

This is virtually the same as the mean figure previously ascertained for 14 old men²—namely 73.3%. It would thus appear that cancer of the stomach (unlike peptic ulcer) does not affect the rate of emptying of the gall bladder.

This is the more noteworthy in that histamine tests failed to elicit the presence of free HCl in 6 of these 10 patients and that the others showed only small amounts; from which it may be inferred that free HCl is not essential to normal emptying of the gall bladder.

Similarly, the presence of some degree of retention of gastric contents in 7 of these 10 patients, following a barium meal, suggests that the length of time it takes the stomach to empty is unimportant, from the standpoint of evacuation of gall bladder bile, so long as there is no delay in the initial discharge of food into the duodenum.

Finally, in 6 cancer patients X-rayed after gastro-enterostomy or partial resection of the stomach, it was found that the rate of emptying of the gall bladder was slightly faster than in normal individuals, the mean discharge being 77.7%. While this difference is not statistically significant, conclusions are withheld pending examination of more cases.

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Reactions to the Alcohol-Insoluble Fraction of Ragweed Pollen.

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It was shown by Coca and Grove¹ that tryptic digestion of pollen did not destroy its ability to elicit a positive reaction in allergic individuals, although after dialysis no trace of its original nitrogen-content remained. Stull, Cooke and Chobot² found that the active principle of ragweed pollen is present in that fraction which is insoluble in 90-95% alcohol. Black³ by repeated precipitation of ragweed pollen extract in 60% alcohol and redissolving of the precipitate in acid saline, obtained an extract which contained very little nitrogen, and which gave many of the chemical reactions characteristic of

¹ Grove and Coca, *PROC. SOC. EXP. BIOL. AND MED.*, 1923, **21**, 48.

² Stull, Cooke, and Chobot, *J. Allergy*, 1929-30, **1**, 470.

³ Black, J. H., *J. Allergy*, 1931, **2**, 161.

polysaccharides. This fraction also gave typical allergic reactions in 43 ragweed-sensitive patients, and no reactions in 50 normals. The highest dilution giving a reaction when injected intradermally was 1:240,000. Unger, Moore, Cromwell and Seeber,⁴ in desensitization experiments using both purified protein derivatives and purified polysaccharide fractions, concluded that the specifically active substance in pollen is protein in nature, and that the carbohydrate plays no part in the specificity of their reactions.

To 50 cc. of a 2% aqueous extract of ragweed pollen, 450 cc. of absolute alcohol were added. The resulting precipitate was dissolved in 50 cc. of physiological saline. In control tests, 2% aqueous extracts of pollen were used.

The redissolved precipitate gave typical allergic reactions in individuals sensitive to ragweed pollen. The reaction elicited by the 90% alcohol-insoluble fraction was more intense than that of the 60% alcohol-insoluble fraction, but the type of reaction was essentially the same in each case.

In the allergic individuals reactions were obtained with the 90% alcohol-insoluble fraction in dilutions of 1:10,000,000, administered intradermally. The intensity of this reaction varied in different individuals from a slight reddening to an intense erythema with the formation of a wheal and pseudopods.

It was observed that some apparently normal individuals failed to react to this fraction, while others who gave no reaction to whole ragweed pollen responded to intradermal injections of the alcohol-insoluble fraction.

To confirm this observation, the following series of tests was made: 127 individuals who have never suffered from hay fever were given intradermal injections of whole pollen extract—1:1,000,000—in the right forearm, and of the 90% alcohol-insoluble fraction—1:1,000,000—in the left forearm. These cases were divided into 2 groups—the first composed of those individuals in whose families there were no known cases of allergic disease, and the second, of those cases whose family history was positive for

TABLE I.
Reactions to Alcohol-insoluble Fraction.

	Positive reactions	Negative reactions	Total	% negative reactions
Group I (negative history)	36	38	74	52
Group II (positive ")	48	5	53	9
Difference in percentage of negative results				43

⁴ Unger, Moore, Cromwell, and Seeber, *J. Allergy*, 1934, 5, 2.

allergic disease. The results of these tests are shown in Table I. None of these individuals gave a reaction to the whole pollen.

From these data it appears that those individuals who have a family history of allergic disease, but are not themselves sensitive to whole ragweed pollen extract react in a high percentage of cases to the alcohol-insoluble fraction. The ratio of this difference to its standard deviation is 5+, which shows a significant difference exists between the two groups.

Six to 8 hours after the initial injection an area of erythema accompanied by swelling and tenderness, but no wheal formation, was seen to appear. This was first noticed in individuals who failed to react immediately and was later found to occur in those who gave the immediate reaction. This delayed reaction disappeared slowly, in some cases lasting as long as 24 hours.

Attempts at desensitization using the alcohol-insoluble fraction are being carried on.

From these results, it appears that individuals who themselves do not react to whole ragweed pollen extract, but whose family history is positive for allergic disease, give a high percentage (91%) of positive reactions to intradermal injections of the alcohol-insoluble fraction of the same pollen. Those individuals whose family history is negative give a much lower percentage (48%) of positive reactions to the alcohol-insoluble fraction. Possibly some informants, in giving a negative history, were unaware of allergic disease in members of their family; it is probable that many reacting individuals giving a negative family history would be included in the group giving positive histories if complete knowledge were obtainable.

It is also possible that some of the negative reactors might prove to have positive histories, but the statistical analysis of the results obtained in this series makes this seem unlikely.