

6. Prevalence of selected risk factors

Estimates (synthetic predictions) of the population with selected health risk factors have been produced for a majority² of Statistical Local Areas (SLAs) in South Australia, using data collected in the 2004-05 ABS National Health Survey. A description of the process is in the box in Section 6.

Remote areas were not included in the sample for the National Health Survey, so estimates have not been made for the following remote SLAs: Anangu Pitjantjatjara, Ceduna, Coober Pedy, Le Hunte, Maralinga Tjarutja, Streaky Bay, Unincorporated Yorke, Unincorporated Mallee, Unincorporated Lincoln, Unincorporated West Coast and Unincorporated Far North.

² The NHS sample includes the majority of people living in private households, but excludes the most remote areas of Australia. Thus, it has not been possible to produce estimates for SLAs with relatively high proportions of their population in these remote areas.

Current smokers

Tobacco is the largest preventable cause of death and disease in Australia. Smoking is a key risk factor for the three diseases that cause most deaths in Australia: ischaemic heart disease, lung cancer and cerebrovascular disease. Smokers are also at increased risk of developing chronic obstructive pulmonary disease and reduced lung function (22). Men's death rates from smoking-related lung cancers still far exceed those of women because men began smoking in large numbers prior to women, and have always had a higher prevalence of smoking. Moreover, men tend to smoke more heavily than women, to choose cigarettes with a higher tar content, and to report longer duration of smoking than women, probably reflecting an earlier age of uptake (23).

Aboriginal and Torres Strait Islander people are more than twice as likely as non-Indigenous Australians to smoke cigarettes on a daily basis. In 2004, 52.9% of the adult Aboriginal population in South Australia were current daily smokers, with the figure in urban areas much higher at 53.7%. By comparison, 17% of the non-Indigenous population were smokers (35).

The estimates below were based on information reported to interviewers by respondents to the 2004-05 ABS National Health Survey. 'Current smoker' includes those who reported smoking daily, weekly or less than weekly.

Men in all age groups had higher rates of smoking, with the exception of the 65 to 74 year age group (Figure 6.1). Rates for both men and women were highest in the younger age groups, with those for men highest in the 35 to 44 year age group, and for women, highest in the 25 to 34 year age group. Rates decreased sharply at older ages.

There were clear, and strong, socioeconomic patterns for both men and women, with the estimated number of smokers increasing with increasing disadvantage (Figure 6.2). Rates in the lowest SES group were 73% higher than those in the highest SES group for males, and 68% higher for females. Male rates were higher than those for females in each SES group.

Male rates were higher than those for females in all remoteness classes, and, in particular, in the Very Remote areas (Figure 6.3). There was a substantial differential in rates of smoking for men, with the rate in the Very Remote areas being 80% higher than in Major Cities: the differential for females was less pronounced, but still markedly higher, at 23%.

Prevalence of current smokers aged 18 years and over, South Australia, 2004-05

Figure 6.1: By age and sex

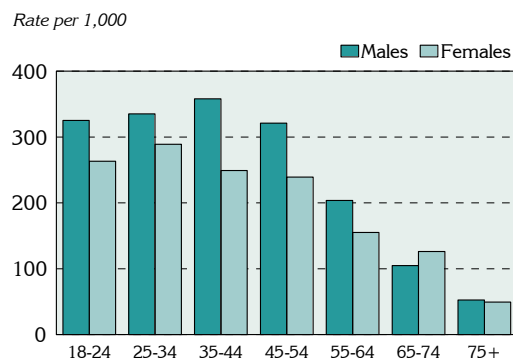


Figure 6.2: By socioeconomic status and sex

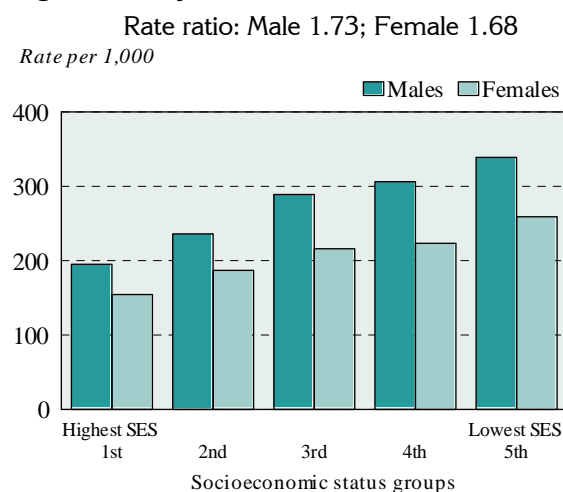
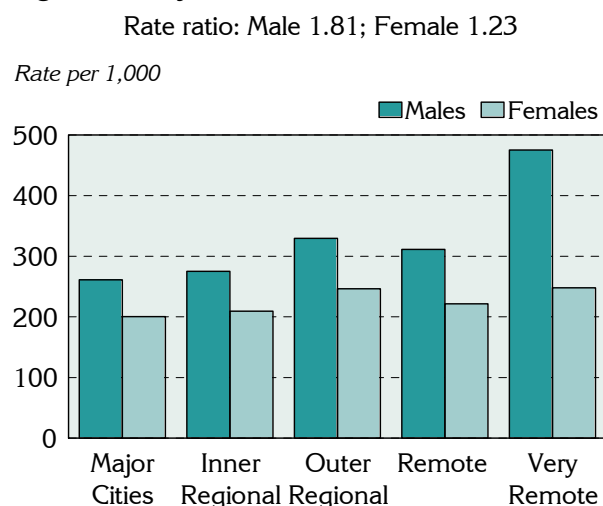


Figure 6.3: By remoteness and sex



Estimated number of male current smokers (18 years and over), 2004/05

Compared with the State rate, there were fewer male current smokers aged 18 years and over in the Central Northern (a standardised ratio (SR) of 97, 79,472 men) and Southern Adelaide (an SR of 91, 30,670 men) Health Regions. At the sub-region/district level, there were elevated ratios in Outer Southern District and the Western and Northern sub-regions.

All Health Regions in country SA had more male smokers than expected, with substantially more in Riverland, Northern & Far Western and Mid North.

Table 6.1: Estimated current smokers, males aged 18 years and over, by Health Region, South Australia, 2004/05

Health Region	Number	Rate ¹	SR ²
Central Northern Adelaide	79,472	265.2	97**
Northern sub-region	16,593	99.6	105**
Western sub-region	10,383	100.6	106**
Central East sub-region	8,921	80.7	85**
Southern Adelaide	30670	248.5	91**
Urban Beaches District	6,077	91.5	96**
Hills District	2,905	75.8	80**
Outer Southern District	5,887	103.4	109**
Metropolitan Adelaide (excl. Gawler)	11,0142	260.3	96**
Hills Mallee Southern	12,187	280.2	103**
South East	7,423	304.2	112**
Wakefield	10,784	288.2	106**
Mid North	3,826	345.3	127**
Riverland	4,340	349.6	128**
Eyre	3,109	307.4	113**
Northern & Far Western	5,904	346.2	127**
Country South Australia (incl. Gawler)	47,573	305.0	112**

¹ Rate is the number of male current smokers (18 years and over) per 1,000 population

² SR = Standardised Ratio, percentage of variation in the region from the ratio of 100 in South Australia

Metropolitan Adelaide

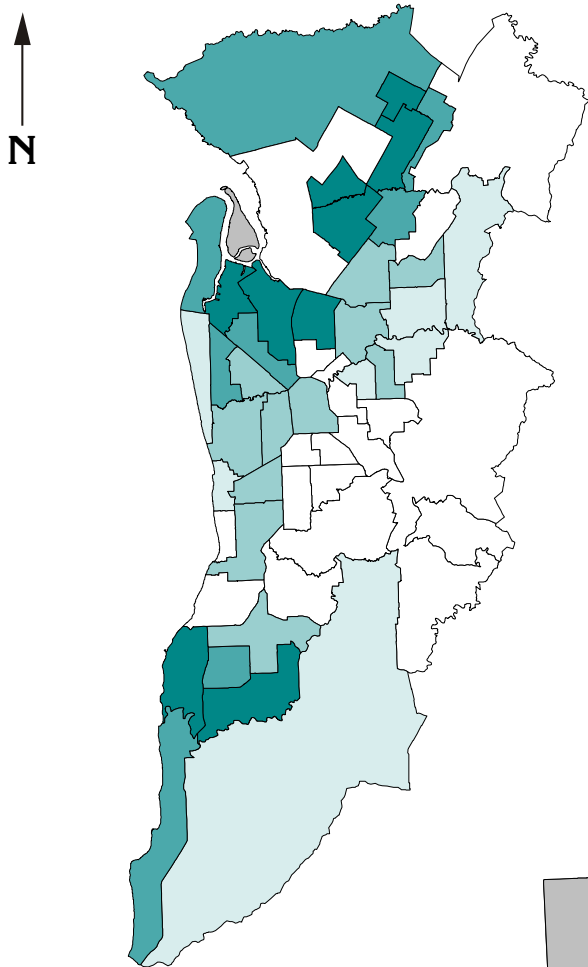
There were estimated to be more male smokers than expected in the SLAs of Playford - West Central (an SR of 137**, 1,738 males) and - Elizabeth (136**, 3,315); Onkaparinga - North Coast (127**, 2,289) and - Hackham (124**, 1,775); Port Adelaide Enfield - Port (125**, 1,471) and - Inner (120**, 2,465); and Salisbury - Central (125**, 3,580) and - Inner North (125**, 3,279) (Map 6.1).

SLAs with lower than expected ratios were Mitcham - North-East, - West and - Hills; Burnside - North-East and - South-West; Walkerville; Adelaide Hills - Central and - Ranges; Unley - East and - West; Norwood Payneham St Peters - West; Onkaparinga - Reservoir; Tea Tree Gully - North; Marion - South; Holdfast Bay - South; Playford - Hills; Prospect; and Salisbury Balance.

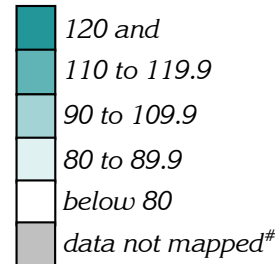
Country SA

In country SA, there were many areas with higher than expected ratios. These included Unincorporated Flinders Ranges (an SR of 207**, 311 men); Unincorporated Riverland (154*, 28); Unincorporated Pirie (151**, 60); Flinders Ranges (146**, 245); Peterborough (139**, 269); Unincorporated Whyalla (137, 38); Port Pirie Districts - City (135**, 1,794) and Balance (124**, 438); Berri & Barmera - Barmera (132**, 555) and - Berri (126**, 907); Renmark Paringa - Renmark (131**, 1,035) and - Paringa (130**, 255); Loxton Waikerie - West (130**, 619) and - East (123**, 941); Mid Murray (129**, 1,179); Karoonda East Murray (128**, 161); Whyalla (128**, 2,909); Elliston (125**, 165); Port Augusta (124**, 1,848); Murray Bridge (122**, 2,197); Copper Coast (121**, 1,280); Yorke Peninsula - South (121**, 480); Goyder (121**, 528); and Port Lincoln (120**, 1,712).

Map 6.1 and Map 6.2: Estimated number of male current smokers (18 years and over), Metropolitan Adelaide and country SA, 2004/05

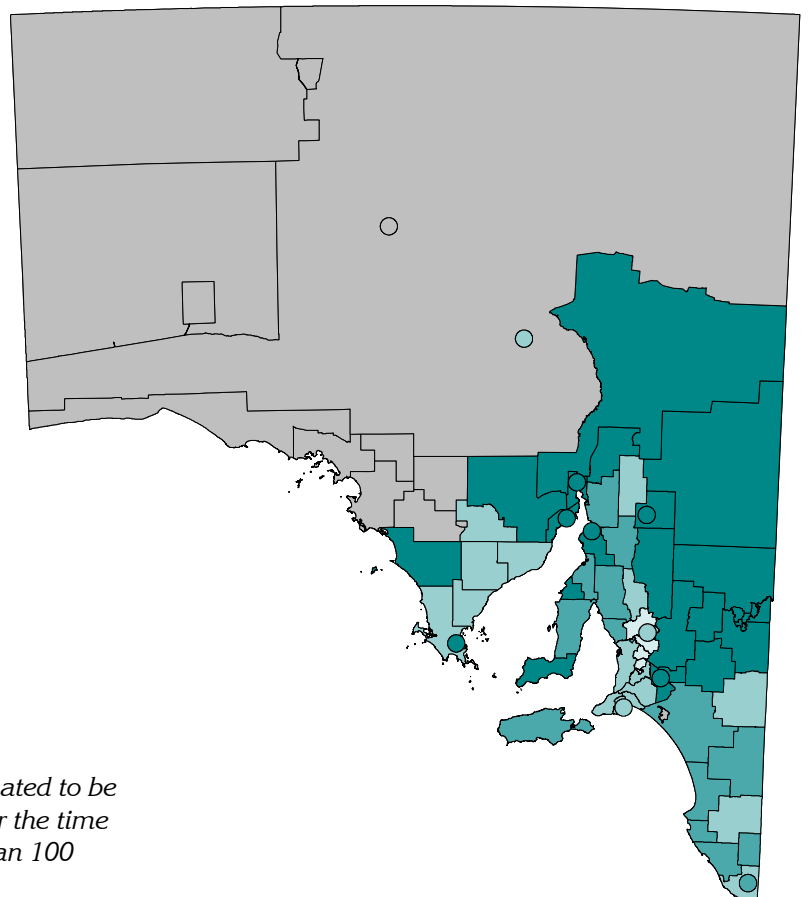


Standardised ratio (as an index)*, by SLA

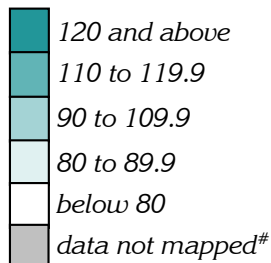


* Expected numbers were derived by indirect standardisation, based on totals for the metropolitan region

Data not mapped because there were between one to four admissions over the time period; or the SLA has a population of less than 100



Standardised ratio (as an index)*, by SLA



* Expected numbers were derived by indirect standardisation, based on SA totals

Data not mapped because there were estimated to be between one to four men in this category over the time period; or the SLA has a population of less than 100

Overweight (not obese)

Each increment in a person's body weight above their optimal level is associated with an increase in the risk of ill health. Energy imbalance needs only to be minor for weight gain to occur, and some people, due to genetic and biological factors, may be more likely to gain weight than others.

Overweight is associated with higher mortality and morbidity, and those who are already overweight have a higher risk of becoming obese. Research has shown that 49% of overweight men do not perceive themselves as overweight; and for rural men, being overweight may be seen as an advantage for protecting a family despite the unhealthy consequences (24, 25).

The estimates below were based on height and weight, as reported to interviewers by respondents to the 2004-05 ABS National Health Survey.

The estimated number of males who were overweight (but not obese) was higher than that for females in all age groups shown in Figure 6.4. The proportion of the population who were overweight steadily increased for both men and women until the 45 to 55 year age group. For men, proportions remained at this level through to the 65 to 74 year age group before decreasing substantially: for women, the level increased slightly in the 55 to 64 year age group, then dropped to consistent levels in the two oldest age groups.

For males, being overweight (not obese) showed a small decline across the SES groups, while for females, there was a small increase, albeit with lower rates in SES group (Figure 6.5). This was very different from the pattern for obesity (see Figure 6.8, below).

Rates for males were higher than those for females across all remoteness classes, most notably in the Very Remote areas (Figure 6.6). For both males and females, the rates in the Very Remote areas were higher than those in the Major Cities; the differential for males was 55%, and for females, 42%.

Prevalence of overweight (not obese) people aged 15 years and over, South Australia, 2004-05

Figure 6.4: By age and sex

Rate per 1,000

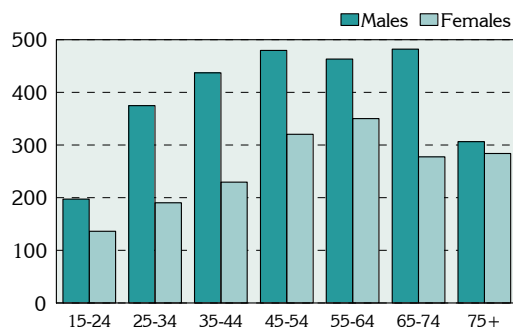


Figure 6.5: By socioeconomic status and sex

Rate ratio: Male 0.94; Female 1.08

Rate per 1,000

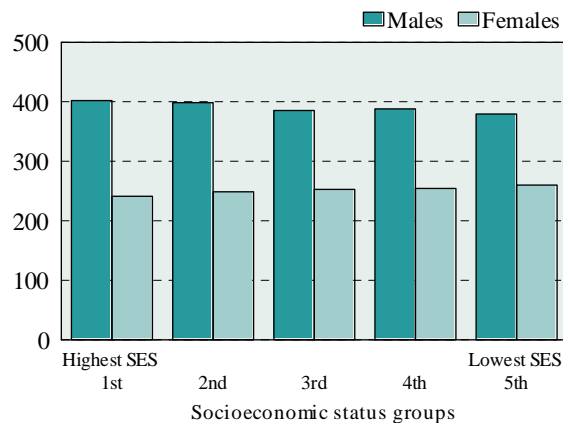
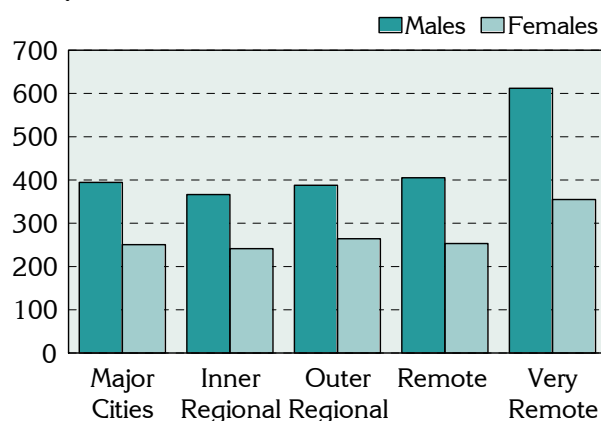


Figure 6.6: By remoteness and sex

Rate ratio: Male 1.55; Female 1.42

Rate per 1,000



Estimated number of overweight (not obese) males aged 15 years and over, 2004/05

Both Central Northern Adelaide (with a standardised ratio (SR) of 101**, 121,854 men) and Southern Adelaide (an SR of 101**, 51,434 men) Health Regions had close to the expected numbers of males aged 15 years and over assessed as being overweight (not obese). There was also little variation at the sub-region/district level.

In country SA, only Northern & Far Western Region was estimated to have a statistically significantly elevated number of overweight males.

Table 6.2: Estimated number of overweight (not obese) males aged 15 years and over by Health Region, South Australia, 2004/05

Health Region	Number	Rate ¹	SR ²
Central Northern Adelaide	121,854	393.9	101**
Northern sub-region	51,076	388.4	99
Western sub-region	33,754	392.5	100
Central East sub-region	37,024	403.0	103**
Southern Adelaide	51,434	395.8	101**
Urban Beaches District	21,626	395.5	101
Hills District	12,218	400.0	102**
Outer Southern District	17,590	393.3	101
Metropolitan Adelaide (excl. Gawler)	173,288	394.5	101**
Hills Mallee Southern	17,812	363.8	93**
South East	9,905	385.1	99
Wakefield	15,594	372.9	95**
Mid North	4,980	389.6	100
Riverland	5,414	399.3	102
Eyre	4,244	389.1	100
Northern & Far Western	7,375	419.5	107**
Country South Australia (incl. Gawler)	65,324	381.3	98**

¹ Rate is the number of overweight (not obese) males per 1,000 population

² SR = Standardised Ratio, percentage of variation in the region from the ratio of 100 in South Australia

Metropolitan Adelaide

The highest ratios of overweight (not obese) males were in the SLAs of Adelaide (an SR of 113**, 3,356 men); Tea Tree Gully - Hills (110**, 2,195), - Central (108**, 4,375) and South (105**, 5,451); Salisbury - North-East (108**, 3,608); and Charles Sturt - Coastal (105**, 5,364) (Map 6.3).

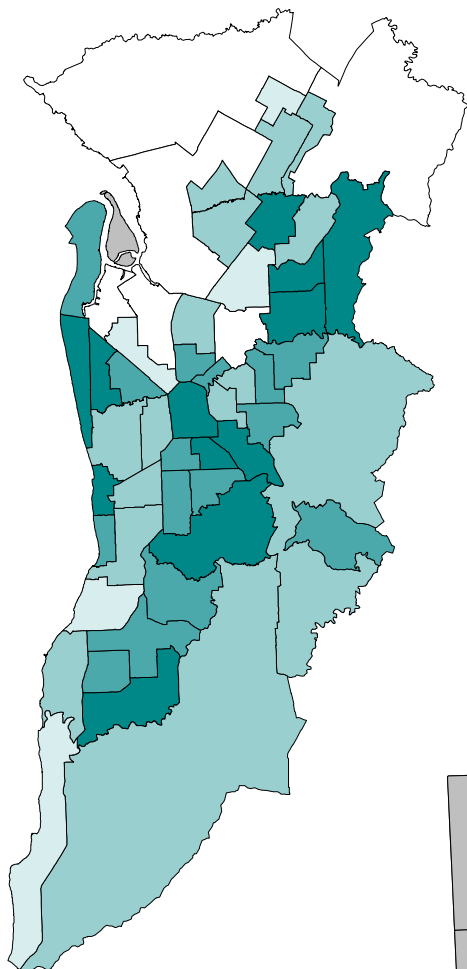
Lower than expected ratios were recorded for Salisbury Balance; Port Adelaide Enfield - Port, - Park and - East; and Playford - Hills and - West.

Country SA

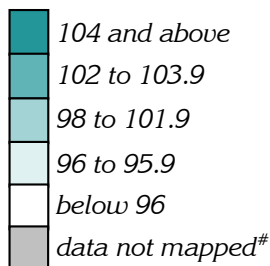
SLAs with the largest numbers of overweight males compared with the level expected were Unincorporated Flinders Ranges (an SR of 189**, 396 men) and Roxby Downs (140**, 910). Other elevated (although not statistically significant) ratios were recorded for Unincorporated Pirie (125, 70), Unincorporated Riverland (112, 28), Elliston (111, 223), Flinders Ranges (107, 315), Robe (106, 242) and Berri & Barmera - Berri (106, 1,147).

The lowest ratios in country SA were in Unincorporated Whyalla; Alexandrina - Coastal and - Strathalbyn; Mount Barker - Central; Light; Yankalilla; Victor Harbor; Kingston; Mallala; Barossa - Barossa; Peterborough; Murray Bridge; Copper Coast; and Yorke Peninsula - South.

Map 6.3 and Map 6.4: Estimated number of overweight (not obese) males aged 15 years and over, Metropolitan Adelaide and country SA, 2004/05

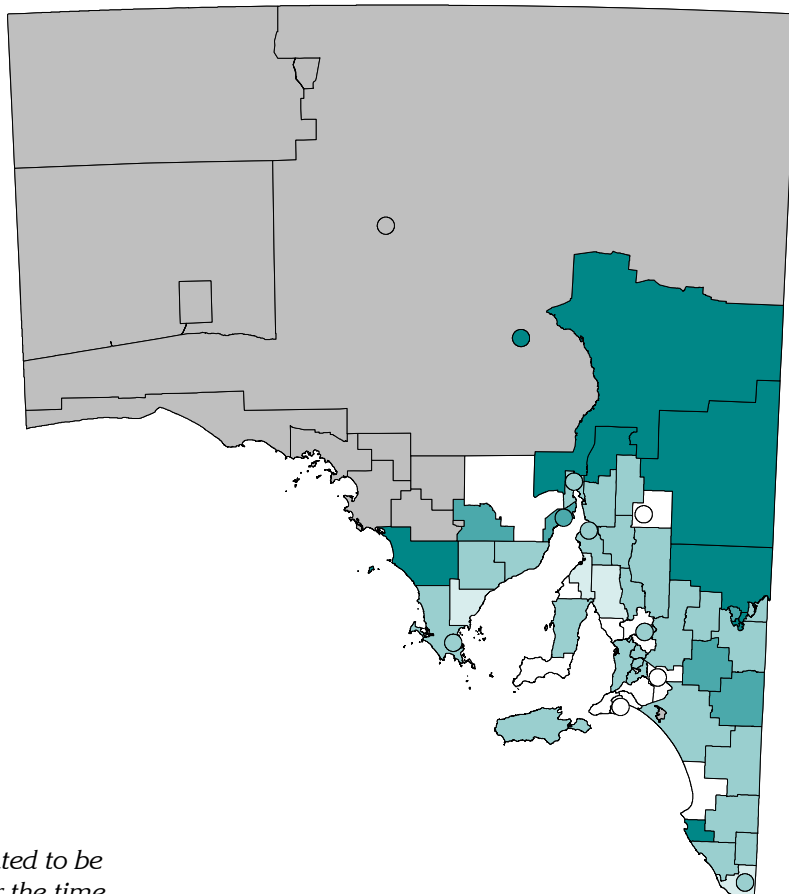


Standardised ratio (as an index)*, by SLA

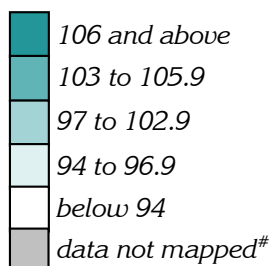


* Expected numbers were derived by indirect standardisation, based on totals for the metropolitan region

[#] Data not mapped because there were between one to four admissions over the time period; or the SLA has a population of less than 100



Standardised ratio (as an index)*, by SLA



* Expected numbers were derived by indirect standardisation, based on SA totals

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Obesity

Obesity is a significant contributing factor in the development of many diseases, which can in itself lead to high blood pressure and elevated blood cholesterol. Excess body fat also increases the risk of developing a range of health problems including type 2 diabetes, cardiovascular disease, high blood pressure, certain cancers, sleep apnoea, osteoarthritis, psychological disorders and social problems. For men, the prevalence of obesity is increasing, with the proportion of men who were classified as obese more than doubling, from 9% in 1989-90 to 19% in 2004-05 (26).

These estimates were based on height and weight, as reported to interviewers by respondents to the 2004-05 ABS National Health Survey.

Male rates of obesity were higher than those for females in all age groups up to 55 to 64 years (Figure 6.7). For men, rates increased rapidly after 15 to 24 years, and were highest in the 35 to 44 year age group. Female rates also increased rapidly after 15 to 24 years, but remained below those for men until the 65 to 74 year age group.

Rates of obesity for both males and females increased with increasing disadvantage, with male rates in the lowest SES areas 49% higher than those in the highest SES (Figure 6.8). For females, the differential was greater, with the rate in the lowest SES areas almost twice that in the highest SES areas (a rate ratio of 1.93). Male rates were higher than those for females in all but the lowest SES group, where they were the same.

Obesity rates increased with remoteness, with a strong, continuous gradient (Figure 6.9). The gradient, and the differential between the most remote and Major Cities areas, was strongest for males, with rates in the Very Remote areas more than twice those in the Major Cities areas (rate ratio of 2.05). Male rates were higher than those for females across all remoteness classes, with the gap increasing as remoteness increased.

Prevalence of obese people aged 15 years and over, South Australia, 2004-05

Figure 6.7: By age and sex

Rate per 1,000

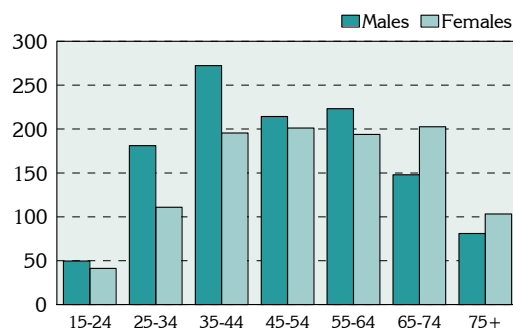


Figure 6.8: By socioeconomic status and sex

Rate ratio: Male 1.49; Female 1.93

Rate per 1,000

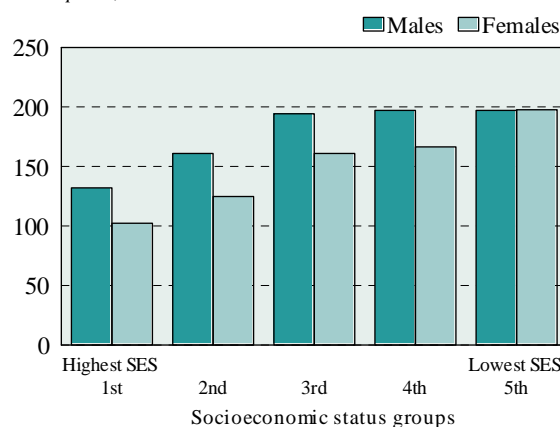
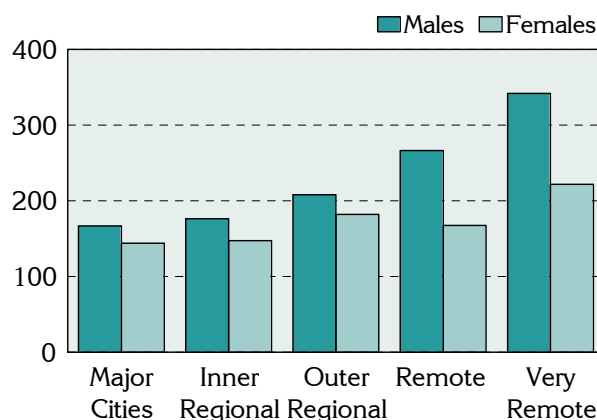


Figure 6.9: By remoteness and sex

Rate ratio: Male 2.05; Female 1.54

Rate per 1,000



Estimated number of obese males aged 15 years and over, 2004/05

Both the Central Northern Adelaide (with a standardised ratio (SR) of 95, 51,994 males) and Southern Adelaide (an SR of 92, 20,920 males) Health Regions had fewer than expected males aged 15 years and over assessed as being obese. However, both Central East sub-region and Hills District were estimated to have much lower ratios when compared with Metropolitan Adelaide as a whole; and Northern and Western sub-regions, and Outer Southern District had notably higher ratios.

In country SA, all health regions had more males than expected who were assessed as being obese, in particular, Eyre had just over 50% more (an SR of 152**, 2,936 men).

Table 6.3: Estimated number of obese males aged 15 years and over by Health Region, South Australia, 2004/05

Health Region	Number	Rate ¹	SR ²
Central Northern Adelaide	51,994	168.0	95**
Northern sub-region	24,044	180.9	103**
Western sub-region	15,519	181.8	103**
Central East sub-region	12,431	136.3	77**
Southern Adelaide	20,920	161.8	92**
Urban Beaches District	8,569	159.1	90**
Hills District	4,111	134.8	76**
Outer Southern District	8,240	183.4	104**
Metropolitan Adelaide (excl. Gawler)	72,914	166.2	94**
Hills Mallee Southern	8,962	183.3	104**
South East	5,175	198.9	113**
Wakefield	8,076	193.6	110**
Mid North	2,711	214.0	121**
Riverland	2,954	218.1	124**
Eyre	2,936	267.8	152**
Northern & Far Western	3,883	215.0	122**
Country South Australia (incl. Gawler)	34,697	201.9	115**

¹ Rate is the number of obese males 15 years and over per 1,000 population

² SR = Standardised Ratio, percentage of variation in the region from the ratio of 100 in South Australia

Metropolitan Adelaide

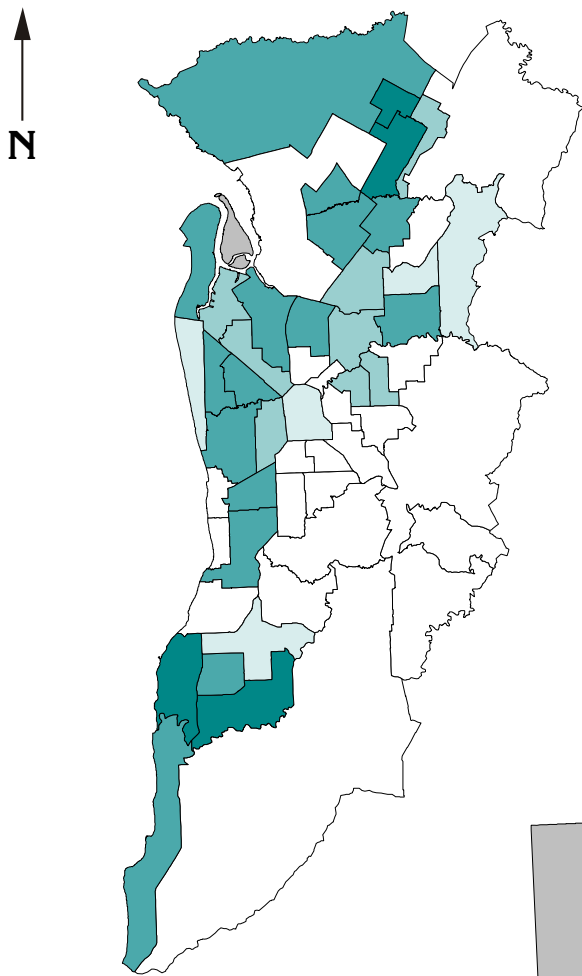
Higher than expected numbers of males aged 15 years and over living in the SLAs of Playford - West Central (an SR of 121**, 998 men) and - Elizabeth (121**, 1,968); and Onkaparinga - Hackham (119**, 1,101) and - North Coast (115**, 1,434) were assessed as being obese (Map 6.5).

The lowest ratios were recorded in Burnside - North-East and - South-West; Norwood Payneham St Peters - West; Mitcham - North-East, - Hills and - West; Unley - East and - West; Walkerville; Playford - Hills; Salisbury Balance; Adelaide Hills - Central and - Ranges; Prospect; Tea Tree Gully - North; Marion - South; Holdfast Bay - South and - North; Onkaparinga - Reservoir and - Hills; and Campbelltown - East.

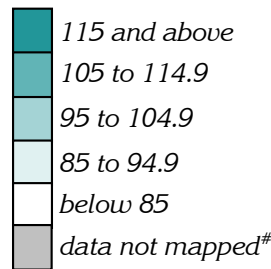
Country SA

The most highly elevated ratio was in Unincorporated Flinders Ranges (an SR of 226**, 228 men) with over two times the expected number of obese men (Map 6.6). Other SLAs with elevated ratios were Unincorporated Pirie (an SR of 176**, 49 men), Unincorporated Riverland (171*, 20); Franklin Harbour (156**, 158); Cleve (155**, 232); Southern Mallee (155**, 260); Yorke Peninsula - South (154**, 487) and - North (123**, 692); Port Lincoln (154**, 1,473); Tumby Bay (153**, 307); Kangaroo Island (150**, 514); Elliston (148**, 142); Kimba (148**, 126); Flinders Ranges (147**, 190); Roxby Downs (145**, 474); Lower Eyre Peninsula (145**, 498); Karoonda East Murray (130**, 121); Berri & Barmera - Barmera (120**, 385) and - Berri (122**, 603); Loxton Waikerie - West (125**, 426) and - East (121**, 663); Port Pirie Districts Balance (124**, 322) and - City (122**, 1,170); Renmark Paringa - Renmark (123**, 685) and - Paringa (122**, 172); Goyder (123**, 394); Peterborough (123**, 184); Mid Murray (121**, 837); Tatiara (121**, 636); Unincorporated Whyalla (121, 27); and The Coorong (120**, 527).

Map 6.5 and Map 6.6: Estimated number of obese males aged 15 years and over, Metropolitan Adelaide and country SA, 2004/05



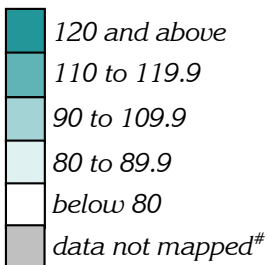
Standardised ratio (as an index)*, by SLA



* Expected numbers were derived by indirect standardisation, based on totals for the metropolitan region

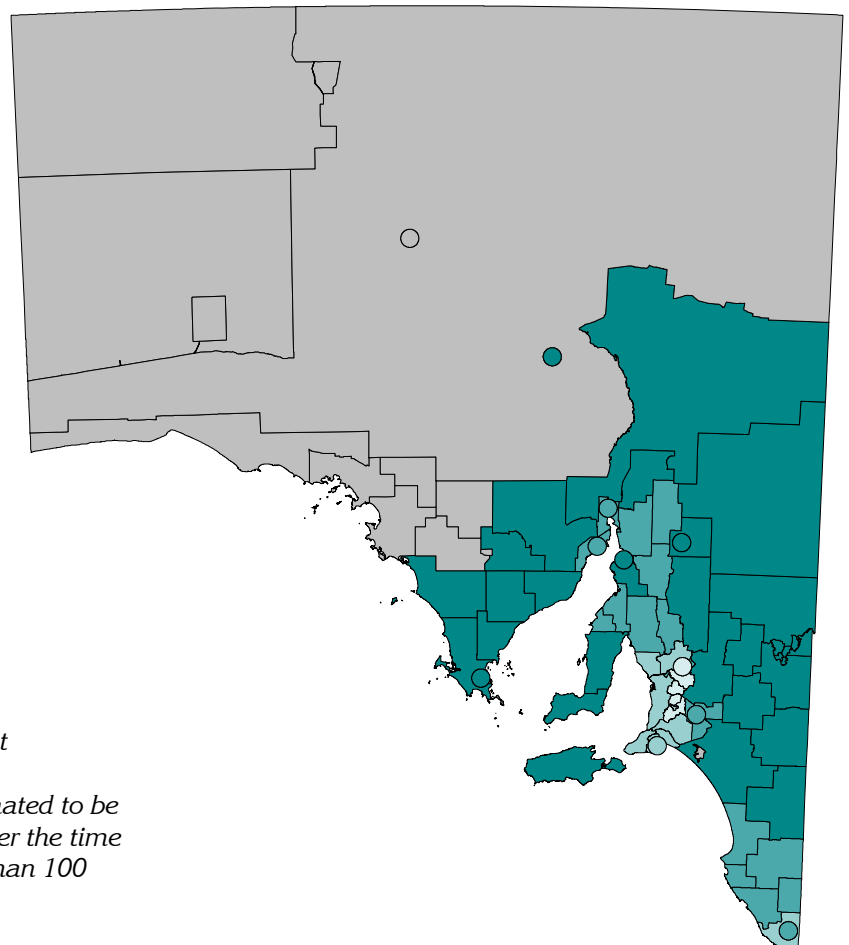
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Standardised ratio (as an index)*, by SLA



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