

tympanic bone transmission occurs in any case with a functional air sound transmission system where the external auditory canal is occluded or where the drum membrane is loaded with liquid either on its lateral or on its deep surface. It does not take place when the air sound transmission apparatus is functionally out of commission or has been removed.

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A Quantitative Test for the Determination of Xanthine and Hypoxanthine in the Blood.

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Working on the basis of the assumed fact that the enzyme, xanthine-oxidase, is specific for the conversion of xanthine and hypoxanthine to uric acid, we have devised a test for these 2 compounds in the blood. The enzyme is prepared from fresh milk after the method of Dixon and Thurlow.¹ A small amount of enzyme (50 mg.) is placed in a test tube containing 2 cc. of oxalated blood and incubated for 24 hours along with a control tube containing 2 cc. of oxalated blood from the same patient. After incubation for 24 hours at 37°C., a uric acid determination (Benedict Method) is made on the contents of each of the tubes. The difference in the amount of uric acid found in each of the tubes is presumably explained by the conversion of the xanthine and hypoxanthine of the blood by the xanthine-oxidase added to the blood in one of the tubes. We were surprised to learn that the increase in the amount of uric acid was quite routinely about 200% in the series of normal individuals upon which the test was performed. Up to date, however, no constant variation has been found in any of the group of diseases to which we applied the test. As far as we know the only other test available for the determination of xanthine and hypoxanthine in the blood is the nephelometric method devised by Graves and Kober in 1915.² They have apparently not applied their test to human blood, however.

¹ Dixon, M., and Thurlow, S., *Biochem. J.*, 1924, **19**, 971.

² Graves, S. S., and Kober, P. A., *J. Am. Chem. Soc.*, 1915, **37**, 2430.