pulmonary mucous surface. They have also shown that when it is rapidly introduced into the organism, it is more rapidly eliminated than when it is slowly introduced. When it is slowly introduced, at least an hour and a-half is required after the introduction of the last dose, that is, after the last quantity of it has been inhaled, for its complete elimination from the blood. So far as we know at present, the elimination of the hydrate of chloral is the same as the elimination of chloroform slowly introduced into the blood. So much of the hydrate as has been changed into chloroform is eliminated by the pulmonary mucous surface in an hour and a-half, or less, after its absorption. When, therefore, it is desirable to keep the blood charged with the hydrate of chloral continuously, it should be given at intervals of not more than two hours. If this is undesirable, a second dose should never be administered until sufficient time has elapsed for the elimination of the first. The practitioner should select one or the other of these modes of administration, in accordance with the therapeutic object he has in view. How any of the other substitution compounds of the hydrate of chloral are eliminated, we do not yet know. They are probably oxidized in the organism.

4th. *Action on the System.*—Hydrate of chloral, while in the system, affects especially the blood, the cerebro-spinal axis, the heart and arteries, the muscular system, and the temperature.

When a single therapeutic dose of chloral is administered, it passes into and out of the blood without producing any chemical change in that fluid. If the dose, however, is so large as to be a toxicological one, the blood undergoes a change. It becomes, as we learn from Dr. Richardson's experiments, less coagulable, and its corpuscles become shrunken and crenate, it is in fact devitalized. In this respect the action of chloral on the blood resembles that of large or long continued doses of ammonia or potash. If chloroform were administered in therapeutic doses for a long time, and with such short intervals between each dose, that its complete elimination from the blood, for at least a portion of each twenty four hours, were rendered impossible, a devitalization of the blood would doubtless result. That such is not the case, provided chloral is given so as to allow for its daily complete elimination, we learn from clinical observation. I have said that in this respect the action of