

So You Think You Know How to Read Iron Studies...Well now you do!

- Remember Fe Studies Must be taken following 5-12 hours of fasting
- Strenuous exercise, alcohol and all supplements containing iron should be avoided for at least 24hrs prior to the test
- Must have high-sensitivity C reactive protein (hsCRP) measured at the same time, to rule out altered Fe metabolism secondary to inflammation
- Note in kids, teens and pregnant women *always* check the FBE – to exclude any negative impact on erythropoiesis
- Note patients with any form of iron dysregulation including thalassemias, HFE mutations and transferrin SNPs, will not fit into these ‘ideal’ ranges

Your 3 Key Iron Markers

Transferrin – the specialised Iron taxi in the body that reflects your patients’ ‘Iron Hunger’

Transferrin Saturation (%) – the number of ‘bums on seats’ in these Iron Taxis, reflecting your patients’ ‘Tissue Delivery of Iron’

Ferritin – stored iron, reflecting the amount of ‘Iron at the Depot Awaiting Taxis’ in your patients

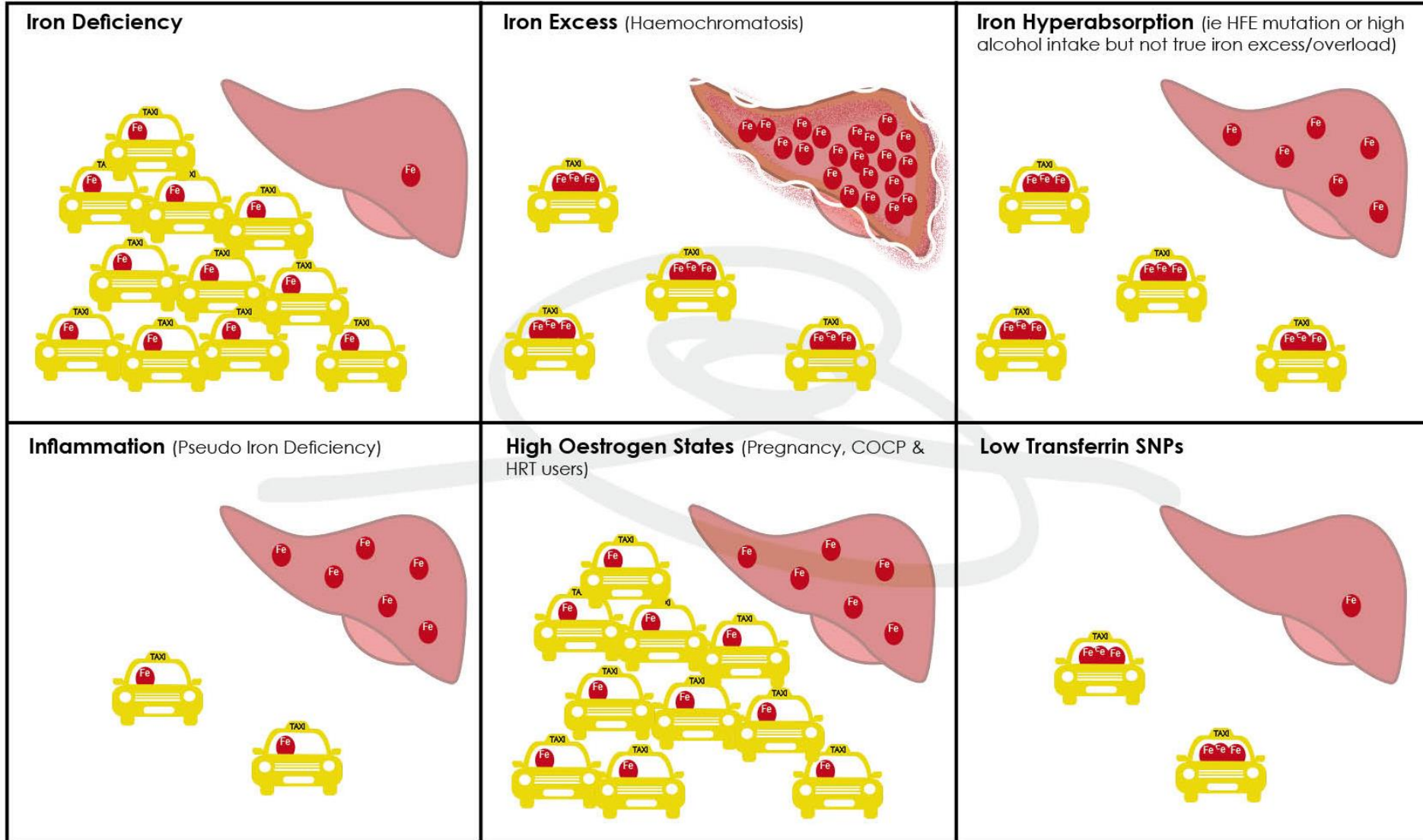
Suggested ‘Ideal’ Ranges in Patients by Life-stage

	Transferrin g/L (µmol/L)	Transferrin Saturation %	Ferritin µg/L
Kids (note: check FBE)	2-2.5 (25-34)	20-30%	>20
Teens	2-2.5 (25-34)	20-30%	>20
Women			
Menstruating	2-2.5 (25-34)	20-30%	30 -100
COCP	2-3.5 (25-44)	20-30%	30 -100
Preconception	2-2.5 (25-34)	20-30%	>50
Pregnancy (note: check FBE)			
1st trimester	3-4 (37-50)	↓	50-100
2nd trimester	2.5-4 (34-50)	↓	<i>Expected to drop with hemodilution >wk20></i>
3rd trimester	2.5-4 (34-50)	↓	>30
Post-Menopausal	2-2.5 (25-34)	20-30%	≤ 100 -150
On HRT	2-3.5 (25-44)	20-30%	30 -100
Men	1.8-2.5 (22-34)	30-40%	50-300
<i>Note that stores are expected to increase with each decade through mid-life</i>			

	Iron Deficiency	Iron Excess	Iron Hyper-absorption	Inflammation	High Oestrogen States	Low Transferrin SNPs
Serum Transferrin	↑↑	Normal or ↓	Normal or ↓	↓↓	↑↑	↓↓
Transferrin Saturation	↓	↑↑	↑↑	↓↓		↑↑
Ferritin	↓	↑↑	Normal or ↑	↑		↓

IRON PATTERNS

KEY: Taxis=Transferrin; No of passengers per taxi=Transferrin Saturation; Taxi Depot=Liver; Passengers at Depot=Ferritin



Origin: [Update In Under 30 So You Think You Know How To Read Iron Studies?](#)

Related Resources: [Update in Under 30 Iron Overload But Not as You Know It](#)