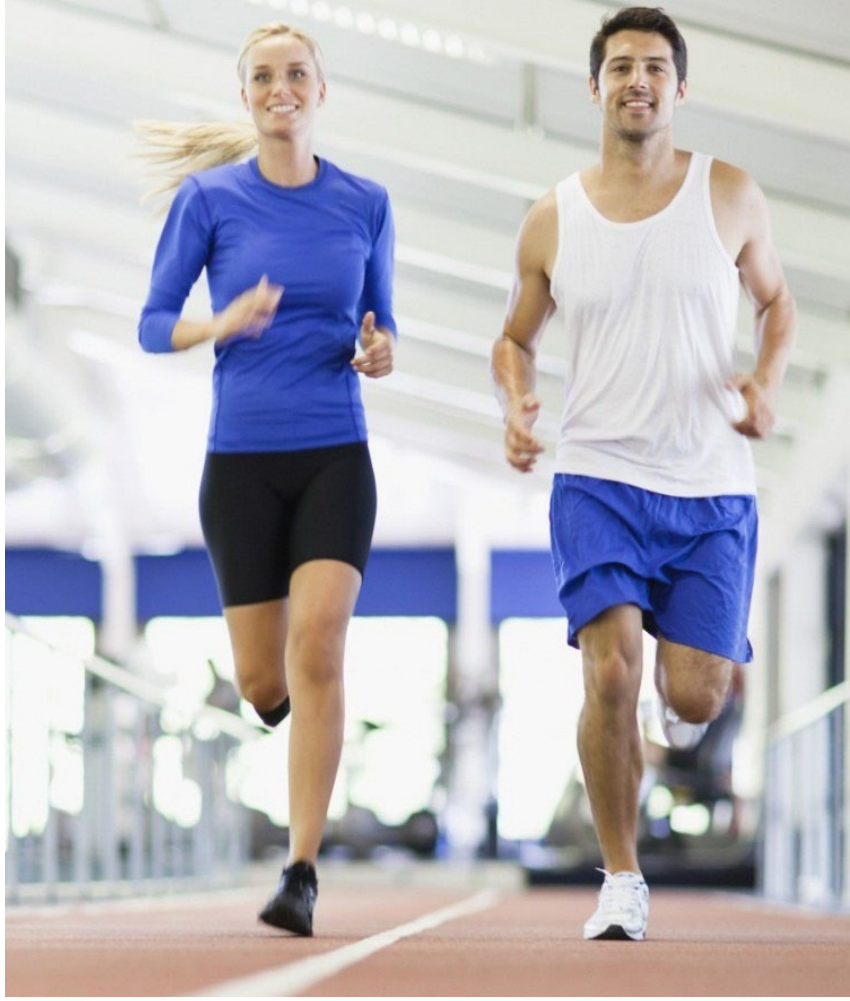


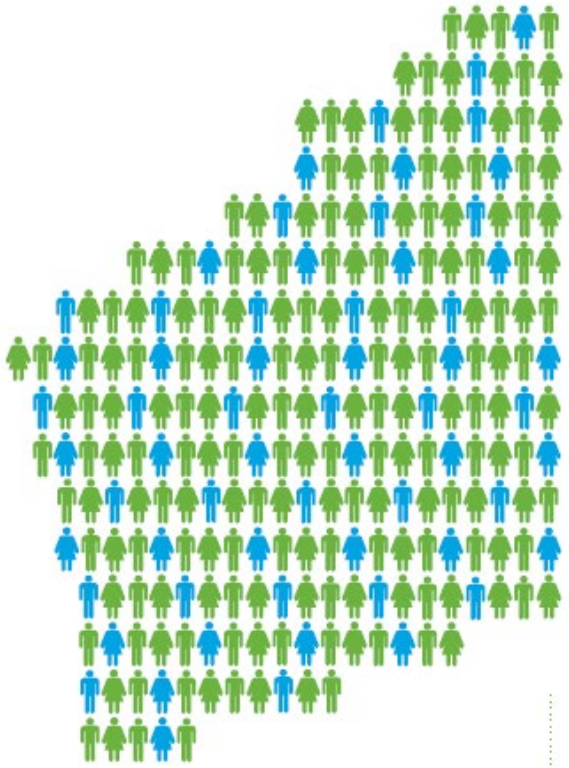
COMPLEXITIES OF ADOLESCENT OBESITY – NOT JUST A BMI Z-SCORE

WA RURAL PHYSICIANS WORKSHOP 2025 - 18TH OCTOBER 2025

DR CARSTEN BROEZE
GENERAL PAEDIATRICIAN - WACHSSW

ADOLESCENT OBESITY – WHY IS IT IMPORTANT?

- Increasing population of children and adolescents in a society used to an aging population
- Increasing complexity within the adolescent population
- Significantly increasing obesity rates with associated complex comorbidities
- Many serious diseases and morbidities/mortalities have their roots in adolescence
- Many lifestyle choices start in adolescence
- Early intervention for prevention
- Often stuck in grey zone between paediatric and adult services
- Multiple barriers to accessing healthcare and management
- No one simple solution

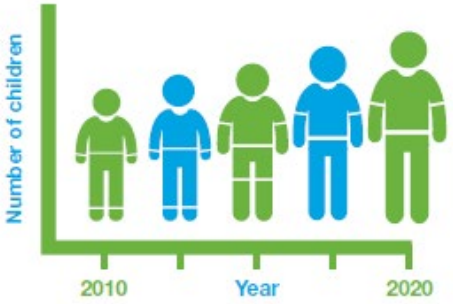


Approximately

610,000

children and young people live in WA and make up **23 per cent** of the state's population

19%
increase



In the last 10 years there has been a **19 per cent** increase in the number of children aged 6 to 11 years living in WA

Poverty line

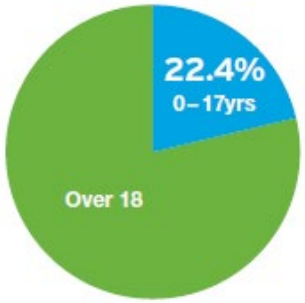
Up to

17%

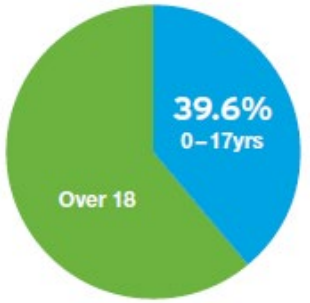
of children and young people are living below the poverty line in WA

Aboriginal children and young people

There are about **40,000** Aboriginal children and young people aged under 18 years living in WA. Children and young people aged under 18 years make up **39.6 per cent** of the total WA Aboriginal population



WA non-Aboriginal population



WA Aboriginal population

33,754

births were registered in WA during 2019

Around

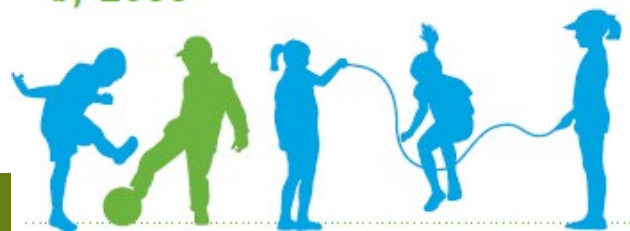
152,000

or **25 per cent**, of children and young people in WA live in regional and remote areas

The number of WA children and young people is projected to increase by **63 per cent**, to over

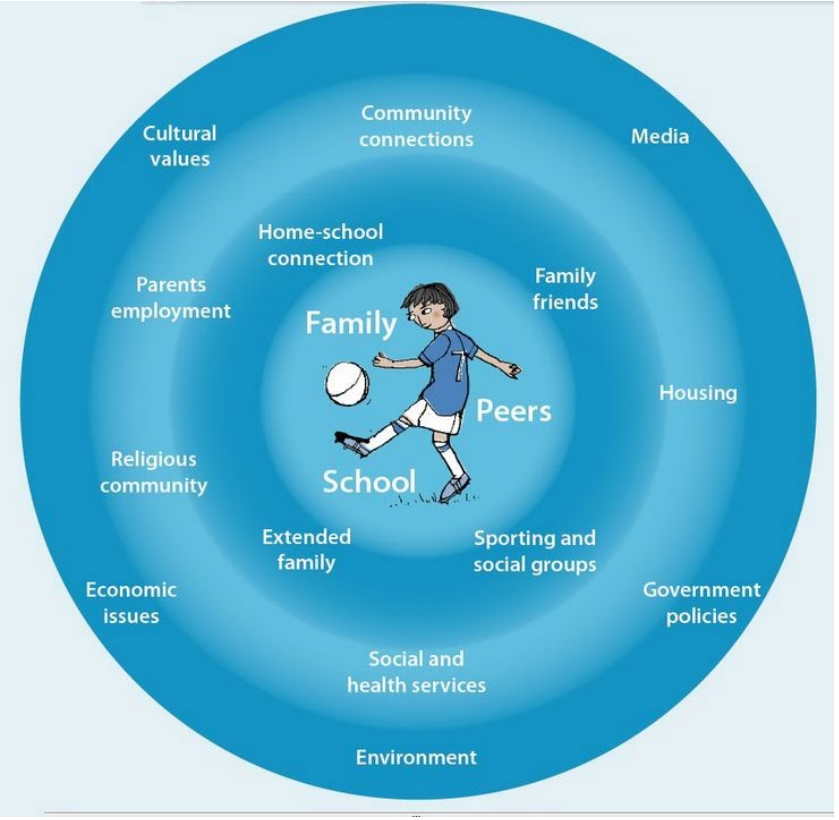
1 million

by 2066



63%
increase

BEING AN ADOLESCENT – IT'S SIMPLE RIGHT ???



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WHAT IS HAPPENING TO AN ADOLESCENT?

- Physiological/anatomical change (PUBERTY)
- Psychological Development

Early Teens (10-14):

- Reduced concrete thinking, Appearance: “Am I normal?”, Invincible, no tomorrow (YOLO)

Middle Teens (15-17):

- Increased risk-taking, Limit testing, “Who am I?”, Experiment with ideas

Late Teens (18-21):

- Formal operational thinking, Future, planning, partner, separation

- Establishment of patterns of behaviour
- Seeking a sense of safety
- PLUS ……

WHAT IS HAPPENING TO ADOLESCENTS?

SOME FUN FACTS (SPEAKING OUT SURVEY WA 2021)

- 40% of female and 30% of male students reported getting help for mental health worries in the last 12 months
- One-quarter (24.7%) of Year 7 to 12 students reported they wanted or needed to see someone for their health in the last 12 months but were not able to
  - The most commonly cited reasons for this were ‘feeling embarrassed or ashamed’ (64.4%) and ‘unsure who to see or where to go’ (38.2%)
- >1/3 (36.8%) of sexually active female Australian students have had unwanted sex
- 17% of female and 8% of male high school students say they can’t talk to their parents about their problems
  - **1-in-3 female high school students don’t have an adult they would feel okay talking to about serious problems**
  - 3% of students feel safe at home only “a little bit of the time” or “never”
  - Less than one-third of students reported feeling safe in their local area all the time
  - **1-in-2 male and 1-in-3 female Year 9 to 12 students reported they had been hit or physically harmed on purpose. Female students are most likely to be physically harmed at home while male students are most likely to be physically harmed at school and other public places.**
- 45% of high school students are regularly in contact online with people they have not met face-to-face and 21% are daily

PROTECTING ADOLESCENT HEALTH NEEDS YOU!

- Families who protect and nurture
- Healthcare responsive to adolescents' needs
- Schools that promote healthy development
- Clean air, adequate water, sanitation and hygiene
- A transport system that is safe
- Laws to protect the rights of adolescents

World Health Organization

https://www.who.int/maternal_child_adolescent/topics/adolescence/graphics/en/

NOW THAT WE'VE COVERED THAT…….

- Let's get to obesity

OBESITY

- Increased prevalence of obesity with increased prevalence of the comorbidities associated with obesity

AAP/CDC classification

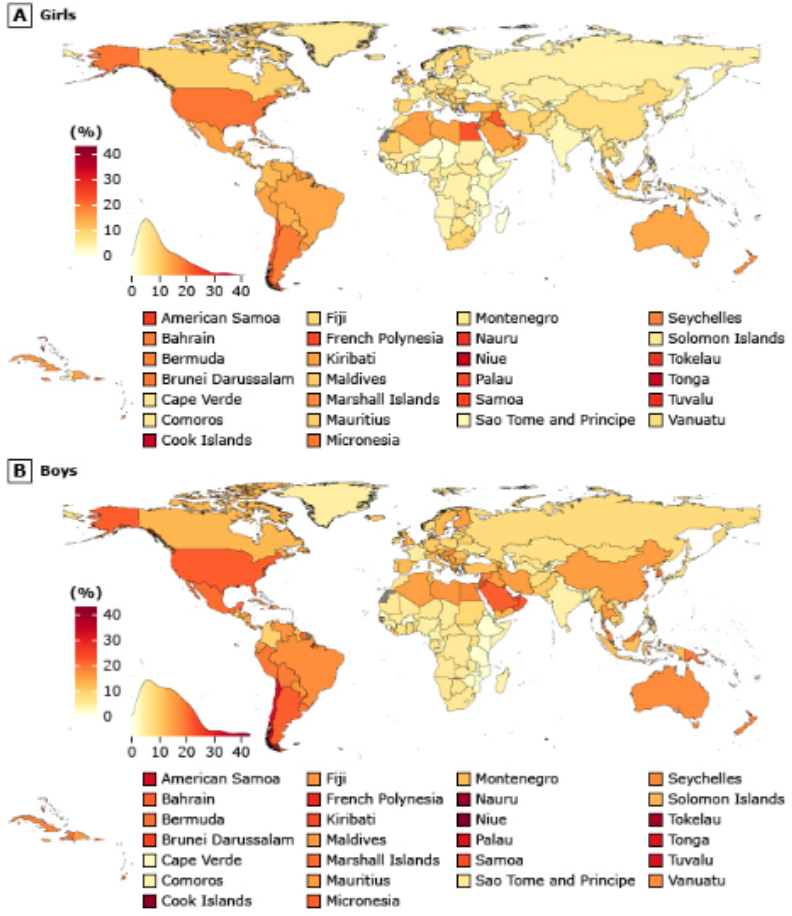
- Overweight = BMI 85th to <95th % (BMI 25 to <30)
- Obesity
  - Class I: BMI >/= 95th to <120% of 95th % (or BMI >/= 30 to <35 if lower)
  - Class II: BMI >/= 120% to 140% of 95th % (or BMI >/= 35 to <40 if lower)
  - Class III: BMI >/= 140% of 95th % (or BMI >/= 40 if lower)

  (120% of 95th centile = approx. 98th percentile or BMI z-score >/= 2)

  PCH Healthy Weight Service use BMI z-score and % of 95th centile

  - www.pch.health.wa.gov.au/Our-services/Endocrinology-and-Diabetes/Healthy-Weight-Service/For-health-professionals
  - Eligibility criteria has drastically tightened due to drastic increase in referrals

AGE-STANDARDIZED PREVALENCE OF OBESITY IN 2022 FOR SCHOOL-AGED CHILDREN AND ADOLESCENTS (AGE 5 TO 19 YEARS)



ADOLESCENT OBESITY - ADDITIONAL THINGS TO CONSIDER

- Prediabetes (fasting glucose 5.6 – 6.9; 120-minute OGTT glucose 7.8 - 11; HbA1c 5.7 – 6.4)
- Metabolic dysfunction-Associated Steatotic Liver Disease (MASLD)
  - LFT derangement: ALT >1.5 x upper laboratory limit
- Slipped Upper Femoral Epiphysis (SUFE)
- Intracranial Hypertension
- OSA
- Hypertension (>/= 95th percentile > 2 occasions)
- Underlying obesity syndrome (eg: Prader-Willi)
- Dyslipidaemia (eg: LDL >/= 3, +/- TG >/= 2.5)
- Any additional pharmacotherapy increasing risk of insulin resistance (eg: anti-psychotics)
- Musculoskeletal pains and reduced mobility
- Skin changes
- Reduced cardiovascular endurance
- Psychosocial stressors and mental health complications
- Effects on school

ASSESSMENT AND MANAGEMENT – HOLISTIC APPROACH

- Build a rapport
- Encourage separate consult away from parents (ensure confidentiality)
- Systemic Screen
  - Timeline of obesity
  - HEADSSS screen
  - Pubertal status
  - Menstrual history (? PCOS features)
  - Medical history, medications
  - Sleep hygiene / sleep health
  - Dietary routines / disordered eating / secondary eating disorder cognitions
  - Lifestyle – diet, activity, screentime/social media
  - Psychosocial stressors / barriers to change
  - Their priority and motivation / understanding and insight
  - What have they tried? What worked? What didn't?
  - Schooling – mainstream, alternative/distance ed/vocational stream, plans for the future
  - Focus and attention - ? Additional neurodevelopmental issues (ADHD, ASD)
  - Services and supports

ADOLESCENT OBESITY – SCREENING TESTS (HWS) AND ASSESSMENTS

- BMI z-score – at baseline and on repeated assessment to give a trend and indication of improvement
- BP
- Nutritional blood screen
- Fasting metabolic screen – can repeat 6-12 monthly
- Consider baseline hormonal screen
- OGTT if HbA1c 5.7% - 6.4% in children >/= 10yrs
- Genetic screening
- Extra/targeted:
  - Sleep study referral
  - ENT referral
  - Renal USS / renal referral
  - HWS referral
  - Hip Xray / orthopedic referral
  - Physio/dietetic assessment

ADOLESCENT OBESITY – MANAGEMENT APPROACH

- Ensure regular, trusted GP
- Lifestyle changes
  - Regular dietary routines, nutritious/varied diet, proteinaceous breakfast
  - Activity – cardiovascular fitness, weight-based training (pick a fun activity they can stick to)
  - Especially if still growing, aim initial static weight (not rapid weight loss) and allow height to catch-up; if have reached peak height, aim for gradual and health weight loss
  - GP chronic disease management plan
  - Community-based physical activity options, group fitness
  - Online Better Health Program (up to 12yoa)
  - Dietician/nutritional support
  - Engage whole family – using supportive language (don't focus on weight or speak negatively about eating), family lifestyle changes
  - Optimisation of sleep health / screen time
- Mental health support – psychologist, mentor, sporting team/social group, youth worker

ADOLESCENT OBESITY – MANAGEMENT APPROACH (CONT'D)

- Resources:
  - Optimal Weight for Life (OWL) program at Just Kids Health clinic in southern Perth region for 2-18yo (www.justkidshealth.com.au)
  - Online Better Health program (https://betterhealthprogram.org)
  - Health and Wellbeing QLD (https://hw.qld.gov.au)
  - Sleep Health Foundation
  - Raising Children Network (https://raisingchildren.net.au)
    - "Overweight and obesity management: pre-teens and teenagers"
    - "How to help your child with body image issues: 9-18 years"
    - "Teenage screen time and digital technology use: tips for balance"
    - "Sleep and teenagers: 12-18 years"
- Medication considerations:
  - Generally guided by endocrinology – Metformin, GLP-1 receptor agonists
  - SSRI
  - Stimulant
  - BP management

ANOTHER THING YOU CAN DO

- Consider increasing your own abilities – eg: Rethink Obesity Education offered by Novo Nordisk
  - Motivational interviewing
  - Keys to successful conversations
  - Behavioural Therapy – how to effectively implement it in your existing appointments
  - Gaining a better understanding of treatment guidelines