

Absence of Effect of Swallowed Saliva on Coagulation of Blood.

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It has been shown^{1, 2} that saliva added to shed blood has a remarkable accelerating action both on normal and haemophilic bloods. It was thought desirable to see if saliva, when swallowed, had any effect on the coagulating time of blood or contributed in any way to its coagulability. Mills^{3, 4} has shown that the ingestion of a meal rich in protein has an accelerating effect on the coagulation of blood but the ingestion of fats or carbohydrates has little effect.

The results of this work may be briefly stated. It is easy to confirm Mills' observations. Thus a meal of 600 gm. of meat caused a reduction of clotting time from $3\frac{1}{4}$ minutes to 1 minute 54 seconds two hours after the meal. No, or at most a few seconds, reduction in clotting time resulted from carbohydrate or fat meals and this is true also for the ingestion of large amounts of saliva. Paraffin or gum was chewed for 15 to 30 minutes and the saliva swallowed as formed. Samples of blood were taken every 15 minutes and in no case was any material difference in clotting time noted. Thus the average of 6 experiments carried out on 6 different individuals shows a clotting time before of 3 minutes 14 seconds, one hour after the saliva had been swallowed it was 3 minutes 15 seconds. The capillary tube method of Mills and Petersen⁵ was used for obtaining the coagulation times.

In one dog all the salivary glands were removed aseptically and although the animal was kept a number of months the coagulating time of its blood remained normal.

Thus no effect on the coagulating time of blood could be made out either from an increase or a decrease in the amount of saliva swallowed. It might be pointed out that cobra and other snake venoms which affect coagulation when injected into the blood are without effect when taken by the mouth

¹ Bellis, C. J., Birnbaum, W., and Scott, F. H., *Proc. Soc. Exp. Biol. and Med.*, 1932, **29**, 1107.

² Bellis, C. J., and Scott, F. H., *Proc. Soc. Exp. Biol. and Med.*, 1933, **30**, 1373.

³ Mills, C. A., *J. Biol. Chem.*, 1923, **18**, 55.

⁴ Mills, C. A., and Neeheles, H., *Chinese J. Phys.*, 1928, **2**, 219.

⁵ Mills, C. A., and Petersen, M. F., *Arch. Int. Med.*, 1923, **32**, 188.