Records of the mid-day and evening pulse rate were also obtained but these

TABLE 1.

	No.	Before			During			After		
		Mean	Range		Mean	Range		Mean	Range	
Women	4	60.77	44-70		62.18	48-74		63.3	52-78	
Men	8	64.91	50-76		64.8	50-90		65.3	50-80	
			Prob. Error	Stand. Devia.		Prob. Error	Stand. Devia.		Prob. Error	Stand. Devia.
Both Sexes	12	63.4	.425	6.561	64.2	.499	7.8	64.6	.44	6.76

proved to be so variable, depending upon the subjects' activity, that only the mean readings of the morning (basal) pulse are shown in Table I.

There was very slight increase in the pulse rate in 7, no change in 3 and a slight decrease in 2 cases. In no individual case was any marked effect noted, neither do the means for each sex show significant change in value. The general tendency of the means for all subjects is toward an increase, but the changes are inconsequential, when tested by the criterion that the difference in two values to bear significance must be greater than 3 times the probable error.[1] From the results of this small series it is concluded that iodine in the form of Lugol's solution, 10 drops once daily, has no appreciable effect on the pulse rate of normal individuals.

[1] Pearl, Raymond, introduction to *Medical Biometry and Statistics*, 1923, Philadelphia (p. 214).

3351

One Solution Technique for Direct Microscopic Counting of Bacteria in Milk.

R. W. NEWMAN. (Introduced by C. S. Mudge.)

From the Dairy Laboratory, Division of Chemistry, State Department of Agriculture, Sacramento, Calif.

A method has been devised for simplifying the direct microscopic method of Breed for counting bacteria in milk.

In the official Breed method, 0.01 ml. of milk is spread over an area of 1 square centimeter on a glass slide. When dry, the slide is immersed in xylene for at least one minute (to remove the fat from the milk); then dried, immersed in 90 per cent alcohol for one or more minutes (to fix the smear to the slide); dipped in Loeffler's methylene blue until the milk smear is overstained; washed in water; decolorized in alcohol; again washed in water; dried and examined under a standardized microscope.

The new method eliminates the use of two solutions, two Coplin jars and four separate operations, and substitutes a single solution which simultaneously dissolves out the fat; fixes the milk smear to the slide and stains the bacteria and leucocytes. Excellent contrast between bacteria and background is secured without recourse to decolorization. Any one of the following solutions may be used: