

Kerr DNS, Davidson S (1958). Gastrointestinal intolerance to oral iron preparations. *Lancet* 2:489-492.

Key passages

GASTROINTESTINAL INTOLERANCE TO ORAL IRON PREPARATIONS

DAVID N. S. KERR

M.B. Edin., M.S. Wisconsin, M.R.C.P.E., M.R.C.P.

ASSISTANT, DEPARTMENT OF MEDICINE,
UNIVERSITY OF EDINBURGH

Sir STANLEY DAVIDSON

B.A. Cantab., M.D. Edin., F.R.C.P.E., F.R.C.P.

PROFESSOR OF MEDICINE, UNIVERSITY OF EDINBURGH

The five "iron pills" contained: ferrous sulphate; ferrous gluconate; ferrous succinate; ferrous calcium citrate; and lactose. The last is hereafter referred to as the "unknown" control pill. The pills known to the patient as the "control" pills also contained lactose, and were identical in appearance and composition to the "unknown" control pills.

The volunteers were assigned at random to five groups which took the pills in different orders.

In the present investigation the incidence of symptoms in the group as a whole was almost the same, whether the iron was taken as ferrous sulphate, ferrous gluconate, ferrous succinate or ferrous calcium citrate. Similar "toxic effects", however, were reported equally often after taking the "unknown" control pills which were thought to contain iron but in fact contained only lactose. It is of great interest that with the "known" control pills (identical in every way with the "unknown") only 2 subjects reported symptoms. This observation may be interpreted in two ways: either (1) most of the subjects experienced no symptoms while taking the "known" control pills, or (2) the symptoms arose, but, because they could not be ascribed to the pills, were ignored or attributed to other factors.

Summary

1. Ferrous sulphate, ferrous gluconate, ferrous succinate, ferrous calcium citrate, and "known" and

“unknown” control pills (containing lactose) were administered to 93 healthy young women in a double-blind trial. The incidence of gastrointestinal symptoms attributed to the pills was assessed from the replies to a questionnaire.

2. Virtually no toxic effects were reported from “known” control pills containing lactose, but the exactly similar “unknown” control pills, which were thought by the subjects to contain iron, produced as many side-effects as the pills which did in fact contain it.

3. None of the four iron compounds was found to be significantly more “toxic” than inert pills containing lactose. Hence it was concluded that intolerance to these iron preparations, in the dosage given, was mainly psychological in origin.

TABLE II—INCIDENCE OF ALL GASTROINTESTINAL SYMPTOMS IN 93 SUBJECTS WHO COMPLETED THE TRIAL

Iron preparation	1 No symptoms	2 Slight or doubtful symptoms	3 Symptoms +	4 Symptoms ++	5 Total with significant symptoms (3+4)	6 Total with no significant symptoms (1+2)
Ferrous sulphate ..	58	12	22	1	23	70
“ gluconate ..	69	4	17	3	20	73
“ succinate ..	59	13	19	2	21	72
“ calcium citrate ..	63	11	14	5	19	74
“ Unknown ” control ..	65	8	18	2	20	73
“ Known ” control ..	91	0	2	0	2	91

+ = symptoms definite but treatment continued.

++ = symptoms severe enough to stop treatment with that pill.

[Home](#)

[Contents](#)