



Evidence brief: food, built environments and obesity

Unhealthy diets, overweight, and obesity are the leading risk factors for death, disease and disability in Western Australia (WA), after tobacco use.¹ Most WA adults (71 per cent) are overweight or obese and one in four WA children are overweight or obese.^{2,3} If current trends continue, hospitalisation costs linked to overweight and obesity in WA are set to rise by 80 per cent, to \$610 million by 2026.⁴

Overweight and obesity are closely linked to the environments in which people are born, live, work, learn, play, and age.⁵ Today's environment has been referred to as obesity-promoting or 'obesogenic' as it encourages people to consume more energy than their bodies need and to be less physically active,⁶ which are drivers of obesity and diet-related disease.^{7,8,9}

Our food environments are shaped by food production and supply, food composition, food prices and affordability, nutrition labelling, marketing and promotions, and access to healthy and unhealthy food retail outlets.¹⁰

Our current food environments promote excess energy intake from cheap, widely available and heavily promoted energy-dense, nutrient-poor and/or highly processed products that should be limited or avoided in a healthy diet.¹¹ There is also evidence of inequitable access to healthy food outlets both within and outside metropolitan areas.^{12,13}

This brief summarises evidence regarding the location, proximity and density of healthy and unhealthy food retail outlets, the impact this has on dietary intake, overweight and obesity, and policy options to address these issues.

WA policy context

The Sustainable Health Review (SHR) is a 10 year blueprint for the WA health system that emphasises the importance of prevention. Recognising that rising rates of overweight and obesity are placing undue burden on the health system, recommendation 2a of the SHR is to halt the rise in obesity and increase the number of adults who have a healthy weight.¹⁴ A priority for implementation under recommendation 2a is "Changes to planning laws to limit unhealthy food outlets and to support access to healthy food options including near schools".¹⁴ Supporting this, the Western Australian Health Promotion Strategic Framework 2022-2026 includes a strategic direction to "Work across government and key sectors to influence urban planning to ensure urban design and infrastructure promotes and supports healthy eating patterns in line with the Australian Dietary Guidelines, increases local access to healthy food and drink, and reduces children's exposure to unhealthy food outlets."



What does the evidence say?

The study of the impact of unhealthy and healthy food outlets on dietary intake and health is an evolving field and in recent years, there has been a significant body of evidence collected on the Perth metropolitan area (Perth). A summary of the evidence is provided on the following pages.

Perth neighbourhoods are dominated by unhealthy food outlets

- Food outlets considered by health professionals to be 'unhealthy' (such as convenience stores, café restaurants and takeaway/fast food outlets) were present in greater numbers than healthy food outlets (such as supermarkets/greengrocers) in both established and newly developed neighbourhoods from 2004 - 2011.¹²
- Between 2005 and 2010, cross-sectional data showed that within 3 km of the average Perth home, there were 28 fast food outlets and only 10 healthy food outlets.¹⁵
- Between 2005 and 2010, for every 1,000 people in Perth there were 1.4 fast food outlets compared to 0.5 healthy food outlets.¹⁵
- Between 2004 and 2011, the number of unhealthy food outlets increased more than the number of healthy food outlets in both established and newly developed Perth neighbourhoods.¹²

Areas of lower relative socioeconomic advantage have more unhealthy food outlets

- There were significantly fewer supermarket/greengrocers and a lower proportion of healthy food outlets in areas of low socioeconomic advantage compared to areas of high socioeconomic advantage, in newly developed neighbourhoods between 2004-11.¹²
- Between 2004 and 2011, established neighbourhoods had more unhealthy food outlets in closer proximity to the home in areas of lower socioeconomic advantage compared with higher socioeconomic areas.¹²
- The density of fast food outlets and the 'top 4' fast food chains was greater in areas with more relative socioeconomic disadvantage in 2018-19.¹⁶
- In 2018-2019, with each increasing level of relative socioeconomic advantage the number of fast food outlets decreased by 6 per cent and the number of 'top 4' fast food chains decreased by 10 per cent.¹⁸



More unhealthy food outlets are located closer to the home than healthy food outlets

- More unhealthy food outlets were located closer to home than healthy food outlets in both established and newly developed Perth neighbourhoods studied between 2004 and 2011.¹²
- Between 2005 and 2010, 41 per cent of children had at least one unhealthy food outlet within 800 m of their home.¹⁵

- Between 2005 and 2010, the average distance from a person's home to a fast food outlet was around 1.3 km, compared to 1.5 km to a healthy food outlet.¹⁵

It should be noted that people purchase and/or consume food and drink in a variety of outlets located around places they work, learn and recreate. Limited research has been undertaken to assess the impact of food outlets away from the place of residence.

Unhealthy food outlets are located close to schools

Studies during 2017-2019 show that:

- Perth schools had an average of 1.8 fast food outlets located within 400 m; 5.7 fast food outlets within 800 m; and 8.1 fast food outlets within 1 km.¹⁶
- 86 per cent of Perth schools had at least one fast food outlet located within 1 km.¹⁶
- 11 per cent of Perth schools had at least one of the 'top 4' fast food chains within 400 m; 32 per cent had one within 800 m; 41 per cent had one within 1 km.¹⁶
- Perth secondary schools were significantly more likely than primary schools and K-12 schools to have at least one fast food outlet within 1 km.¹⁶
- An increase in the number of 'top 4' fast food chain outlets within 400 m, 800 m and 1 km of a school was significantly associated with an increase in the frequency of secondary school students purchasing unhealthy (discretionary) foods from food outlets near their school.^{16,17}
- 45 per cent of secondary school students surveyed (n=2389) purchased discretionary foods from food outlets near their school once a week or more.¹⁷
- Schools located in lower socioeconomic areas had a significantly higher number of fast food outlets within 400 m and 'top 4' fast food chain outlets within 400 m and 1 km, than schools located in higher socioeconomic areas.¹⁶

Accessibility to food outlets has an impact on dietary intake and obesity

- Australian evidence is mixed in relation to the neighbourhood density and proximity of supermarkets and obesity however, several international and local studies suggest a lower likelihood of obesity is linked with the presence of supermarkets.^{19, 20, 21}
- The number of healthy food outlets within 800 m of home is consistently associated with a decreased risk of children being overweight or obese.¹⁵
- Locating healthy food outlets within 800 m of home²², school, and work increases healthy food intake.²³
- Living in an area with a greater proportion of healthy food outlets is associated with healthy food intake,⁶ healthier purchases, and the consumption of healthier items, particularly vegetables.¹⁹
- Relocating to an area with a greater percentage of healthy food outlets near the home is significantly associated with an increased intake of fruit and vegetables.²⁴
- Moving to a new residential development with a higher number of unhealthy food outlets (convenience stores and café restaurants) near the home is significantly associated with an increased intake of unhealthy food.²⁴
- Over time, diets become healthier as the percentage of healthy food outlets near the home increases.²⁵

- A 2018-19 study of fast food outlets in Perth found some evidence of relationships between fast food outlets and 'top 4' chain fast food outlet availability near homes, vegetable intake, and body mass index.¹⁶

Accessing healthy food is more difficult in rural and remote areas

- In rural and remote areas, transport challenges, inadequate supply, poor variety and low quality of fresh food, and high prices, means that fresh and healthy food is not always available in more remote food outlets, making it difficult for people to access a healthy diet.^{26, 27}

Improved public transport access and walkability to healthy food outlets promotes healthy eating

- Not having access to a car can be a barrier to accessing healthy food.²⁵
- Locating healthy food outlets close to where people live, and along public transport routes can reduce barriers to accessing healthy food.²⁰
- Improving public transport access and providing safe connected walking and cycling paths and networks allow people to more easily access healthy food outlets.²⁰



Good practice

The literature identifies a range of strategies for use across government that can increase access to healthy food and reduce access to unhealthy food. These strategies have been drawn from evidence and expert opinions. Some of the key strategies are listed below.

- Embed healthy food environments as a key objective and planning mechanism in planning policies and legislation.^{28 - 31}
- Change planning laws, zoning restrictions and land use policies and strategies to limit unhealthy food outlets and to support access to healthy food options, including near schools.^{14, 32, 33}
- Implement restrictions on opening hours of unhealthy food outlets near schools.³⁵
- Provide economic or other incentives for food outlets selling predominantly healthy foods, including near schools.³⁷
- Implement policies to ensure menus provide healthier options and/or that healthier options are the default option.³²
- Provide a variety of fresh and nutritious food outlets such as supermarkets and grocery stores within walking distance of where people live and near public transport, walking and cycling routes.^{38 - 41}
- Ensure healthy food outlet positioning is competitive and well balanced with other food outlets.³¹
- Co-locate healthy food outlets with other key destinations to facilitate multiple activities as part of one trip e.g. within activity centres and near schools.^{30, 31}

- Take policy action in remote communities and their community stores to improve availability of healthy foods and limit availability and sales of unhealthy foods³² e.g. transport subsidies, incentives for store owners.
- Provide economic or other incentives to support the development of supermarkets in food deserts.^{34, 35}
- Use zoning and/or land use policies to establish and encourage farmers markets and community-based gardens to improve local access to fresh produce.^{34, 42, 43}
- Facilitate healthy mobile food vendors and other innovative nutritious food retail and distribution initiatives, particularly in areas underserved with fresh food stores e.g. mobile vendors or farmers markets selling fresh fruit, vegetables or other produce.^{23, 44}

Conclusion

Evidence for a link between exposure to unhealthy food environments and poor diet is accumulating.^{9, 39, 45} Unhealthy food environments can adversely affect food consumption and be a driver of obesity and diet-related chronic diseases such as type 2 diabetes, cardiovascular disease, and some cancers. Improving community food environments is an equitable approach to support consumers to make healthier food and beverage choices and reduce their risk of obesity and chronic diseases.

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