## To dine or to (Door) Dash?

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ut of groceries, too tired to cook, or too cold to venture outside and grab dinner? Don't worry, DoorDash has you covered. Or UberEats. Or GrubHub.

The rise of delivery apps has fundamentally changed society's relationship with food. Now, with some button presses, or even a verbal command to an Amazon Alexa, food can arrive on your doorstep within the hour. While the convenience and variety of options have been praised by many, others find this rising phenomenon concerning. Researchers worry about the impacts of food delivery services on human health alongside growing environmental and economic costs.

The seemingly infinite catalog of food comes with potential health drawbacks. Restaurant-prepared food is generally higher in sodium, saturated fats, and sugars than home-cooked meals. Additionally, nutritional information isn't always available online, making it even harder to evaluate options. Researchers hypothesize that these apps influence people to make less health-conscious choices, and may cause a shift in overall diet patterns, potentially increasing obesity rates. Overweight and obese individuals are often at higher risk for repercussions including heart disease, type 2 diabetes, high blood pressure, and even some cancers, making weight management an important health priority.

Along with enabling poorer nutritional choices, food delivery apps make over-ordering not only easy but often highly encouraged by a multitude of marketing tactics delivered instantaneously by push notification. These include discounts, free delivery, or free sides for reaching a minimum cart value. This encourages diners to order more than they might normally and tack on calorie-dense sides or desserts. Additionally, these offers are often time-limited, creating an artificial sense of urgency.

Ordering from home also reflects the increasingly sedentary nature of modern society. Researchers have defined the sedentary behavior epidemic as a potential contributor to the obesity crisis. With more people working from home and now ordering meals from home, opportunities for physical activity are becoming increasingly limited, contributing to calorie surpluses.

Additionally, DoorDash, UberEats, and GrubHub all now deliver alcohol, which poses its own health problems. DoorDash, in its 2023 trend report, mentioned its 648% increase in whiskey orders and 317% increase in rum. This report also cited a 36% year-over-year uptick in late-night orders, when late-night eating has been shown to increase hunger, decrease energy, and potentially increase obesity risk.

This 150 billion dollar industry has more than tripled in value since 2017, largely boosted by the COVID-19 pandemic. DoorDash's 2024 trend report indicated that 70%

of surveyed consumers ordered food delivery in the last month, slightly more than the 68% who reported eating at a restaurant in the same timeframe, signaling changing trends when it comes to purchasing prepared food. Food delivery is especially appealing to college students — one study found that students ordered food delivery approximately twice per week. In addition to industry leaders, more niche players are emerging — these include Fantuan specializing in Asian food, and GoPuff, an app made by college students, for college students.

The impacts of food delivery apps spread beyond human health. For struggling restaurants, the advent of delivery services was a lifeline during the lockdown period, but they now have to adapt to a delivery-friendly model. This has resulted in lower profit margins due to costs associated with being listed on these lucrative apps. Food and plastic waste are other notable concerns associated with the rise of delivery.

To give credit where it's due, services like DoorDash have promoted diverse restaurants and cuisines, exposing their large customer bases to new algorithmically determined dining options. DoorDash reported that 30% of users mentioned trying 5 to 10 different cuisines monthly. Additionally, customization and build-your-own options are popular among users. Thus, delivery apps encourage customers to try a variety of food options and expand their palates.

Ultimately, the impacts these apps have are largely contingent on decisions made at the individual level. Additionally, ensuring adequate public health education and incentivizing healthier choices are some methods researchers suggest to combat health concerns. Setting fair commission rates for participating restaurants and donating leftover food can also improve economic and environmental consequences. While food appearing on your doorstep is a huge convenience, it's important to remember that the underlying food delivery ecosystem creates a chain reaction with consequences far beyond the dinner table.

Open Health (2024). DOI: 10.1515/ohe-2023-0022 Journal of Community Health (2023). DOI: 10.1007/s10900-023-01229-1 Cell Metabolism (2022). DOI: 10.1016/j.cmet.2022.09.007 Sustainability (2020). DOI:10.3390/su12145528 HOTO VIA SHUTTERSTOCK

