

ing the rates of cytolysis in each solution converged with ageing of eggs. The terminal rates are closely correlated with the osmotic pressure differences across the egg membrane. The convergence indicates a greater effect of osmotic forces on cytolysis at later ages and, conversely, lesser effect at early ages.

The increase in surface area of eggs placed in a given hypotonic solution at constant temperature and duration, is greater with ageing of eggs. This is due to increased permeability of the egg membrane with age. The resulting per cent increase of stretching of the membrane was measured and compared with the percent increase in the rate of bursting. The 2 curves are not parallel. Bursting is progressively faster than stretching. Hence, increased stretching of membrane with ageing, is not solely responsible for the increased rate of bursting.

These 2 lines of evidence, namely, (1) convergence of bursting rates in different concentrations, (2) non-parallelism between rates of stretching of membrane and rates of bursting, strongly indicate a third factor, namely, a change (i. e., a decrease) in tensile strength of the egg membrane with ageing of eggs.

This increased stretching plus the decreased tensile strength of the egg membrane, we believe are the major factors involved in the more rapid bursting of the egg membrane during ageing.

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Further Study on the Incidence of *B. dysenteriae* in the Normal Individual.*

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Study of the stools of 50 healthy individuals, selected from various sections of New Orleans, was previously reported. *B. dysenteriae* was recovered from the feces in 6 instances, or 12%. Of these 6 isolations, 5 were the lactose fermenting strain described by Duval¹, and one was the true Shiga type.

The present report completes the survey, which includes 50 additional cases. The first group was selected from the public clinics,

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¹ Duval, C. W., *J. Am. Med. Assn.*, 1904, **46**, 381.

the last group studied comprised cases selected from private practice. In the first group, the patients lived in various parts of the city, some under good, others under poor hygienic conditions; while those of the second group came from a less widely distributed area, and lived under much better hygienic conditions.

The same technique as previously used was employed. Fresh stool specimens were obtained by proctoscopic examinations, were cultured in dextrose bouillon for from 2 to 3 hours, plated, and *B. dysenteriae* colonies subsequently searched for. The only variation from the previous technique was that the patients were given a mild laxative about 6 to 8 hours before the stool specimens were obtained, and in 3 instances, repeated examinations were made of the stool specimen.

From each of the normal cases, blood specimens were obtained for the purpose of testing for specific agglutinins. The organisms used in the agglutination test were *B. Flexner*, *B. Duval*, *B. Shiga*, *B. Hiss Y*. In those instances where *B. dysenteriae* organisms were recovered, they were tested with the homologous serum and serum from the experimental immunized animal.

In 3 instances dysentery bacilli were isolated from the second group of 50 cases. This percentage is considerably less than in the first group selected from the public clinics. There is also a notable drop in percentage of the lactose fermenter, while *B. Hiss Y*., *B. Flexner*, were each encountered once. In previous studies carried out with dysenteric cases in the South, there has been a considerable number of *B. dysenteriae* (*Flexner*) encountered and we might have expected to recover this organism more frequently.

In 2 cases the patient's serum agglutinated the isolated organism in a dilution of 1-100. In one case the isolated organism was agglutinated in a 1-25 dilution.