Case Study: Stroke

- 67 yo ♂ with acute, ischaemic R MCA territory stroke
- PMHx: ↑chol, HTN, T2DM (diet controlled)
- Deficits: L hemiparesis, dysphagia (NBM)
- No current chest infection or UTI
- Wt: 103 kg
- Ht: 172 cm (family estimate)
- Well nourished pre-adm, central adiposity
- SOOB for short periods, time being extended daily
Calculations

- Energy req: 7980 – 8480 kJ/day
- Ptn req: 65 – 81 g/day
- Based on adjusted body wt (ABW) = 81.25 – 88.5 kg
  - \([\text{actual wt} - \text{IBW}] \times 0.25\) + IBW
  - \([\text{actual wt} - \text{IBW}] \times 0.50\) + IBW
- Energy: Harris-Benedict equation
- No injury factor
  - ischaemic stroke pts not hypermetabolic
- Activity factor of 1.2
  - sitting out of bed
- Ptn: 0.8 – 1.0 g/kg ABW
  - assumes pt is not hypercatabolic :: based on NHMRC NRVs
Issues

• What if you had used the Schofield equation?
  – 7730 – 8155 kJ/day (~ 250 kJ less than HB)
  – may introduce less error eg. estimated height

• What if the stroke had been haemorrhagic?
  – some evidence that there is an increase in REE as for traumatic brain injury.
  – small sample sizes

• What if the stroke was subacute?
  – 2009 study in tube-fed pts 6/12 post-stroke: REE reduced compared to control grp even after adjustment for FFM
  – small sample size
Issues

• Should you adjust for obesity?
  • Divided opinion
  • Available studies not specific to stroke pts, usually in critically ill
  • Reasons to adjust:
    • usual actual wt can overestimate requirements
    • for long term sedentary patients, muscle is not being maintained by activity. Extra weight likely to be adipose tissue
  • Most common recommendation: use 50% correction factor (average between ideal and actual body wt) to meet estimated requirements
  • Monitor, monitor, monitor!


