



Weight status in children at 8 years: a prospective cohort study

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BACKGROUND

Prevalence of childhood obesity represents a major public health concern, given the tracking of body weight from childhood to adult age and its health sequelae

OBJECTIVES

To describe prevalence of overweight (OW) and obesity (OB) in children at 8 years and investigate the relationship with pre-pregnancy maternal weight and weight status at 4 years



METHODS

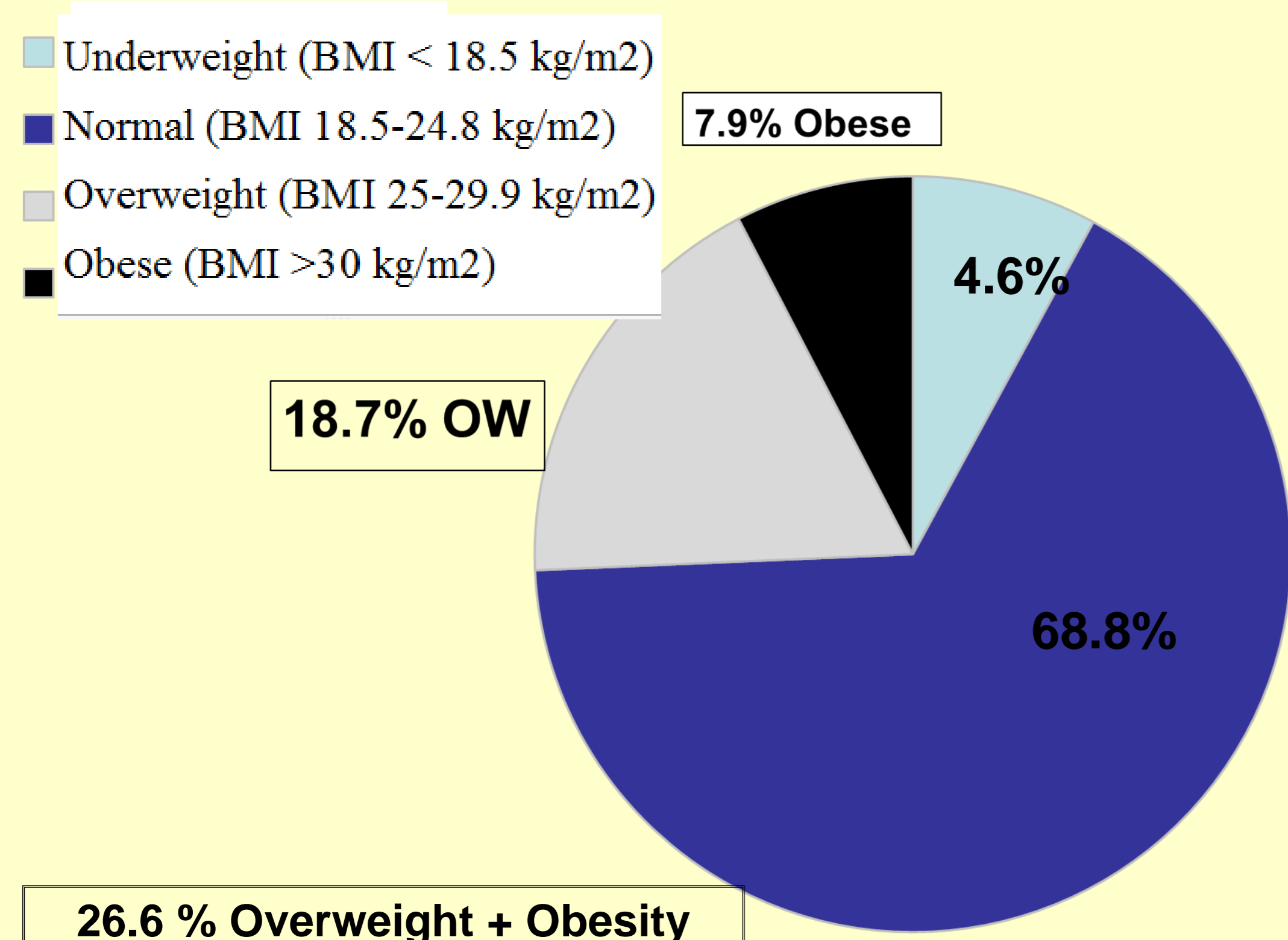
485 pregnant mothers recruited between 2004-2007 and 409 children from a population-based cohort study. Research protocol was approved by the Ethics Committee.

We analysed maternal BMI, BMI at 4 and 8 years and prevalence of OW/OB according to IOTF. At 8 years, we also measured waist circumference (enKid references) and body composition (by electrical bioimpedance)

RESULTS

319 children (169 boys) were studied, aged [mean(SD)] 8.26 (0.28) years. 20.2% children had OW or OB at 4 years. At 8 years, one out of three children had OW or OB.

Pre-pregnancy Maternal BMI



Ponderal status of children at 4 and 8 years

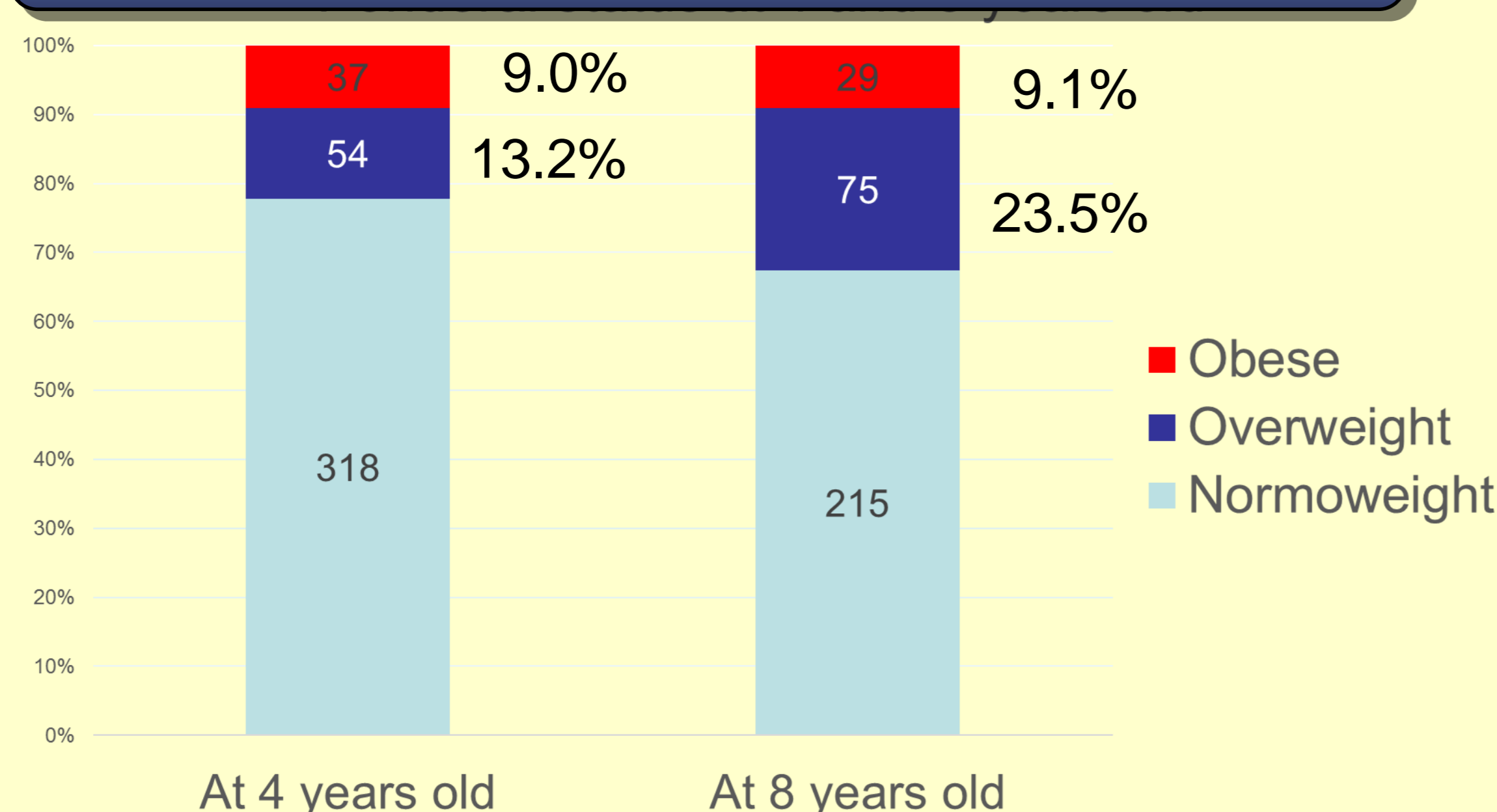


Table 1: Anthropometric characteristic at 8 years

		Boys	Girls	Total
BMI	Normal	N (%)	N (%)	N (%)
	Overweight	118 (69.8)	97 (64.7)	215 (67.4)
	Obesity	37 (21.9)	38 (25.3)	75 (23.5)
Waist circumference	<P90	14 (8.3)	15 (10.0)	29 (9.1)
	>=P90	134 (79.3)	96 (64.0)	230 (72.1)
Waist circumference / Height	Normal	35 (20.7)	54 (36.0)	89 (27.9)
	Overweight	44 (26.0)	28 (18.7)	72 (22.6)
	Obesity	77 (45.6)	58 (38.7)	135 (42.3)
% Body fat	<25%	48 (28.4)	64 (42.7)	112 (35.1)
	>=25%	105 (70.5)	90 (66.7)	195 (68.7)
		44 (29.5)	45 (33.3)	89 (31.3)

There is a positive relation between pre-pregnancy BMI and BMI at 4 and 8 years (p-trend <0.001)

CONCLUSIONS

High prevalence of overweight and obesity at 8 years was found, even more that at 4 years. There is a positive correlation between offspring's weight status and pre-pregnancy maternal weight. Childhood obesity prevention should be started from pregnancy and infancy.

