Action on Respiration.—On respiration the salicylates have very similar effects to those on circulation. Therapeutic doses have no perceptible effect; with larger dosage, there is a primary acceleration of breathing, to be followed later by progressive slowing and more or less dyspnea; after poisonous doses, these symptoms become more and more urgent, until death eventuates from cardiac failure and asphyxia.

The respiratory centre is primarily stimulated conjointly, perhaps, with irritation of the pulmonary vagi, and later depressed or paralyzed. According to Livan, CO_2 is excreted during the period of respiratory acceleration, proportionate to the amount of salicylates ingested.

Action on Nervous System.—The nervous system is comparatively little affected by salicylic acid in ordinary doses, except, perhaps, in cases of marked susceptibility. There is usually tinnitus aurium, but this symptom is more probably due, as in quinine, to tympanic congestion rather than to any direct effect upon the auditory nerve. We have seen that under the effects of large doses the respiratory and vasomotor centres are directly affected by the drug, and the cerebral cortex is often profoundly affected as shown by the delirium, convulsions and local paralyses.

Diaphoresis.—The perspiration which follows the ingestion of the salicylates has been ascribed in part to the dilatation of the cutaneous vessels which Maragliano showed the salicylates effected in common with the antipyretics, most probably, by exciting the vasodilator centres in the medulla and, partly, by a direct influence on the sweat centres themselves (Cushing). The sweating is at times very profuse and exhausting (Ewald).

Influence on Temperature.—The temperature in health is not lowered by administration of the salicylic compounds, unless much more than therapeutic doses are taken (Sée, Ringer Furbringer). It may have some control over heat formation, however, since North observed that the ingestion of the acid inhibited the normal rise of temperature following physical exertion; North does not appear, however, to take into account the effects of exercise in producing cutaneous vascular dilatation and diaphoresis. In fever, its antipyretic action is usually very marked; it was in this rôle that the drug made its début as a therapeutic agent. It is certain, however, that its power to lower temperature varies greatly in different forms of fever (Bartels, Senator, etc.). It has a specific action in the fever of rheumatism, although, at times, it is ineffectual in controlling