Investigating the impact of body composition on the activity of propofol in babies, infants and children undergoing anaesthesia.

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Status	RECRUITING
Sponsor	University of Auckland
Enrollment	50 participants

Plain Language Summary

Propofol is a medication commonly used to keep patients asleep during surgery. Getting the dose right is straightforward in average-sized older children, but much more difficult in newborns and in obese children — groups where dosing guidelines are limited or based on inappropriate models. Too little propofol can lead to awareness under anaesthesia; too much can cause dangerous side effects.

This study is examining how propofol moves through and is processed by the body (pharmacokinetics) in children across the full spectrum — from newborns to obese teenagers. By measuring propofol levels in the blood at specific time intervals during and after surgery, and combining this with precise body composition measurements, researchers aim to build a more accurate dosing model.

Participants include children aged 0–15 years having surgery at Starship Children's Hospital, including both obese and non-obese children. Children having cardiac or liver transplant surgery are excluded. If your child is having an operation at Starship and meets the age criteria, the research team may approach you about participating. The study involves only additional blood sampling during an existing procedure — no extra surgical steps or procedures are added.

Key Eligibility Criteria

Inclusion (4)

- Participants will include 50 neonates infants and children aged 0-15 years undergoing surgical procedures at Starship Children’s Hospital. This study will include both obese and non-obese children. Obesity will be determined based on a BMI > 95% for age and sex, determined by the Children’s BMI calculator and assigned to one of 3 categories as defined as the % above the 95th centile, as follows:
- •Obesity Grade I: > 95%-120% of 95th percentile (adult BMI >30 -35 equivalent)
- •Obesity Grade II: 120-140% of 95th percentile (adult BMI 35- 40 equivalent)
- •Obesity Grade III: > 140% of 95th percentile (adult BMI > 40 equivalent)

Exclusion (1)

- Children undergoing cardiac or liver transplant surgery will not be included.

Locations (1 total)

Auckland, New Zealand