

NEVADA KIDS COUNT

Food Deserts

What is a food desert?

The first official use of the term “food desert” appeared in a 1995 document from the United Kingdom’s Nutrition Task Force. Since then, the term has become popular among researchers, politicians, and activists (Cummins & Macintyre, 2002). The 2008 Farm Bill defined a food deserts as an “area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower income neighborhoods and communities” (USDA, 2009). In other words, food deserts are poor neighborhoods where residents cannot purchase healthy food.

Are food deserts a major problem?

About 2.3 million U.S. households, roughly 2.2 percent of households, do not have access to a vehicle and reside at least one mile from the nearest supermarket (USDA, 2009). Similarly, 11.5 million people (4.1 of the population) live in low-income areas that are more than a mile away from the closest supermarket. Another 3.4 million households (3.2 percent) live between 0.5 and 1.0 mile from the closest supermarket and do not have access to a vehicle (USDA, 2009). On average, individuals in low-income areas spend 19.5 minutes traveling to supermarkets, 4.5 minutes more than the national average (USDA, 2009). In short, millions of low-income Americans struggle to reach a grocery store.

Impact of Supermarkets

Supermarkets are not the only way to obtain healthy foods. Research, however, shows that living near a supermarket provides numerous benefits. Some of these benefits are mentioned below:



Weight

Individuals who live near a supermarket are less likely to be obese or overweight (Morland et al., 2006).



Prices

Caspi et al. (2017) note that prices of every staple food (except white bread) cost anywhere from 10-54% less in grocery stores than in corner stores or convenience stores.



Variety

Supermarkets offer a wider variety of fruits and vegetables than do convenience stores (Hendrickson et al., 2006).



Advertising

Ghost-Dastida et al. (2014) note that grocery stores market healthier foods than convenience stores.



Health

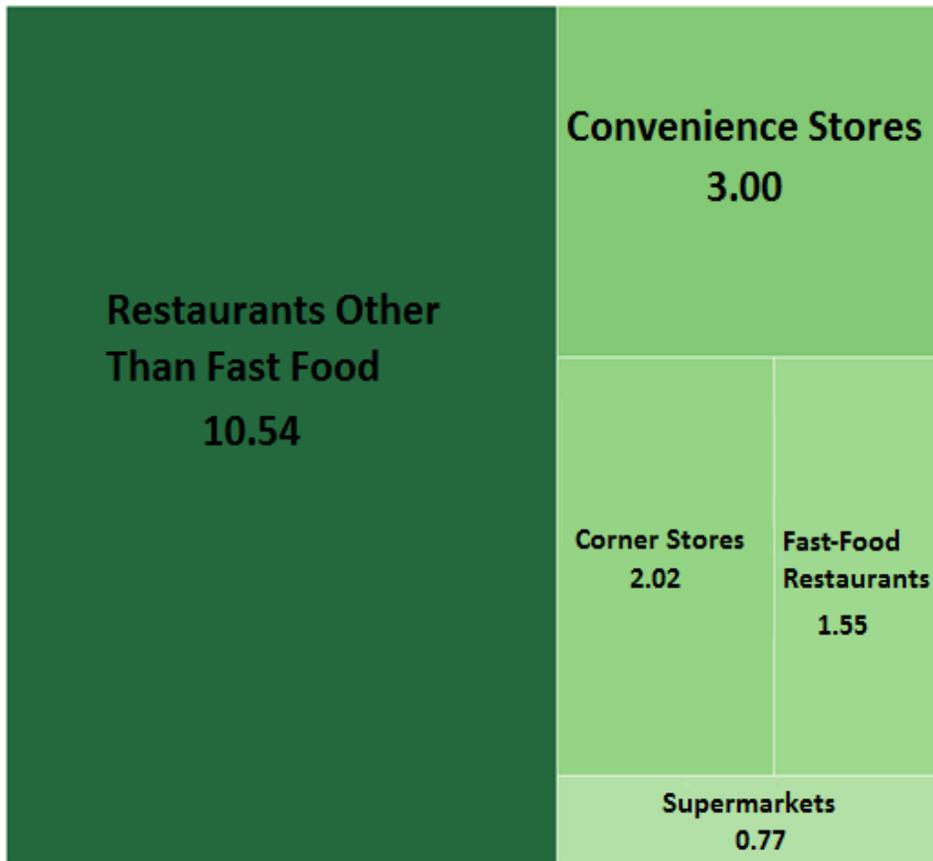
Giang et al. (2008) note that access to a grocery store reduces the risk of a variety of ailments including heart disease, diabetes, and cancer.

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Figure 1

Store Types Per Square Mile in Poor Areas



Food Deserts and Children

Much of the effect of food deserts falls on children. Lee (2012) studied food access through the Early Childhood Longitudinal Study. She found that children in poor areas lived near more fast-food restaurants and convenience stores than supermarkets (Figure 1). Poor areas also contained fewer grocery stores than non-poor ones.

Thomsen et al. (2016) studied the effect of food deserts on body mass index (BMI) scores in Arkansas school children. They found that urban students who resided in food deserts had BMI scores 0.059 standard deviations higher than urban students who did not reside in food deserts. They also found that students who moved into a food desert saw their BMI scores increase by 0.079 standard deviations. Both figures were significantly different from 0 at the 1-percent level. Similarly, students who left food deserts saw their BMI score decrease by 0.045 standard deviations, a number statistically different from 0 at the 10-percent level.

Potential Food Desert Consequences

Obesity

Howlett et al. (2015) studied the role of food environment on low-income, preschool children. They found that children who live near more convenience stores have higher obesity rates than those who do not. In addition, the authors found that increases in the quantity of grocery stores reduced incidences of obesity. Finally, they noted that the presence of grocery stores offsets some of the increases in obesity associated with higher Supplemental Nutrition Assistant Program (SNAP) participation.

Asthma

Preston et al. (2016) studied over 2,000 children between the ages of 6 and 18. They noted that children who lived more than a mile from the nearest grocery store were 53 percent more likely to develop asthma than those that did not. The authors, however, do not argue for causal link between food deserts and asthma.

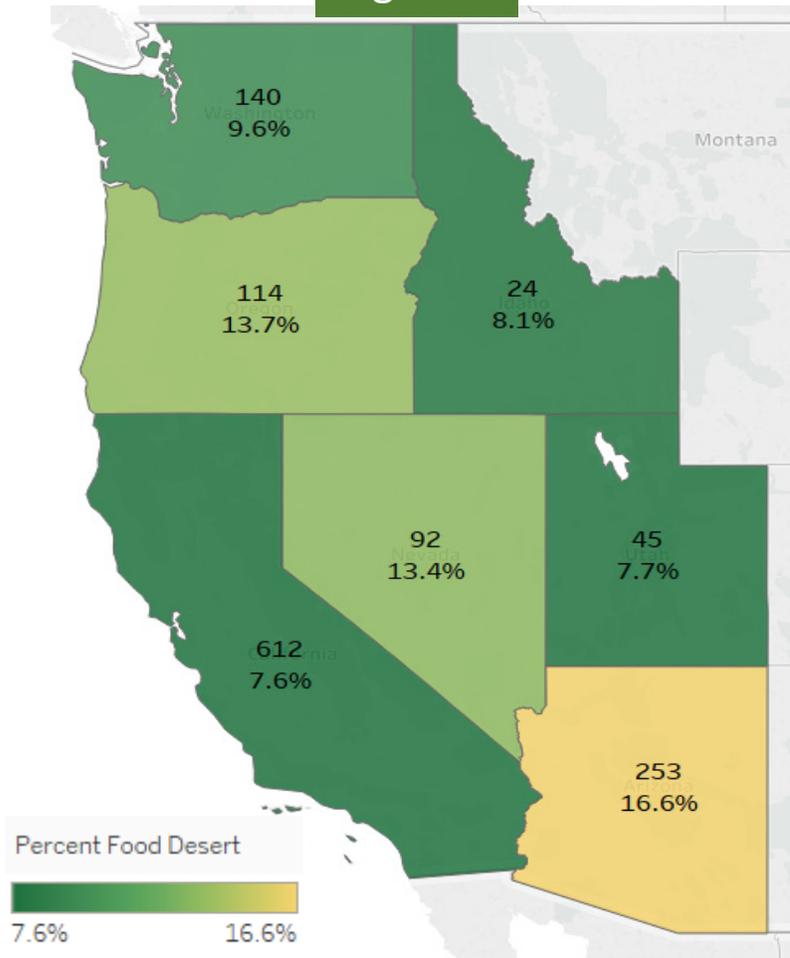
Academic Achievement

Food deserts can also effect academic performance. Frndak (2014) examined the effect of food deserts on 4th grade test scores in the state of New York. He found that the prevalence of food deserts in a school district was associated with decreased academic performance in both urban and suburban settings.

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Figure 3



Access in Nevada

According to the USDA definition, roughly 13.4 percent of Nevada census tracts are food deserts. This compares favorably to Oregon and Arizona, where 13.7 and 16.6 percent of census tracts are food deserts, respectively. Washington, California, Idaho, and Utah see relatively fewer food deserts, with less than 10 percent of census tracts being food deserts in each of those states (USDA, 2017).

Figure 3 shows 92 food deserts in Nevada. This amounts to almost 370,000 individuals living in food deserts.

Recall, however, that the definition of food desert requires 100 households to lack access to a vehicle and live more than a mile away from a grocery store. As such, many households may live in a food desert but have access to a grocery store, or vice-versa. In total, over 10,000 households in Nevada live more than a mile away from a grocery store without access to a personal vehicle. Hence, many of the 370,000 individuals living in a food desert may not actually struggle to reach a grocery store.

Demographics of Nevada Food Deserts

Figure 4 compares tracts that are food deserts and tracts that are not food deserts in Nevada. On average, Nevada food deserts have lower incomes, higher poverty rates, higher black and Hispanic populations, and a higher proportion of people on SNAP. This is similar to the national average. Walker et al. (2010) reviewed various food desert papers published between 1995 and 2010. They noted that, throughout the United States, racial minorities and low-income individuals had less access to supermarkets.

Figure 4

	Income	Poverty Rate	Percent Black	Percent Hispanic	Percent SNAP
Food Desert	\$37,838.53	29.9%	11.7%	37.5%	22.7%
Not Food Desert	\$65,506.03	13.8%	7.1%	24.0%	10.0%

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Data for Figures 2, 3, and 4 from the USDA's Food Access Research Atlas. Raw data can be downloaded here: <https://www.ers.usda.gov/data-products/food-access-research-atlas/download-the-data/>

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