

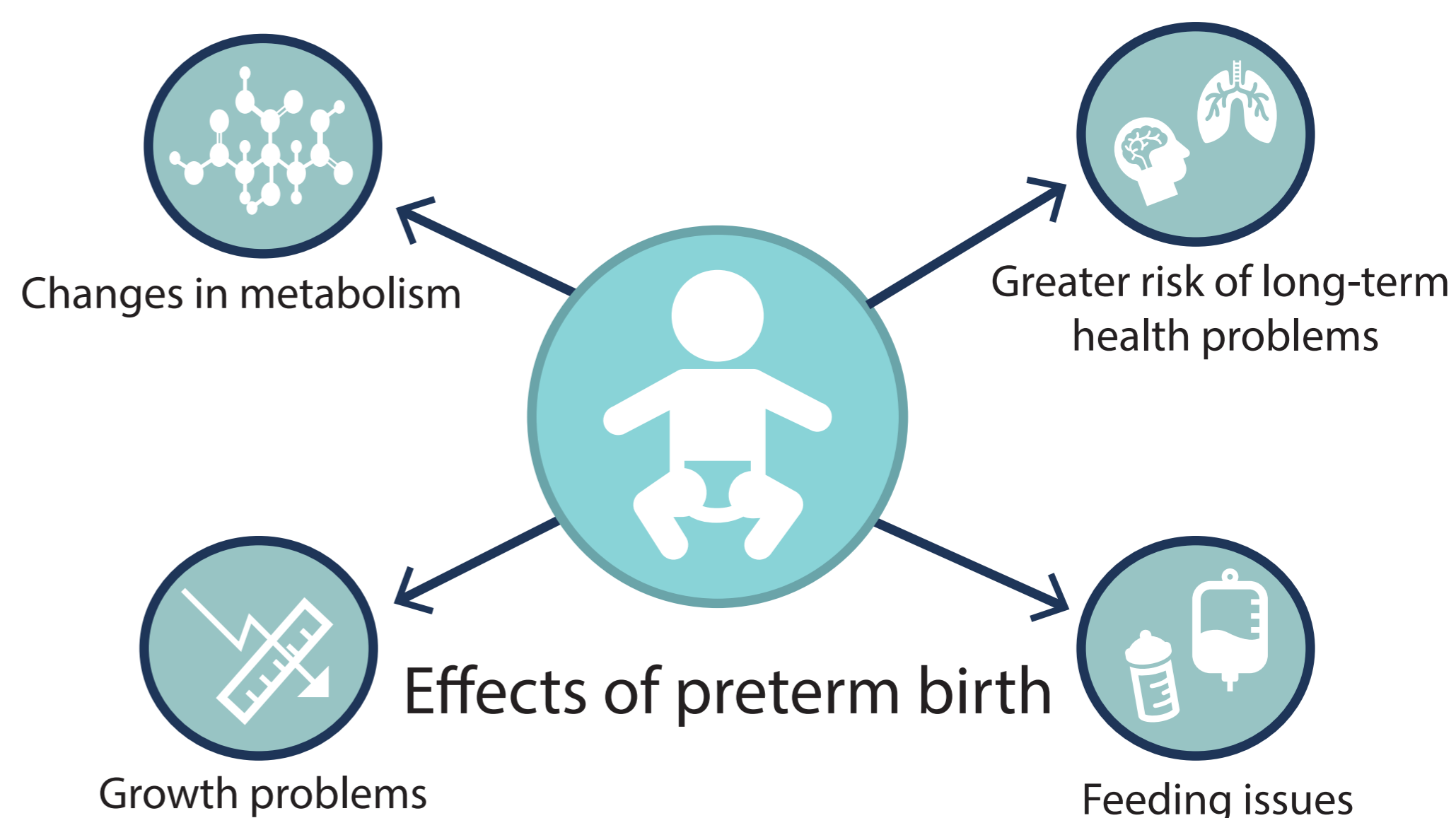
Impact of preterm birth on metabolic maturation and growth

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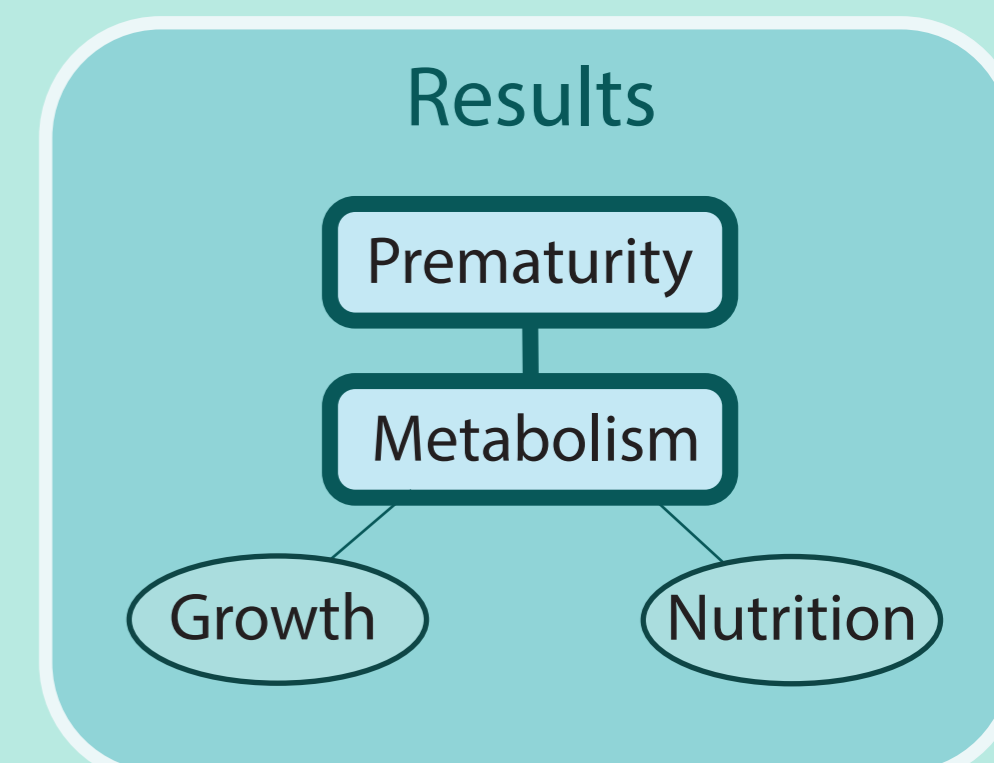
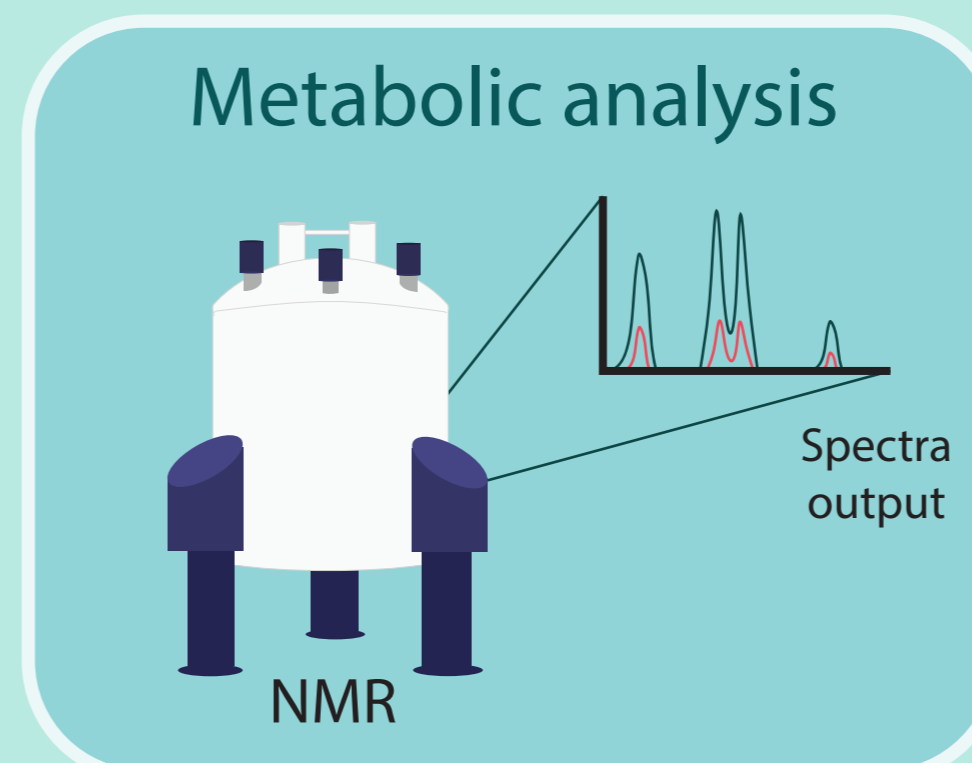
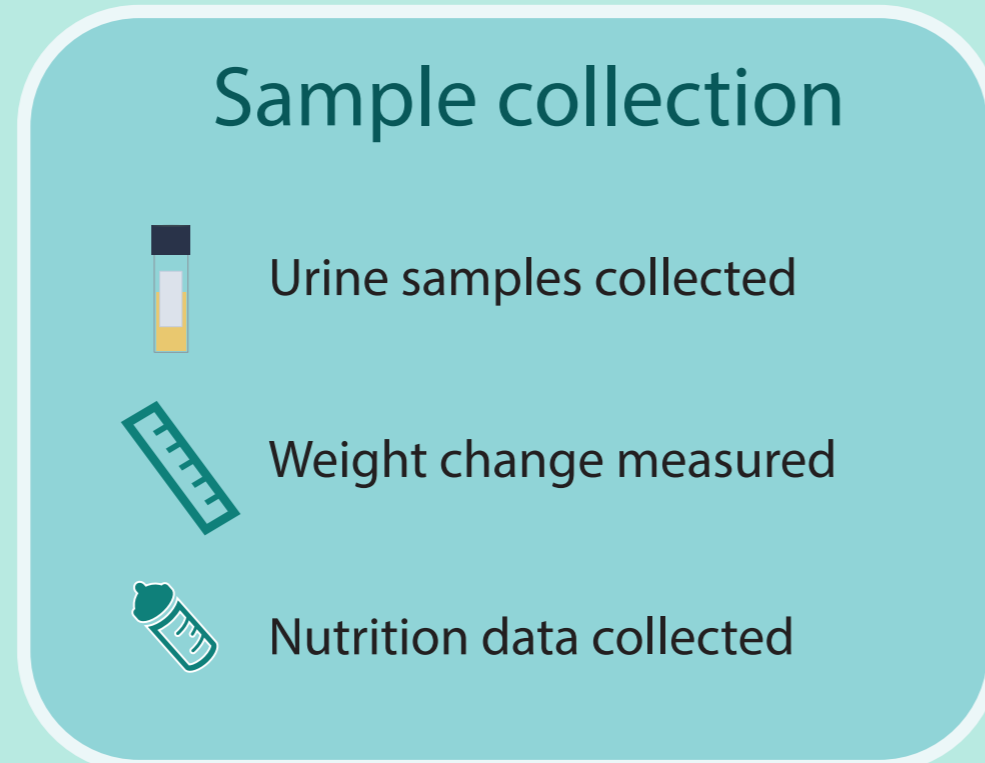
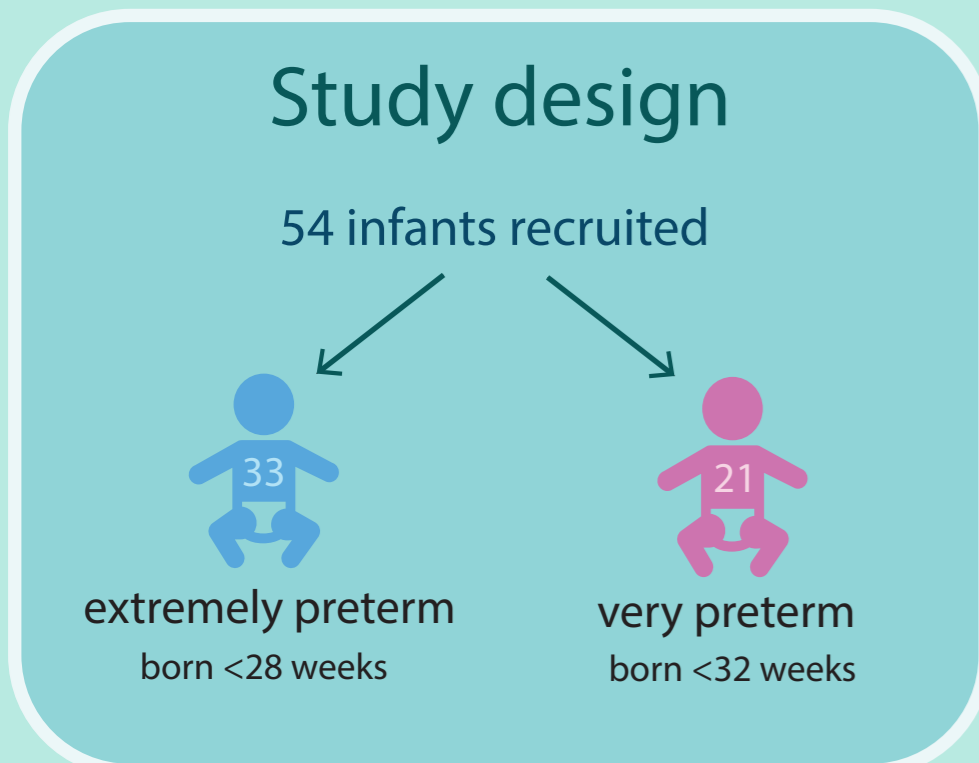
Background

- Around 7% of infants are born preterm in the UK each year ¹
- Complications from preterm birth is the leading cause of death in children under 5 years globally ²
- The cost of very preterm birth on the NHS is estimated at ~£262 million, with costs increasing as gestational age decreases ³



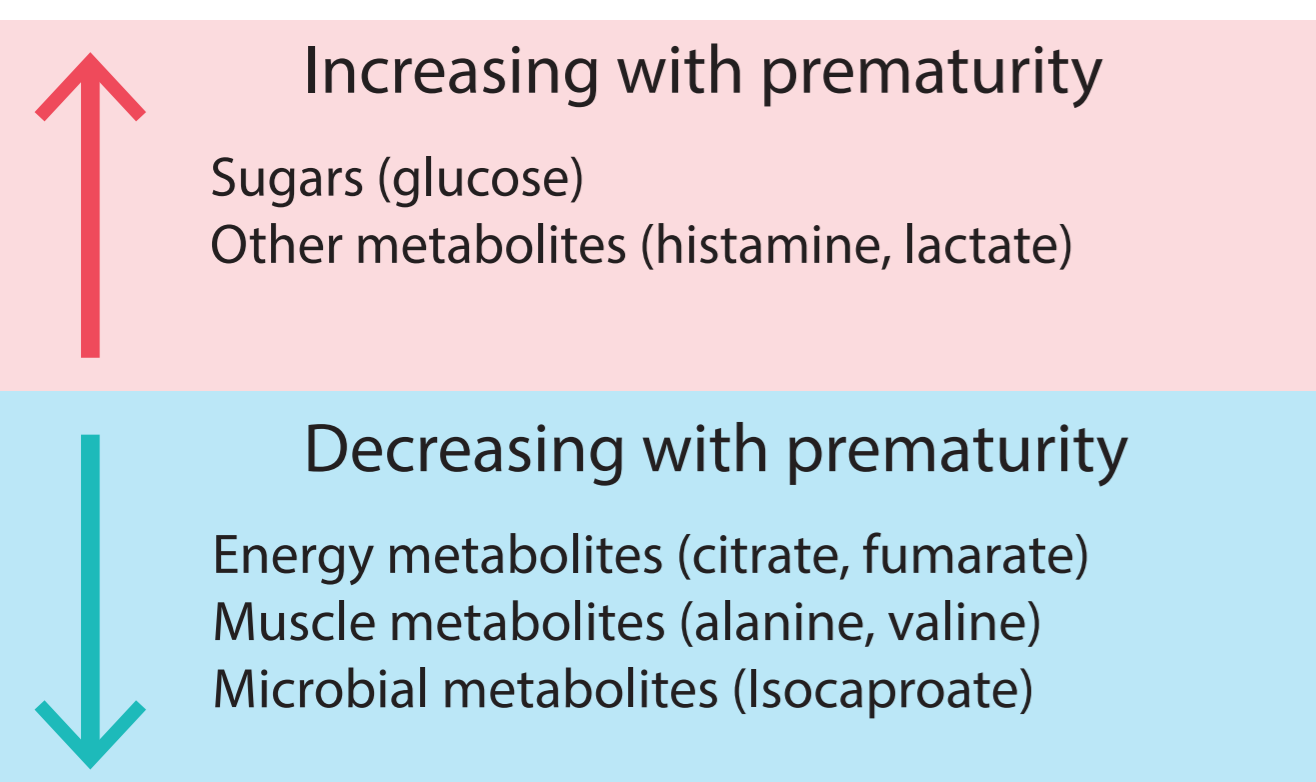
Our aim - Investigate the effect of preterm birth on metabolism and link this to nutrition and growth

Methods

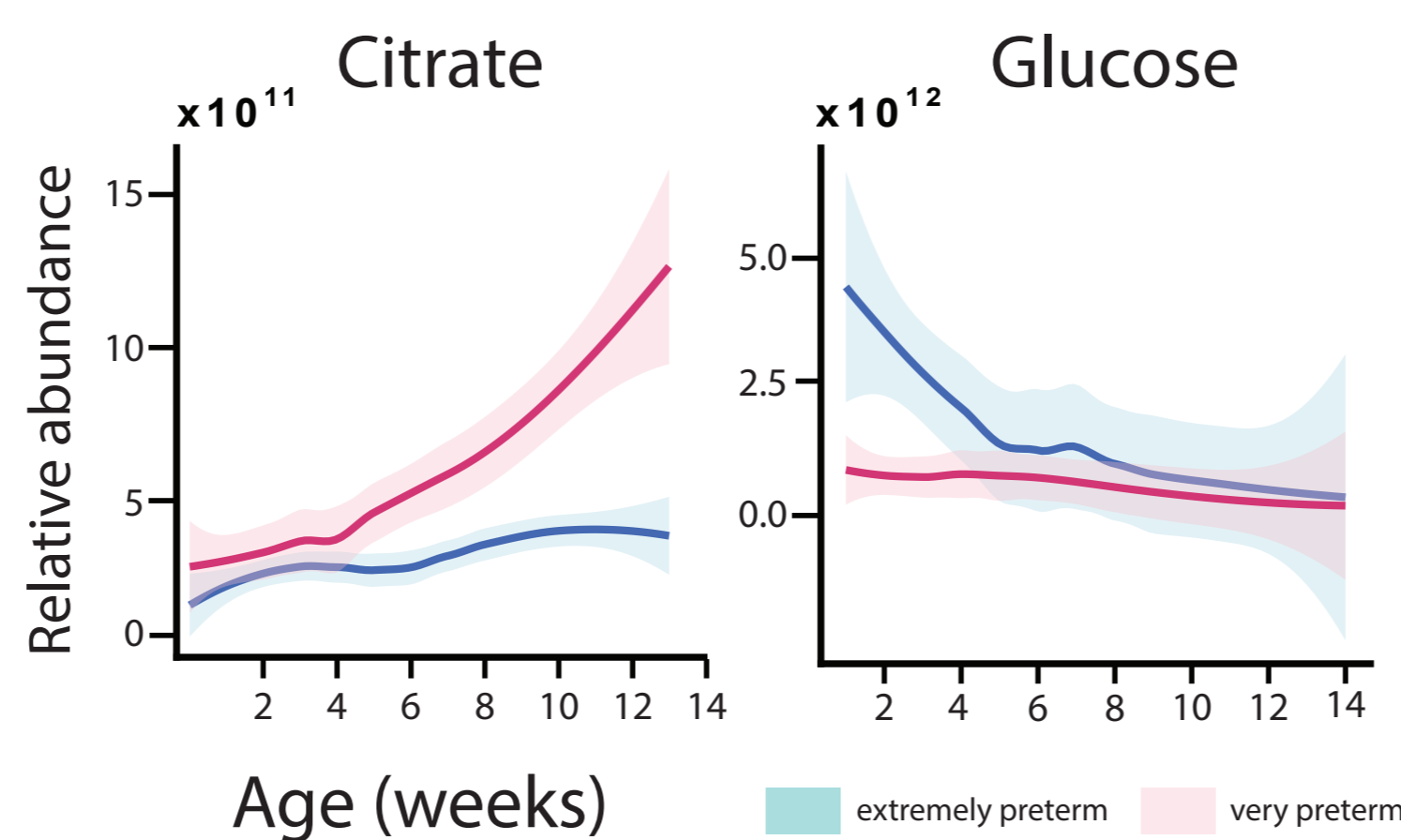


Our findings

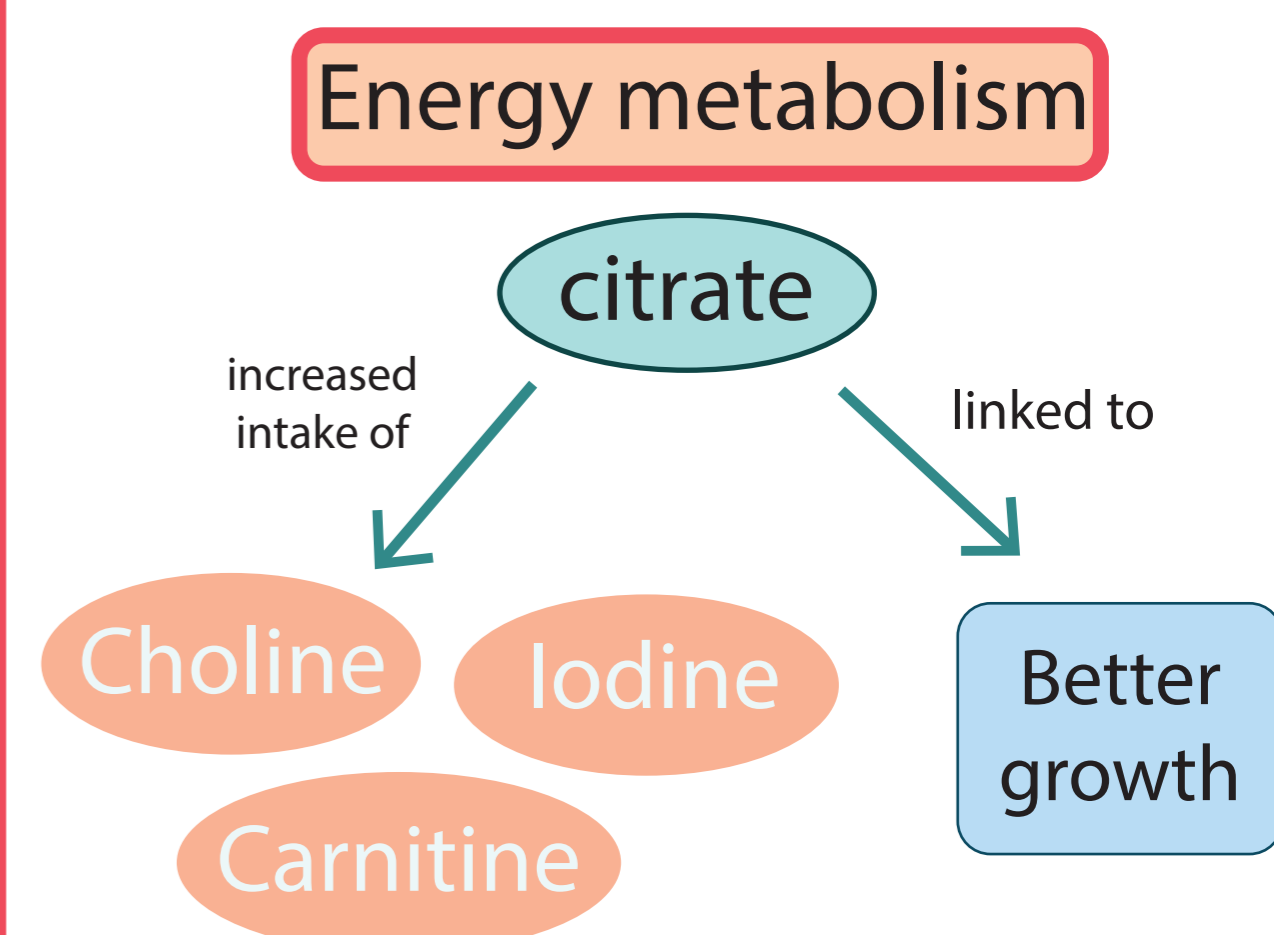
Metabolic changes



How does this change over time?



How can this inform nutrition?



Future potential

- Bedside metabolic testing - identify specific metabolic biomarkers associated with poor growth
- Personalised nutrition - use data to tailor nutrition to individual infants to optimise growth
- Overall, this could lead to better outcomes in both the short- and long-term

References

1. NHS Digital. Maternity Services Monthly Statistics – Births [Internet]. England: NHS Digital; [updated 19 Dec 2024; cited 2026 Feb 26]. Available from: <https://digital.nhs.uk/data-and-information/publications/statistical/maternity-services-monthly-statistics/final-september-2024-provisional-october-2024-official-statistics/births>
2. World Health Organization. Preterm birth [Internet]. Geneva: World Health Organization; 2023 May 10. Available from: <https://www.who.int/news-room/fact-sheets/detail/preterm-birth>
3. Yang H, et al. Healthcare costs of very preterm babies in England: a national population-based cohort study. *BMJ Paediatr Open*. 2023;7(1):e001818. doi:10.1136/bmjpo-2022-001818.