

Pathway to calculate the energy gap:

- 1 Calculate the *weight gain* and the *excess weight gain*; part of the weight gain that is not necessary for normal growth.
- 2 Estimate the *gain in fat free mass* and *fat mass* based on body fat percentages reported in literature.
- 3 Estimate the *energy storage*; the amount of kilojoules stored in the body as fat mass or fat free mass assuming that one kilogram corresponds with respectively 37656 kJ (9000 kcal) and 3180 kJ (760 kcal).
- 4 Estimate the *positive energy balance*; amount of kilojoules consumed to achieve the estimated energy storage assuming an energy efficiency of 50% for a mixed diet
- 5 Quantify the *energy gap*; part of the positive energy balance responsible for the gain or maintenance of excess body weight among overweight children