

## CORRESPONDENCE

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### Allergenicity of chlorogenic acid

TO THE EDITOR

The recent articles by Layton and associates<sup>1, 2</sup> refuting an earlier proposal<sup>3</sup> that the allergen in green coffee bean is chlorogenic acid leads me to describe our brief but fairly intensive experience with chlorogenic acid. According to Freedman and co-workers,<sup>3</sup> chlorogenic acid is distributed widely in nature and if it is indeed an allergenic substance capable of giving intense immediate-type skin reactions, skin reactivity to chlorogenic acid might be expected to be encountered among patients attending an allergy clinic. Accordingly, we obtained a sample of chlorogenic acid and for a one-year period included this substance among the 32 extracts with which we were testing routinely. Dilutions for intracutaneous testing were prepared freshly each month from concentrated stock solutions stored at 4° C. in all instances. The number of patients tested exceeded 300 and most had hay fever, asthma, or both, and were markedly skin reactive to one or more of the pollen, mold, danger, or house dust extracts used in testing.

The chlorogenic acid was obtained from Mann Research Laboratories, Inc., and was made up in a concentration of 0.5 per cent in 50 per cent glycerine for scratch testing and in a concentration of 0.005 per cent in phenolated saline for intracutaneous testing. After standing for 3 days, the solutions were proved sterile on culture, and filtration was considered unnecessary. Patients were tested by the scratch method first and then, if no reaction occurred, by the intracutaneous method. All patients were tested with chlorogenic acid by both methods.

In no instance was a reaction obtained by either the scratch or the intracutaneous methods which differed significantly from reactions obtained with phenolated saline solution and in the overwhelming number of instances no reaction occurred other than that attendant on the testing procedure itself. There were no adverse reactions attributable to the two solutions.

It was concluded that skin reactions to chlorogenic acid either do not occur in an atopic population or that they are extremely rare. It was inferred, therefore, that allergy to chlorogenic acid is likewise very uncommon or does not occur.

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1. Layton, L. L., Greene, F. C., Corse, J. W., and Panzani, R.: Pure Chlorogenic Acid Not Allergenic in Atopy to Green Coffee: A Specific Protein Probably is Involved, *Nature* **203**: 188, 1964.
2. Layton, L. L., Greene, F. C., Panzani, R., and Corse, J. W.: Allergy to Green Coffee, *J. ALLERGY*, **36**: 84, 1965.
3. Freedman, S. O., Krupey, J., and Sehon, A. H.: Chlorogenic Acid: An Allergen in Green Coffee Bean, *Nature* **192**: 241, 1961.