Introduction
Recently two of us reported on the treatment of the brittle nail with gelatin. This study raised several questions requiring further investigation. Among these were the following: (1) the duration of the effect after ingestion of gelatin has been stopped; (2) which clinical conditions and pathological states of the nails respond to gelatin intake; (3) the mechanism of the effect of gelatin on nails. It was felt also that an attempt should be made to correlate other physiological changes in pathological nails. Specifically, the concept that blood levels of calcium, phosphorus, and/or the basal metabolic rate in pathological nails are disturbed was challenged. This idea seems to have established itself firmly on the medical mind, in spite of the work of Kile and others. A recent query on brittleness in nails was answered by giving calcium deficiency as the usual cause. The reason for the remarkable coherence of the layers of keratin in the normal nail and the mica-like splitting in brittle nails has not been investigated thoroughly. We felt that histological study of these and other pathological nail conditions might reveal some mechanism of coherence and/or cause of splitting. Since the brittle nail definitely splits in lamina or sheets, we suspected that there was a "cement substance," which kept these lamina tightly adherent. Also, since it was noted that brittleness was a recurrent phenomenon after gelatin intake was stopped, we wanted to determine whether brittle nails would respond again to a new course of gelatin. A positive response would also serve as a valid control. To these ends it was decided to collaborate with a large outpatient clinic, where extensive patient material was readily available and blood studies, etc., could be performed. This investigation did not lend itself to double blind-control studies, because of the length of the study period and the unreliability of patient material as well as the rapid turnover.

Summary
Forty-three of fifty patients with brittle nails who ingested gelatin daily for three months showed improvement in their nail structure. Eight out of eight cases of recurrent brittle nails could again be controlled by gelatin. Gelatin improved psoriatic nails in 5 cases out of 12. In onychomycosis and other pathological conditions of the nail gelatin was of no appreciable help.