

it, but this, thick and dark, was six to ten times as concentrated in pigment as the control specimen in the rubber balloon. The results were the same when, without other variation in the experiment, the gall-bladder was filled to the normal distension with sterile bile of known character prior to withdrawal of the catheter. The contents of the branches of the hepatic duct connecting with the gall-bladder were always examined at autopsy. Here a thin bile, like that in the balloon, was obtained, a direct proof that the thick contents of the gall-bladder had not come as such from the liver.

It is evident that the normal gall-bladder can concentrate bile with very great rapidity.

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Osmosis as a factor in the local accumulation of leucocytes in the animal body.

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Chemical forces have generally been held responsible for the chemotaxis of leucocytes. Some of the early classical experiments which led to this belief were repeated. The results showed that the work had been misinterpreted, and also indicated that the forces which were active in producing the phenomenon were physical in character.

These physical forces are the forces responsible for osmosis and diffusion. In a solution not at concentration equilibrium they will act in directions counter to each other.

In the aqueous solutions examined, leucocytes are shown to move in the direction of the osmotic force and opposite to the direction of the diffusing substances in solution.

This motion is explained as being due to the greater permeability of leucocytes for water and the fact that their total mass is negligible as compared to their content of water.