

bloods assessment (no comment indicates optimal)  
inflammation  
CRP 2.2

cholesterol 3.7

glucose 4.3

thyroid  
tsh 1.25  
free t4 18.1  
free t3 5  
top ab <6

iron study  
ferritin 264 this is high - are you supplementing?  
iron 16

GBC  
hb normal now 125 in feb low 114 - Why?

mcv 96.7 macrocytic look at B12 folate protein

neutrophils 2.9 - low lack protein zinc and vitamin C

lymphocytes 2.2

basophils 0 - low lack B3 B12 folate

eosinophils .3

platelets 241 - poor EFA balance

## biochemistry

sodium/potassium ratio  $136 / 4.6 = 29.56$  = need more potassium  
calcium/phosphorus =  $2.34 / 1.17 = 2$  low ratio = calcium lack  
urea/creatinine ratio  $5 / .061 = 81.96$  =  
PMI (creat x alb)/(urea x urate) =  $(.061 \times 41) / (5 \times .23) = 2.501 / 1.15 = 2.17$  = excessive protein  
breakdown impaired synthesis

s.albumin 41 - low impaired protein synthesis - (? lack b6 zinc low hormone status inflammation )  
s.ggt 11 - low suggests lack of B6  
s.alt 25  
s.urate .23

bilirubin 30 high - why ? lack of cofactors b3 b6 mg fe glutamine , lack cho reserves fasting insulin resistance, overload of sulphating and glycation, inadequate cruciferous vegetable intake - this should be monitored with gp bilirubin fluctuation ( $22 \rightarrow 16 \rightarrow 30 \mu\text{mol/L}$ ) appears mild and stable, likely benign.

Continue annual to biannual monitoring, maintain hydration, and document any medication or fasting changes around test dates.

If bilirubin consistently rises  $>40 \mu\text{mol/L}$  or symptoms develop, further investigation (fractionated bilirubin, ultrasound, hemolysis screen) would be warranted.

## a. Support Hepatic Detoxification & Bile Flow

Increase bitter and sulphur-rich vegetables:

Rocket, endive, kale, broccoli, cauliflower, cabbage, garlic, onion — enhance phase II liver detoxification and bile clearance.

Include gentle cholagogues:

Dandelion greens, artichoke, lemon juice in warm water, turmeric, and beetroot can assist bile movement and conjugation of bilirubin.

Hydration:

At least 2 L water daily to aid hepatic clearance, particularly if dehydration has coincided with mild bilirubin elevations.

b. Ensure Adequate Antioxidant Intake

Vitamin C sources: Citrus, kiwi, capsicum, berries.

Polyphenols: Green tea, olive oil, turmeric, and deeply coloured vegetables.

Glutathione precursors: Avocado, asparagus, spinach, and moderate whey protein or N-acetyl cysteine (if not contraindicated). Eat regular balanced meals every 3–4 hours.

Combine complex carbs + protein + healthy fat each meal (e.g. salmon, quinoa, olive oil, greens).

Avoid long fasting periods or restrictive dieting. Milk thistle (*Silybum marianum*): supports hepatocyte regeneration and conjugation pathways.

Turmeric / Curcumin: anti-inflammatory and enhances bile flow.

Schisandra or Globe artichoke: gentle cholagogue and antioxidant properties.

Dandelion root tea: mild diuretic and hepatic tonic.

A liver-supportive, antioxidant-rich diet with regular balanced meals, hydration, and gentle herbal support will help maintain stability and prevent future spikes.

alk phos 44

cholesterol 3.7 need more zinc

ferritin 264 - high

iron 16.1. Liver & Biliary Support (your instincts are perfect here)

Cruciferous vegetables daily — broccoli, kale, cauliflower, Brussels sprouts → rich in sulforaphane and glucosinolates for phase II liver conjugation.

Beetroot, globe artichoke, dandelion root, turmeric, lemon, ginger → enhance bile flow and assist hepatic clearance of stored ferritin.

Hydration: at least 2 L filtered water daily.

Reduce alcohol and paracetamol; minimise iron-fortified cereals.

Herbal liver support options:

St Mary's Thistle (*Silybum marianum*) – hepatoprotective, antioxidant, supports hepatocyte regeneration.

Dandelion root (*Taraxacum officinale*) – cholagogue and mild laxative.

Schisandra chinensis – antioxidant, normalises ALT/AST patterns.

Globe artichoke (*Cynara scolymus*) – increases bile secretion and reduces hepatic storage.

## 2. Iron Modulation

Avoid supplemental iron unless clinically deficient.

Limit very high-iron foods (e.g. red meat > 3 times weekly).

Include polyphenol-rich foods (green tea, cocoa, blueberries) that help modulate iron absorption.

Consider curcumin (if tolerated with statins) – can help reduce ferritin via mild chelating and anti-inflammatory action.

## 3. Constipation Relief & Gut Support

Chronic constipation can exacerbate hepatic load and iron retention.

Increase soluble fibre: ground flaxseed, chia, psyllium husk (start low, increase gradually).

Prebiotic foods: asparagus, leeks, oats, green banana resistant starch.

Magnesium citrate or glycinate at night to aid bowel motility.

Aloe vera inner leaf juice or Gentle herbal aperients (Rheum palmatum in microdose, Cascara sagrada short-term).

Encourage daily movement and adequate hydration with electrolytes if low sodium.

## 4. Antioxidant Support

Stored iron can increase free radical production — counterbalance with antioxidants:

Vitamin C foods (citrus, kiwi, berries)

Vitamin E (avocado, almonds, sunflower seeds)

NAC or glutathione precursors if clinically appropriate

## Monitoring & Follow-Up

Parameter	Frequency	Goal
Ferritin, Iron, Transferrin	Every 3 months	Aim ferritin < 150 µg/L
LFTs (ALT, AST, GGT, Bilirubin)	Every 6 months	Track hepatic response
Bowel regularity	Ongoing	Daily soft, formed motion