What is it?

May occur when a pt begins eating an adequate amount – oral, EN or PN - after a period of prelonged starvation or malnutrition

1. **Starvation Phase**: ↓ insulin secretion, ↑ fat and protein metabolism, ↓ Phosphate, K, Mg stores depleted (serum levels may be normal)

2. **Refeeding Phase**: Sudden increase in carbohydrate intake → ↑ insulin secretion. Rapid intracellular shift causes ↓ serum electrolyte levels.

At risk

BMI <18.5, 10% weight loss 3-6/12, little/no intake >5 days, ↓ K, Mg, PO

chronic malnutrition	chronic alcoholism/substance abuse
EDs	oncology
post-op	severe mental health disorders

S/S

Water/salt retention (oedema)	Impaired muscle contraction,
tachy/brady	glucose intolerance
respiratory difficulties	seizures
confusion	coma
blurred vision	

Biochem

↓ serum K	↓ serum PO
↓ serum Mg	↓ thiamine (B1)

Consequences

Electrolyte imbalances (hypophosphataemia, hypokalaemia, hypomagnesaemia)

Abnormal glucose metabolism - hypoglycaemia or hyperglycaemia

Thiamine deficiency

Cardiac: arrhythmias, heart failure

Respiratory: muscle weakness, respiratory failure

Neurologic: confusion, seizures

Haematologic: anaemia, impaired immune function

Intervention

Initiate feeding once: 1. RFS Supps (PO4, K, Mg, B1) have commenced. 2. Electrolytes are monitored. 3. Abnormalities are corrected

High risk pts: Start rate = 50% of goal *OR* Commence low-CHO feed @ ~6000kJ/day. Increase by 2000kJ/day until goal is met.

Lower risk pts: Start @ 1800kcal/day. Gradually increase when biochem is stable, eg +400cal/week

Avoid excessive Na (water retention)

NGT - BMI <14kg/m2

Sup 500mg PO4 bd. 100mg thiamine od for first week.

Guidelines & References

Handbook p169

ASPEN consensus recommendations for refeeding syndrome (2020)

ESPEN basics in clinical nutrition: Refeeding syndrome (2010)

Monitoring

Monitor weight daily

Electrolytes 6-8 hours after first re-feeding

Daily bloods for the first week

Second week = bloods 3/week

BGL 2/day

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Not published yet.
Last updated 11th July, 2025.

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