

## PHYSICAL CHARACTERISTICS OF ADULT AUSTRALIAN MALES

M.W. FISHER and R.S.D. READ

A description of the physical characteristics of a community is important to health interests. Many physical characteristics are indicative of contemporary society's reduced activity demand and reflect a predisposition to a variety of lifestyle-related health problems. Intervention considerations use information such as this in the formulation of 'corrective' approaches.

Data are presented on the physiques of 187 adult males aged 20-49 years, randomly chosen from the Geelong (Victoria) region during the winter of 1981. Physical characteristics measured were weight, height, triceps skinfold and mid-upper arm circumference. Body mass index (BMI) and % body fat were calculated.

Age (years)		Overall	20-24	25-29	30-34	35-39	40-44	45-59
Weight (kg)	Mean	81.9	77.1	81.0	85.6	85.4	80.0	82.9
	(SD)	(10.0)	(6.3)	(9.7)	(11.2)	(11.5)	(9.8)	(8.7)
Height (cm)	Mean	179.9	180.4	179.5	181.5	180.2	179.3	178.4
	(SD)	(6.0)	(5.4)	(5.6)	(6.9)	(6.8)	(6.2)	(5.0)
Triceps skinfold (mm)	Mean	12.9	10.9	12.5	13.0	15.0	12.9	13.7
	(SD)	(3.6)	(2.8)	(4.1)	(3.4)	(3.1)	(3.8)	(3.4)
Mid-upper arm circumference (cm)	Mean	30.1	29.6	30.2	30.7	30.6	29.8	29.6
	(SD)	(1.4)	(0.8)	(1.6)	(1.8)	(1.4)	(0.9)	(1.4)
BMI	Mean	25.3	23.7	25.1	25.9	26.2	24.8	26.0
	(SD)	(2.5)	(1.9)	(2.5)	(2.4)	(2.5)	(2.5)	(2.5)
% Body fat (Durnin and Womersley 1974)	Mean	23.6	17.4	20.2	23.2	26.6	26.3	28.8
	(SD)	(5.2)	(2.8)	(3.5)	(3.2)	(2.5)	(4.3)	(3.5)
% Body fat (Jackson and Pollock 1978)	Mean	22.8	15.8	18.7	26.2	26.3	24.8	26.2
	(SD)	(6.1)	(2.9)	(5.1)	(4.4)	(5.2)	(4.6)	(3.9)

All characteristics except height ( $P > 0.05$ ) exhibited significant age group trends ( $P < 0.005$ ). Generally, this trend showed an increase with age from the 20-24 year age group to the 30-39 year age group, then levelled off. Similar observations have been seen in comparable overseas populations (Womersley and Durnin 1977). This was most evident for the calculated % body fat utilising either triceps skinfold (Durnin and Womersley 1974) or girth measurements (Jackson and Pollock 1978). These measures correlate highly with one another ( $r = 0.73$ ) but are limited, due to their population specificity.

Using BMI as a descriptive measure of adiposity (overweight  $> 25$ , obesity  $> 30$ ), 43% were overweight whilst 2% were obese. BMI correlated highly with triceps skinfold ( $r = 0.72$ ) and % body fat (0.56). Generally, there was an increase in the number of men overweight with increasing age although the frequency of obesity remained relatively constant.

The change in body weight is due to both an increase in body fat and also smaller changes in lean body mass (Brozek 1952), as it seems unlikely that the results are significantly altered by a birth cohort effect towards larger size.

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Department of Human Nutrition, Deakin University, Geelong, Victoria 3217