

A BETTER  
START

E Tīpue Rea

# NZ four-year-olds buck obesity trend

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# Acknowledgement and disclaimer

Access to the data presented was managed by Statistics New Zealand under strict micro-data access protocols and in accordance with the security and confidentiality provisions of the Statistic Act 1975. Our findings are not Official Statistics. The opinions, findings, recommendations, and conclusions expressed are those of the researchers, not Statistics NZ

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# Turned 4?

Your child's FREE B4 School Check  
is due as soon as they turn 4



- The B4 School Check data is a nationwide programme offering free health and development check
- Established September 2008 (we use 2010/2011 to 2015/2016)
- Eligible children are those who are enrolled with a PHO on their 4th birthday (we restricted our data to those aged between 48-60 months)
- Coverage between 72-92% (increasing with time)

# Results

	2010/ 2011	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	Trend (RR)
Overweight	35.0 (34.8, 35.2)	34.3 (34.1, 34.5)	33.5 (33.3, 33.7)	33.3 (33.2, 33.4)	33.6 (33.5, 33.7)	32.8 (32.7, 33.0)	0.989 (0.988, 0.990)
Obesity	16.9 (16.7, 17.0)	16.1 (15.9, 16.2)	15.6 (15.4, 15.7)	15.3 (15.2, 15.4)	15.5 (15.4, 15.6)	14.9 (14.8, 14.9)	0.979 (0.977, 0.980)
Extreme obesity	3.5 (3.4, 3.5)	3.4 (3.4, 3.5)	3.2 (3.2, 3.3)	3.2 (3.2, 3.3)	3.0 (3.0, 3.1)	2.9 (2.9, 3.0)	0.966 (0.962, 0.970)

# Results

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	Overweight (RR)	Obesity (RR)	Extreme obesity (RR)
European	0.993 (0.991,0.994)	0.983 (0.981,0.985)	0.983 (0.981,0.985)
Māori	0.996 (0.994,0.998)	0.985 (0.982,0.988)	0.985 (0.982,0.988)
Pacific	0.991 (0.989,0.993)	0.980 (0.977,0.983)	0.980 (0.977,0.983)
Asian	0.977 (0.973,0.981)	0.938 (0.932,0.944)	0.938 (0.932,0.944)

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# Results

	Overweight (RR)	Obese (RR)	Extreme Obesity (RR)
Samoa	0.996 (0.993,0.999)	0.990 (0.986,0.994)	0.969 (0.96,0.978)
Tongan	0.985 (0.982,0.989)	0.966 (0.96,0.971)	0.927 (0.917, 0.938)
Cook Island Māori	0.985 (0.981,0.990)	0.982 (0.975,0.988)	0.963 (0.948,0.978)
Indian	0.991 (0.983,0.999)	0.961 (0.951,0.972)	0.948 (0.928,0.968)
Chinese	0.984 (0.976,0.991)	0.912 (0.901,0.923)	0.919 (0.892,0.948)

# Results

	Overweight (RR)	Obese (RR)	Extreme Obesity (RR)
Quintile 1 (least deprived)	0.988 (0.985,0.991)	0.976 (0.97,0.981)	0.956 (0.942,0.970)
Quintile 2	0.986 (0.983,0.988)	0.969 (0.964,0.974)	0.968 (0.956,0.981)
Quintile 3	0.986 (0.983,0.988)	0.976 (0.971,0.980)	0.975 (0.965,0.986)
Quintile 4	0.991 (0.989,0.994)	0.985 (0.981,0.989)	0.960 (0.951,0.968)
Quintile 5 (most deprived)	0.995 (0.993,0.996)	0.984 (0.982,0.987)	0.973 (0.967,0.979)

# Results

- Are downward trends fully explained by changing composition of sample/population?
  - Linear time trends were adjusted for sex, ethnicity, deprivation and area. Overweight RR=0.992[0.990-0.994]; Obesity RR=0.980[0.977-0.983]; extreme obesity RR=0.963[0.956-0.969])
- Attendance is not 100%. What if those who do not attend had higher obesity rates?
  - We conducted a sensitivity check considering what would happen to the overall trends if those who did not attend had a 50% higher obesity rate than those who did attend. As attendance rates were lower in the earlier years, this exaggerates the observed downward trend with obesity decreasing from 19.3% in 2010/2011 to 15.5% in 2015/2016.
  - We also considered what would happen with a 50% lower obesity rate among non-attendees. This resulted in stable prevalence estimates across time from 14.5% in 2010/2011 to 14.3% in 2015/2016.