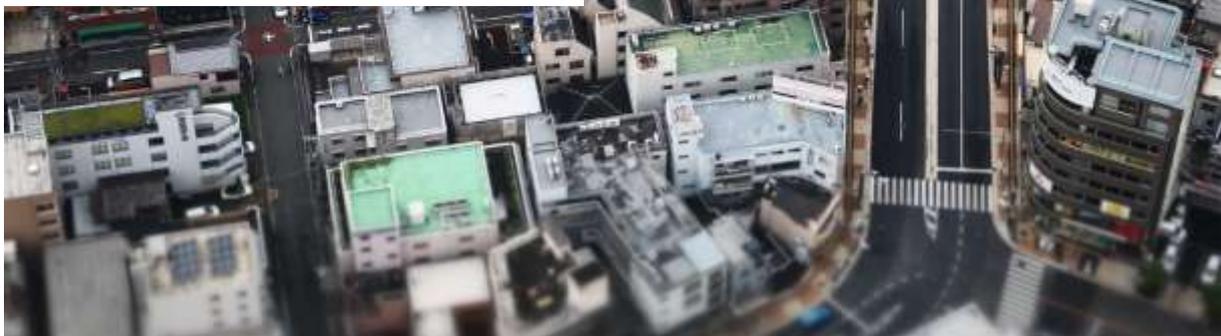


# Untangling the web of food environment studies

Research on the impact of food environment on people's health remains highly inconsistent

Access to healthy food is necessary but not sufficient to improve people's diets.



Is there a link between food accessibility and people's health? Publications about food environment have blossomed in the last 10 years. In a chapter from the second edition of *Neighbourhoods and Health*, researchers from Harvard Medical School review this scientific literature. Their work reflects the difficulty to capture such a phenomenon and highlight that access to healthy food is necessary but not sufficient to improve people's diets.

## How do you measure food environment?

If the food environment concept is easy to grasp, it is a lot more difficult to capture in statistics. And statistics is what researchers need if they want to document the scale of a phenomenon. Here are a few challenges that food environment studies face:

- **What is a "good" food establishment?** If fast food or convenience stores immediately come to mind as examples of unhealthy food purchasing locations, what about supermarkets that sell both fresh/healthy and highly processed food?
- **Where do people actually buy food? (and why?)** Existing studies tend to focus on food that people can access where they live. But they can also buy food next to where they work, to where their kids go to school... and research still does not capture complex activity patterns. For instance, in Los Angeles, less than 25% of people buy their food within their home census track. People can also drive to the nearest supermarket: even if it is not located within walkable distance, it is still within reach.

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Urban Food Futures would like to thank [Jason Block](#) for his inputs and comments.

### Source:

[Block, J., Seward, M. & James, P. "Food environment and health", in Duncan, D. & Kawachi, I \(Ed\) \(2018\), \*Neighborhoods and Health, Second Edition\*, Oxford University Press](#)

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A small number of studies look at the distance between where people live and the closest food outlets. These studies are interesting because they can capture travel time and actual distance given the specifics of the local road networks.

Therefore, as the authors put it *“the uncertain geographic problem may plague the residential food environment literature”*. **More profoundly, such studies hardly capture what people’s actual food environment is.** Interestingly, in one study, when researchers asked people what they thought about food accessibility in their neighbourhood, the results did not totally overlap with objective measures found through Geographical-Information-System (GIS) derived data.

### How do you assess health impacts?

Another difficulty for food environment research is to capture health impacts.

- First, a great methodological challenge is to not only look at people’s health at one specific moment (in what researchers call cross-sectional studies), but also **capture its evolution** (in longitudinal studies).
- Second, **health is multifaceted**. The authors mention a few indicators that have been studied in existing literature, such as, for example diet, body weight, but also hypertension, diabetes and gestational diabetes. According to Jason Block, who co-authored the chapter, diet is the most interesting indicator to follow, as it is the one that is the more closely linked to exposure. However, diet is a means to an end, so it can be difficult to relate to health outcomes.

### Looking for the perfect study...

Such an exploration of food environment studies leads to an unsettling conclusion:

- On the one hand, it is difficult for existing statistics to capture food environment,
- On the other hand, it is as difficult to assess health impacts.

The perfect study would associate longitudinal (long-term) data on diet with historic and detailed information on food environment. However, **many studies cannot access such rich material.**

However, even with high quality data, another issue that arises is that of causal relationship. For example:

- **Does a positive correlation between inhabitants’ health and high fast food outlets density mean that fast food have a negative impact on health?** Or does it mean that fast food companies choose to locate in neighbourhoods with specific characteristics (such, for instance, people who often go to fast foods)?
- Does a correlation between food environment and health hide other factors impacting health, such as, for instance, revenue, stress, exposure to pollutants...?



### “Highly inconsistent” results

As a consequence, the authors conclude that the **research on food environment “is highly inconsistent”**. An example? One study found that opening a supermarket in one neighbourhood in Leeds (United Kingdom) improved local people’s diet, yet another found that this benefit did not materialise in Glasgow (Scotland).

This emphasises the importance of not looking only at one study, but at literature reviews that make a synthesis of existing scientific studies. On food environment issues, such reviews show that results from cross-sectional studies are divergent. Furthermore, because they use available data and different methods, it is extremely difficult to compare their results.

When looking more specifically at longitudinal studies, literature reviews show that **correlations between food environment and health seem to happen to specific populations** (in the United States, for instance, non-White, low-income groups or women).

### It takes more than a supermarket to change eating habits

In a nutshell, we know that we do not know. We do know, though, is that **food environment can only be one ingredient of a better health**. It is not because a supermarket that sells fresh food opens in a food desert that people will adopt a healthy diet. **Eating habits do not change overnight**. For example, one study in Pittsburgh (United States) showed that local people who did go to the new supermarket did not change their calorie intake.

According to Jason Block, **policy-makers need to do more to help people make better choices**. Sometimes, this means opening a new store. But most of the time, it means helping them select the healthier option at the places where they already shop. For example, by making healthy food more financially attractive, or by providing people with information and advice where and when they buy food.

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