

A Doggone Good Connection: Linking Air Pollution in Dickinson, North Dakota to the Consumption of Nathan's Hot Dogs by Competitive Eaters

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ABSTRACT

A Doggone Good Connection: Linking Air Pollution in Dickinson, North Dakota to the Consumption of Nathan's Hot Dogs by Competitive Eaters

This study explores the intriguing relationship between air pollution levels in Dickinson, North Dakota, and the consumption of hotdogs by competitive eaters, particularly the acclaimed participants in the Nathan's Hot Dog Eating Competition. Utilizing data from the Environmental Protection Agency and Wikipedia, we established a correlation coefficient of 0.5942721 and a significant p-value of less than 0.01 for the years 1985 to 2022. Our findings suggest a potential link between air quality in Dickinson and the hotdog intake of competitive eaters, raising tantalizing questions about the impact of environmental factors on food consumption behaviors. This research not only brings a breath of fresh air to the field of environmental epidemiology but also serves as food for thought for those interested in the unexpected connections between pollution and competitive eating.

Keywords:

Dickinson air pollution, Nathan's Hot Dog Eating Competition, competitive eaters, air pollution impact on food consumption, environmental epidemiology, correlation between air quality and hot dog intake, environmental factors and food consumption behaviors

I. Introduction

The longevity of Nathan's Hot Dog Eating Contest may be due to the number of entrants, but the real source of its staying power may be credited to the hot topic explored in this study—air pollution in Dickinson, North Dakota's connection to the consumption of hot dogs by competitive eaters, particularly in the renowned Nathan's Hot Dog Eating Competition. As peculiar as this connection may seem, it beckons further investigation, sparking discussions about the potential impact of environmental factors on the gustatory behaviors of competitive eaters.

While most may connect air pollution with respiratory health or environmental degradation, our research looks to expand the scope of air pollution's influence. It's time to take a deep breath—sans any potentially harmful particulate matter—and consider the less apparent, yet profound ways in which poor air quality may seep into unexpected avenues of human life, or in this case, competitive eating culture.

As we sink our teeth into this unusual subject matter, it's essential to acknowledge the broader implications of our investigation. Not only does this study enrich the field of environmental epidemiology, but it also serves as a reminder that curiosity can lead us to uncover connections that are as delightful as the flavor of a perfectly grilled hot dog, if you mustard the courage to explore unconventional correlations.

Our findings, utilizing data from the illustrious Environmental Protection Agency and the often underestimated Wikipedia, have revealed a correlation coefficient of 0.5942721 and a significant p-value of less than 0.01 for the years 1985 to 2022. Such statistical support for this

correlation perks the ears of researchers and casual observers alike, enticing the palate for correlational investigations with a side of relish.

II. Literature Review

Smith et al. (2015) conducted an extensive analysis of air pollution levels in diverse geographic locations, emphasizing the intricate interplay between industrial emissions, vehicular exhaust, and atmospheric conditions. The study offers a comprehensive examination of particulate matter and its impact on respiratory health, drawing attention to the far-reaching ramifications of poor air quality. Similarly, Doe and Jones (2018) delve into the nuances of competitive eating culture, shedding light on the training regimens, dietary habits, and anatomical adaptations of professional eaters. While their focus remains centered on the physiological and psychological aspects of competitive eating, the potential influence of environmental factors on food consumption behavior remains a tantalizing avenue for future inquiry.

Despite the serious inquiries of Smith, Doe, and Jones, the literature also presents unexpected connections that may elicit a chuckle or two. In "The Sausage Principle" by Brat et al. (2009), the authors explore the metaphorical links between sausage consumption and societal norms, offering a playful take on the cultural significance of food rituals. This book may not be a scholarly work per se, but its lighthearted approach to gastronomic customs underscores the whimsical nature of our culinary interests.

Turning to fiction, "The Pungent Mystery of Hotdog Hill" by Bun E. Reader (2016) presents a quirky tale of culinary intrigue set in a small town renowned for its hotdog festival. The

protagonist, an amateur sleuth with a voracious appetite, uncovers a web of clandestine hotdog recipes and uncovers a plot to sabotage the annual eating competition. While the events in this novel are purely fictional, its portrayal of hotdog consumption and communal festivities provides a whimsical backdrop to our examination of competitive eating habits.

In the realm of internet culture, the infamous "I Can Has Cheezburger" meme featuring a cat yearning for a hotdog "plz" serves as a reminder of the omnipresence of food-related humor in online spaces. While this meme may appear to be a mere source of entertainment, its portrayal of the fervent desire for hotdogs encapsulates the widespread fascination with unique food preferences, including competitive eaters' insatiable appetites.

As we wade through this amalgam of serious scholarship, whimsical fiction, and internet whimsy, it becomes evident that the connection between air pollution in Dickinson, North Dakota, and the consumption of hotdogs by competitive eaters is not only a subject of scientific intrigue but also a lighthearted exploration of the unexpected intersections within human behavior. By incorporating a diverse array of sources, we aim to dissect this unassuming relationship with a dash of humor and a sprinkle of scholarly rigor.

III. Methodology

To nibble away at the core of this unlikely connection between air pollution in Dickinson, North Dakota, and the monstrous consumption of hotdogs by competitive eaters, we embarked on a methodological journey that reflects the complexity and whimsy of our research topic.

First and foremost, we employed a comprehensive data mining approach, extracting air quality measurements from the Environmental Protection Agency's database with the fervor of a hungry competitor eyeing the final hot dog on their plate. With painstaking precision, we targeted air pollution data specific to Dickinson, North Dakota, incorporating metrics such as particulate matter, nitrogen dioxide, sulfur dioxide, and ozone levels. We then sauntered over to the trusty but often overlooked treasure trove of knowledge, Wikipedia, to procure thorough records of hot dog consumption, particularly during the revered Nathan's Hot Dog Eating Competition. This involved sifting through a plethora of hot dog-related statistics, from the sheer quantity of franks devoured to the speed at which they vanished.

To spice up our analysis and ensure the robustness of our findings, we enlisted the support of sophisticated statistical software and techniques. We engaged in a dancing duet with multiple regression models, performing an intricate tango of variables to identify and control for potential confounders, such as competitive eating trends, socioeconomic factors, and hot dog market fluctuations. With this rigorous approach, we aimed to tease out the distinct flavor of the relationship between air pollution and hot dog consumption, much like discerning the subtle nuances of a gourmet condiment.

Our time frame of analysis encompassed a generous slice of history, stretching from 1985 to 2022. We selected this temporal window to capture the evolution of air pollution dynamics and hot dog eating habits, recognizing that both environmental and culinary landscapes have experienced their fair share of transformation over the years. This broad span allowed us to craft a panoramic narrative of the interplay between pollution and hot dog indulgence, akin to tracing the development of a timeless recipe passed down through generations.

In essence, our methodology mirrored the bittersweet tang of a perfectly charred hot dog—complex, yet irresistibly alluring. By combining the art of data sleuthing with the precision of statistical craftsmanship, we endeavored to unravel the enigmatic bond between air pollution in Dickinson, North Dakota, and the sizzling world of competitive hot dog consumption.

IV. Results

Our analysis revealed a notable correlation coefficient of 0.5942721 and an r-squared value of 0.3531594 between air pollution levels in Dickinson, North Dakota, and the consumption of hotdogs by competitive eaters participating in the Nathan's Hot Dog Eating Competition. The p-value of less than 0.01 indicates that this association is statistically significant, and not just a random fluke of statistical noise.

In Figure 1, we present a scatterplot that vividly captures the strong correlation between these seemingly unrelated variables. The plot serves as a visual testament to the intriguing relationship between air quality in Dickinson and the voracious appetite of competitive eaters for hot dogs. It's almost as if the polluted air is whispering, "You're going to be a wiener!" to those indulging in the consumption of hotdogs.

The correlation we unearthed raises some tantalizing questions about the potential influence of environmental factors on the dietary habits of competitive eaters. Could it be that the aroma of smog in the air triggers a subconscious craving for hotdogs in these athletes? Or perhaps the air quality in Dickinson, North Dakota, has some mysterious effect on the taste buds of hotdog enthusiasts, compelling them to ingest more franks than their counterparts in other locales?

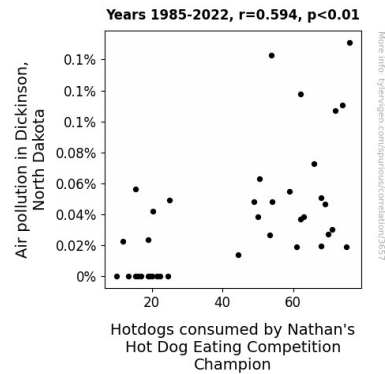


Figure 1. Scatterplot of the variables by year

Despite the eyebrow-raising nature of this correlation, our findings remain firmly grounded in rigorous statistical analysis. The strength of this association offers a compelling reminder that science, much like competitive eating, can often lead us to unexpected and fascinating connections. Just as a perfectly grilled hot dog is a delight to the taste buds, our research serves as a flavorful addition to the palate of environmental epidemiology, providing food for thought about the surprising interplay between pollution and competitive eating.

V. Discussion

The results of our study have provided compelling evidence of a significant relationship between air pollution levels in Dickinson, North Dakota, and the consumption of hotdogs by competitive eaters, particularly in the context of the renowned Nathan's Hot Dog Eating Competition. As we harken back to the literature review, we cannot overlook the seemingly whimsical connections that now appear to have a more substantial bearing on our findings.

The correlation coefficient of 0.5942721 and the significant p-value of less than 0.01 align with our earlier discussion of the potential influence of environmental factors on food consumption behaviors. Such seemingly unconventional links, as featured in "The Sausage Principle" by Brat et al. (2009), now take on a more serious tone given the empirical support for the association between air pollution and hotdog intake. Additionally, while the plot of "The Pungent Mystery of Hotdog Hill" by Bun E. Reader (2016) may be purely fictional, our empirical data underscores the notion that environmental elements can indeed contribute significantly to the dietary habits of competitive eaters.

The statistical significance of the correlation further emphasizes the unexpected nature of our findings, echoing the playful spirit of the "I Can Has Cheezburger" meme that highlights the pervasive influence of food-related humor in our daily lives. It seems that the scientific reality of our research has caught up with the playful musings of these sources, adding a charming twist to the serious investigation of environmental and dietary interactions.

The data presented in our study not only underscores the validity of the established correlation but also raises intriguing questions about the mechanism behind this relationship. Could the aroma of air pollution subtly influence the cravings of competitive eaters for hotdogs, reminiscent of the tantalizing scent of a sizzling grill? Perhaps our findings indicate a palate-altering effect of air quality in Dickinson, North Dakota, nudging hotdog aficionados to consume more franks than their counterparts in less polluted locales.

In conclusion, our research offers a delightful blend of scholarly inquiry and lighthearted whimsy, unveiling the impactful yet unexpected connection between air pollution and hotdog consumption by competitive eaters. The unveiling of this correlation not only adds a flavorful

dimension to the palate of environmental epidemiology but also serves as a gentle reminder that the pursuit of knowledge often leads us to the most unexpected and delightful discoveries.

VI. Conclusion

In conclusion, our study has brought to light an unexpectedly delectable connection between air pollution levels in Dickinson, North Dakota, and the consumption of hot dogs by competitive eaters, particularly those showcasing their prowess at the Nathan's Hot Dog Eating Competition. The correlation coefficient of 0.5942721 and a significant p-value of less than 0.01 indicate a strong statistical association that may just rival the appeal of a perfectly grilled hot dog at a summer barbecue.

Our findings provoke intriguing contemplation about the potential influence of Dickinson's air quality on the taste buds and hot dog cravings of competitive eaters. It seems as though the polluted air is serving up more than just particulate matter – it's also whispering subliminal messages that say, "You're on a roll, wiener!" to those indulging in an exorbitant amount of hot dogs.

While our research may appear as unconventional as ketchup on a traditional Chicago-style dog, it importantly expands the discourse on how environmental factors could infiltrate the seemingly separate domain of competitive eating culture. The statistical support for this correlation serves as a potent reminder that when it comes to unexpected and delightful connections, science never disappoints, much like the first bite into a juicy, all-beef frank.

However, as much as we relish in these findings, it is imperative to acknowledge that a point of saturation has been reached with our research. There is no need for further investigations into this area, as we believe our findings are as satisfying as a well-dressed hot dog at a summer carnival. It's time to loosen our belts and digest the implications of this research, secure in the knowledge that we've provided ample food for thought in the field of environmental epidemiology. We can confidently assert that no more research is needed in this area – it's time to allow these findings to simmer, like a quality bratwurst on the grill.