2017. Iron IV/PO

RCT/Iron / IV or PO/ IBD

Oral versus intravenous iron replacement therapy distinctly alters the gut microbiota and metabolome in patients with IBD

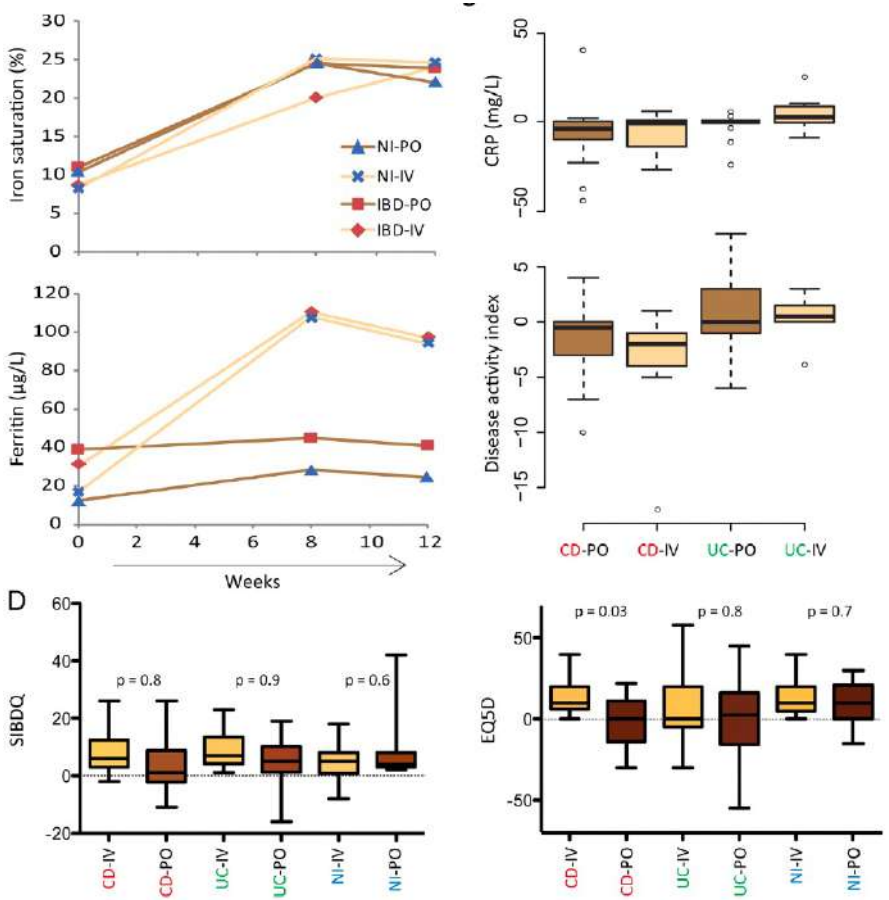
Open-label clinical trial.
Patients with CD, UC and non-IBD iron deficient were randomized to receive iron sulfate orally (PO) or iron sucrose (IV) over 3 months.

Primary endpoint: Clinical parameters, faecal bacterial communities and metabolomes were assessed before and after.

Results: N=72

- Both IV and PO ameliorated iron deficiency but higher ferritin levels were observed with IV. No differences in haemoglobin.
- Changes in disease activity were independent of iron type.
- Major shifts in bacterial diversity occurred in most patients but patients with CD were most susceptible.
- PO treatment was associated with decreased abundances of F. prausnitzii, Ruminococcus bromii, Dorea sp and Collinsella aerofaciens.
- No differences in quality of life and CRP observed between PO/IV

Conclusion:
Shifts in gut bacterial diversity and composition associated with iron treatment are pronounced in IBD participants. Despite similar clinical outcome, oral administration differentially affects bacterial phylotypes and faecal metabolites compared with IV therapy.



Lee T et al. Gut 2017;66:863–871.