

# Nutritional status, especially body mass index, from birth to adulthood and lung function in young adulthood

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**Objective:** The study assessed the impact of body mass index (BMI) at birth, infancy, and adulthood, and waist circumference on lung function. **Methods:** Using a longitudinal design 1221 Chilean young adults were studied. A standardized respiratory questionnaire was used. Forced expiratory volume in 1 s (FEV1), forced vital capacity (FVC), height, weight and waist circumference were measured. Data at birth and at 1 year were obtained from clinical notes. **Results:** Males with a BMI  $\geq$  30 and women with a BMI  $<$  20 had a lower FEV1 (-230 mL, 95% CI -363 to -98; -106 mL, 95% CI -211 to -0.18, respectively). In both sexes those with a BMI 20-25 had the highest FEV1 and FVC. In males there was a negative association between waist circumference and FEV1 and FVC while in women the middle tertile had the highest FEV1 and FVC. There was an association between birthweight and BMI at birth, and FEV1 in men, when unadjusted for other measurements. **Conclusions:** BMI and waist circumference in adulthood ma