

# Foodborne Illness Outbreak Investigation Report

## OUTBREAK SUMMARY

Location:	Famous Yeti’s Pizza, 2300 U.S. Highway 51, Stoughton WI
Date of exposure:	October 22-25, 2024
Date of illness onset:	October 22-25, 2024
Etiologic agent:	Delta-9-tetrahydrocannabinol (THC)
Likely route of transmission:	Contaminated food items
Number of laboratory confirmed cases:	Unknown
Number of probable cases:	85
Local health department:	Public Health Madison & Dane County
Primary contact:	Bonnie Armstrong and Stefanie Moccerro

## BACKGROUND

On October 24, 2024 at 12:15 pm, the Chief of Stoughton EMS and Fire submitted an [online foodborne illness complaint](#) to Public Health Madison & Dane County that stated they had detected a pattern of people being taken to Stoughton Hospital after eating food from Famous Yeti’s Pizza.

The Public Health Epidemiologist called the Chief, who reported that they had five transports during October 22 and 23 of people who had recently eaten at Famous Yeti’s. People in at least two of the transports were suspected to have carbon monoxide poisoning. One home and Famous Yeti’s were tested for carbon monoxide on October 22 and a second home was tested on October 23. All were negative for carbon monoxide, as were tests in the emergency department on the people transported. He provided the name of a person to contact at Stoughton Hospital. Public Health initiated an investigation at this time.

The Public Health Epidemiologist contacted the ER Manager at Stoughton Hospital. They confirmed they had seen multiple people with primary symptoms of dizziness and nausea who had recently eaten at Famous Yeti’s and that those tested for carbon monoxide were negative. They arranged for an affected person to call the Epidemiologist.

This affected person went to the Stoughton Hospital emergency department early in the morning on October 24. This person described symptoms similar to the other individuals, which started about three hours after eating pizza from Famous Yeti’s on October 23. Within about two hours of symptom onset, unable to walk due to severe dizziness, this person called an

ambulance to take her to the emergency department. At the hospital, this person tested positive for THC but had not knowingly consumed any products recently that contained THC.

## METHODS

### Epidemiologic Investigation

#### Questionnaire Design and Administration

The Epidemiologist developed an online questionnaire in Alchemer to collect information from affected people. The questionnaire collected name and contact information, and information on demographics, illness, and the food people ate from Famous Yeti's. A link to the questionnaire was placed on Public Health Madison & Dane County's website home page and shared on social media, in blog posts, and in a news release. The media widely shared this link. In addition, the coordinator of a group of approximately 35 people who ate food from Famous Yeti's at an event on October 23 shared the link with all people at the event. A phone number to complete a questionnaire over the phone in Spanish was posted on the Spanish language homepage on Public Health's website.

The questionnaire was open for responses from October 24 through October 30. Because it was initially reported that only pizza was affected, the outreach with the questionnaire link primarily focused on people who ate pizza. Later, the publicly shared blog included information that grinders, cheese bread, and garlic bread were also affected. The social media post said "Other foods besides pizza were contaminated with oil that had THC in it" and linked to the blog post for details.

Stoughton Hospital provided a list of people who were seen in the emergency department who were possibly linked to the investigation. Public Health Communicable Disease Investigators reached out to those on this list who did not complete a questionnaire on their own to ask them to complete a questionnaire. Communicable Disease Investigators and the Epidemiologist also reached out with clarifying questions to people who had contradictory or confusing information on their questionnaires, such as meal dates outside the affected time frame or a long time between eating the food and symptom onset, to determine if the information on the submitted questionnaire was correct. If it was incorrect, the correct information was added to their questionnaire during data analysis. If a person did not respond, their information was not included in the data analysis.

#### Case Definition

Questionnaires were included for analysis if they met the following criteria:

- The person ate pizza, garlic bread, cheese bread, or a grinder purchased from Famous Yeti's Pizza on October 22, 23, or 24, **and**
- The person reported at least one symptom of THC intoxication, **and**
- The time between when the person consumed the food from Famous Yeti's and symptom onset was five or fewer hours.

## Epidemic Curve

An epidemic curve ([below](#)) was constructed to assess the magnitude of the outbreak.

## Data Analysis

The questionnaire data was exported from Alchemer and analyzed using RStudio version 2024.09.0+375. Two hundred eight questionnaire responses with at least some questions completed were received. It was determined that 101 of these responses were from people who were not associated with this investigation for reasons such as using the name of a famous or fictional person, using a nonsensical name or a name with a reference to drug use, or adding positive comments related to drug use with little to no other information included. These were not included in the analysis.

## Laboratory Investigation

### Testing of Human Specimens

Health care facilities tested some individuals for THC when they sought medical care.

### Testing of Food Specimens

During the inspection with Public Health staff on October 24, the Stoughton Police Department tested a container labeled as Delta-9 THC infused oil from a different business located in the shared community kitchen. The oil was tested with a Duquenois-Levine Reagent. There was no oil left in the container used by Famous Yeti's to make the pizza dough. Therefore, a bulk container located in the same vicinity as the borrowed oil was tested.

## Environmental Investigation

Famous Yeti's is a restaurant located in a building with a shared community kitchen. The environmental investigation included several interviews with the owner of Famous Yeti's, as well as two onsite visits at the restaurant. Additionally, several phone calls were made to notify and collaborate with important community partners including the Stoughton Police Department, Department of Agriculture, Trade and Consumer Protection, and the Wisconsin State Lab of Hygiene. To prevent additional illnesses, information from the investigation was used to develop a news release for swiftly notifying the public of the contaminated pizza and steps to complete a questionnaire.

## Efforts to Alert the Public

Public communications was critical to alert the public to dispose of any remaining pizza, as contaminated food may still have been available for people to eat. The outreach efforts included a news release, blog posts, social media posts, and responses to media requests.

# RESULTS

## Epidemiologic Investigation

### Data Analysis

Of the 107 questionnaires determined to be valid responses, 85 met the case definition and were determined to have had illness likely related to consuming THC-contaminated food from Famous Yeti's. These questionnaires were included in the data analysis.

Fifty people (58.8%) who became ill ate affected food on October 23. Twenty-three people (27.1%) ate on October 24, eleven (12.9%) on October 22, and one person ate food on October 25 that was purchased on October 23. The time between eating food and symptom onset ranged from 0 – 4 hours (average = 1.3, median = 1.0).

The ages of people affected ranged from one to ninety-one years (average = 40.9, median = 43). Eight people (9.4%) were younger than 18 years. Female gender was reported by 38 people (44.7%) and 47 (55.3%) reported male gender.

People reported a wide variety of symptoms. Dizziness was the most frequently reported symptom and was reported by 80 people (94.1%). See [Table 1](#) for other symptoms asked about in the questionnaire. In addition to the specific symptoms included in the questionnaire, people could type in information about other symptoms they experienced. See [Table 2](#) for other reported symptoms.

Seventy people reported their symptoms ended by the time they completed their questionnaire. For these 70 people, the duration of symptoms ranged from one to eighty-three hours (average = 21.5, median = 17).

Three people reported experiencing impaired driving and three people missed work time due to their symptoms. Not knowing the cause of their symptoms, people reported suspecting carbon monoxide poisoning, heart attack, and stroke. Impacted people included women who were pregnant or breastfeeding, and people with existing allergies to THC.

Thirty-three people (38.8%) saw a health care provider in response to their symptoms. Twenty-seven people (31.8%) went to an emergency department and three people (3.5%) were hospitalized for at least one night.

Table 1. Questionnaire symptoms reported by people who ate THC contaminated food from Famous Yeti's Pizza

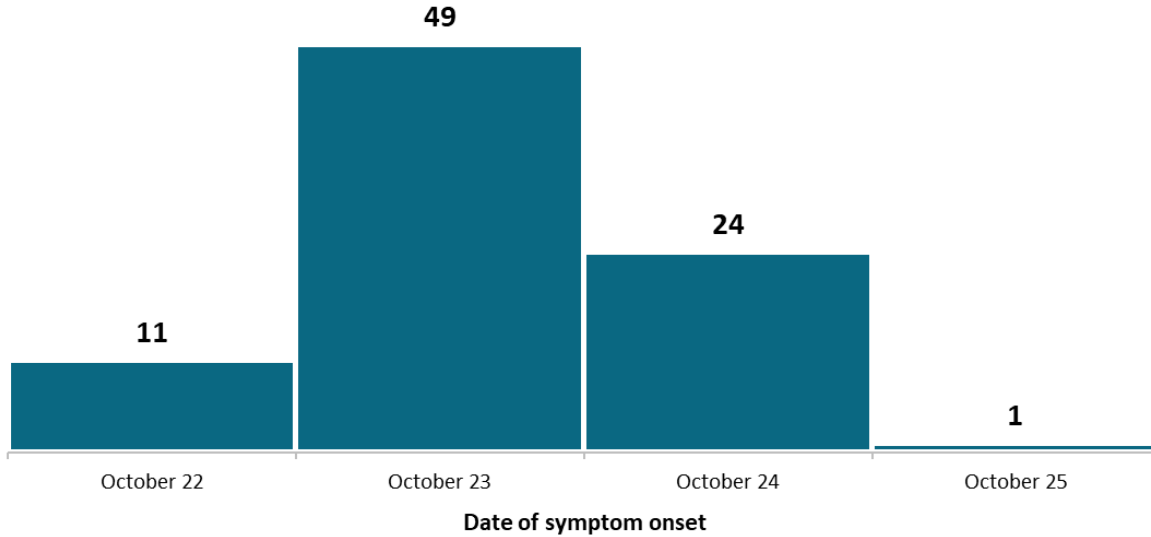
Symptom	Yes		No		Not sure	
	Number	Percent	Number	Percent	Number	Percent
Dizziness	80	94.1	4	4.7	1	1.2
Sleepiness	76	89.4	6	7.1	3	3.5
Anxiety	67	78.8	11	12.9	7	8.2
Short term memory impact/ time distortion	59	69.4	13	15.3	13	15.3
Increased heart rate	54	63.5	7	8.2	24	28.2
Nausea	52	61.2	30	35.3	3	3.5
Paranoia	42	49.4	26	30.6	17	20.0
Panic attack	29	34.1	37	43.5	19	22.4
Increased blood pressure	28	32.9	4	4.7	53	62.4
Hallucinations	22	25.9	53	62.4	10	11.8
Vomiting	10	11.8	72	84.7	3	3.5

Table 2. Other symptoms reported by people who ate THC contaminated food from Famous Yeti's Pizza

Allergy-like symptoms	Difficulty breathing	Muscle spasms
Balance issues	Driving impairment	Numbness
Blurred vision	Dry mouth	Perception distortion
Confusion	"Felt high" / "Felt drunk"	Rapid speech
Difficulty moving	Food cravings	"Raucous laughter"
Difficulty talking	Headache	Tingling

## Epidemic Curve

### Number of people who reported becoming ill after eating THC-contaminated food from Famous Yeti's Pizza in October, 2024



## Laboratory Investigation

### Human Specimens

Since THC intoxication is not a reportable illness, health care facilities did not submit laboratory reports for people who tested positive for THC. Based on information provided by Stoughton Hospital, and from individuals verbally and in questionnaires, fifteen people who completed a questionnaire had a positive test for THC. We do not know the exact number of people who ate food from Famous Yeti's purchased during October 22-24 and tested positive for THC, since people may not have completed a questionnaire or may not have included this information on their questionnaire, and information about THC results was not requested from other health care facilities.

### Food Specimens

The Duquenois-Levine Reagent test of the bottle of Delta-9 THC infused oil yielded a presumptive positive result for the presence of THC.

## Environmental Investigation

The Environmental Health Services Supervisor (EHSS) and the Environmental Health Program Manager (EHPM) received notification of the illnesses from the Epidemiologist early afternoon on Thursday, October 24. The Director of Environmental Health (Director) and the Health Officer were notified immediately of the situation and a foodborne illness investigation was initiated. The results of the environmental investigation that followed are summarized below in chronological order:

### **Thursday, October 24:**

- The EHSS and EHPM conducted a phone interview with the Famous Yeti's Owner sharing that people were reporting illness after consuming Famous Yeti's pizza. The owner reported that they were aware that something unusual was happening but did not know the cause. Owner was informed that at this time Public Health was gathering information and would call them right back with next steps.
- The EHSS and EHPM discussed the information obtained from the owner with the Epidemiologist to troubleshoot next steps including development of a series of interview questions and closure of the restaurant.
- The EHSS and EHPM called back the owner to gather more information from questions that were developed in collaboration with the Epidemiologist. During this conversation, the owner disclosed that, within the space of the shared community kitchen, there is another licensed business that makes THC products. To prevent further illnesses, the restaurant closed.
- The EHSS and EHPM contacted the Epidemiologist to share this new information of a licensed THC business located within the shared community kitchen. During this discussion, the Epidemiologist shared that they, too, had just received new information from an ill person linking THC as the possible contaminant.
- The Director of Environmental Health was notified by the EHSS and EHPM of this new development in the investigation. To rapidly respond, the Director instructed the EHSS to contact the Stoughton Police to report the situation, as the police department would be responsible should this be an intentional poisoning. The Director also instructed the EHSS to immediately notify the Department of Agriculture, Trade and Consumer Protection (DATCP), as Public Health Madison & Dane County is an agent health department for DATCP. DATCP also licenses and regulates the THC business in the shared community kitchen located in the same building. The Director instructed EHPM to assign a Leadworker and the District Sanitarian to conduct an onsite investigation as soon as possible and to maintain contact with the Famous Yeti's owner.
- Many of the next steps happened concurrently:
  - The EHSS called and emailed DATCP immediately to alert them of this situation.
  - The EHSS contacted the Stoughton Police to report the situation. Stoughton Police stated they were aware of the situation and had already started their own investigation.
  - The EHPM assigned and coordinated an onsite investigation at the Famous Yeti's with a Leadworker and the District Sanitarian.
  - The Famous Yeti's owner called back the EHPM to report they thought they figured out what happened. They stated that they went to the shared community kitchen to borrow oil for making a batch of pizza dough. The owner further reported they now believed that the oil used was THC infused oil obtained from a DATCP-licensed business located within the shared community kitchen. EHPM asked what other food the oil was used in and the owner stated only the pizza dough.
  - The EHPM immediately shared this new information with the EHSS and Director.

- The EHSS contacted Stoughton Police to share this new information. Stoughton police stated that they did not believe that the contamination was intentional. The EHSS asked if a police officer could meet the Leadworker and District Sanitarian at Famous Yeti's to test for a positive THC result in leftover pizza dough and/or oil, and any unwashed containers or utensils used in preparation. Stoughton Police agreed to assist with testing.
- The EHPM updated the District Sanitarian that, as part of the onsite investigation, a Stoughton Police Officer would be joining them onsite to test for THC.
- While the onsite investigation was in progress, the EHSS made phone calls to the Wisconsin State Lab of Hygiene (WSLH) to determine if food samples could be tested for THC. WSLH stated that their policy is to only test food samples for THC that are submitted by law enforcement.
- The Leadworker and District Sanitarian reported to the EHPM that there was not any leftover pizza dough, THC infused oil used to make the pizza dough, or unwashed containers or utensils; however, there was a bulk container located in the same vicinity as the borrowed oil. The Police Officer tested this container, labeled as Delta-9 THC infused oil, which tested positive for THC.
- The EHPM shared the positive THC test result with the EHSS and the Director.
- The EHPM spoke with Famous Yeti's owner on the phone and discussed alerting customers of the concern with the pizza. The owner stated they also would reach out to customers from the affected days the food was sold.
- Given the urgency to get this information out to the public to prevent further illnesses, the Director worked with the Communications Team, as well as the Epidemiologist, subject matter experts, and the Health Officer, to draft and review a news release alerting the public to the potential public health risk. At approximately 5:45 PM, the Director shared the draft news release with Stoughton Police, DATCP, the District Sanitarian and the owner of Famous Yeti's for review to ensure accuracy; after which, the news release was published at 5:57 PM.
- The Leadworker and District Sanitarian completed an onsite report summarizing the investigation and the Famous Yeti's owner's next steps.
- The Famous Yeti's owner stated they would post information on the establishment's website and social media pages and said they would also reach out to customers from the days the affected food was sold.

#### **Friday, October 25:**

- In consultation with DATCP, the decision was made to not test any leftover pizza because, at this point in the investigation, it would add little value.
- The Director and EHSS collaborated with DATCP to set up a joint onsite visit to verify all food operations within the shared community kitchen were properly licensed within the next week.
- The owner of Famous Yeti's reached out to the District Sanitarian to see if they could reopen for Saturday. The District Sanitarian confirmed that the Famous Yeti's owner had cleaned and sanitized all surfaces in contact with the THC infused oil. The District



Sanitarian discussed with the EHSS, and the decision was made to allow Famous Yeti's to reopen.

### **Monday, October 28:**

- The Epidemiologist stated that additional information was obtained from the questionnaires implicating grinders (sandwiches) along with the pizza dough.
- The EHSS instructed the EHPM to call the Famous Yeti's Owner to discuss the other food implicated.
- The EHPM called Famous Yeti's owner. During this call, the owner stated that the THC infused oil was brushed on the grinders and garlic bread. The affected pizza dough was also used to make cheese bread.
- The Leadworker and District Sanitarian conducted a joint onsite visit with DATCP to verify all food operations were properly licensed. A report was written with the following notes: "During onsite visit, operator [Famous Yeti's owner] indicated that the Delta-9 THC oil used for pizza doughs last Tuesday (10/22/24) was also used for preparing grinders (sandwiches), garlic breads, and cheese bread products served during the same timeframe of affected pizza products (10/22/24 - 10/24/24). Operator clarified that the oil was used for grinders and garlic breads for toasting, while cheese breads are made using pizza dough. Of the 71 total orders that the business had from last Tuesday - Thursday (10/22/24 - 10/24/24), operator indicated approximately 5 grinders, 2 garlic breads, and 18 cheese breads were sold."

### **Efforts to Alert the Public**

The outreach efforts (news release, blog posts, social media posts, and responses to media requests) had the following impact (data as of November 4th):

- Website views of news release and blogs: 25,684
- Reach of social media posts: 1,253,375
- Broadcasting media mentions about this case: 89
- Online news media mentions about this case: 698

## **DISCUSSION**

### **Environmental Investigation**

During the preliminary stages of the investigation, the Epidemiologist, EHSS, and EHPM discussed potential organisms of concern for foodborne illness. Some hypotheses for the foodborne illness included suppliers delivering contaminated food, new food processes or food handling techniques, new chemicals or chemicals used improperly, and new structural/equipment changes within the facility. As more information came into Public Health, the investigation shifted to THC contamination.

Since it was not known if the contamination was intentional at this time, the Stoughton Police Department was contacted. Because Public Health Madison & Dane County is an agent health department for the Wisconsin Department of Agriculture, Trade and Consumer Protection

(DATCP), they were also immediately notified. Furthermore, the shared community kitchen has a DATCP-licensed business that makes THC products.

The business whose THC infused oil was used is licensed through the Department of Agriculture, Trade, and Consumer Protection. Hemp-derived THC products are legal under the 2018 Farm Bill and largely unregulated in Wisconsin. This product doesn't face the same laws and regulations as cannabis because it comes from the hemp plant. The oil can be used to make everything from cookies to condiments.

The test the Stoughton Police used during the onsite investigation was the Duquenois-Levine Reagent. This test is a widely used presumptive test for detecting the presence of cannabinoids, including tetrahydrocannabinol (THC), often employed in field settings. It is a qualitative test, not quantitative. It does not distinguish between different concentrations of THC; it only establishes that, presumptively, THC is present. As a presumptive test, it does not confirm the presence of THC or marijuana definitively and should be followed by confirmatory testing, such as gas chromatography-mass spectrometry (GC-MS). A confirmatory test was not performed because of the following reasons: (1) the bottle of oil was legally made by a licensed business located within the shared community kitchen; (2) the bottle of oil was labeled as containing Delta-9 THC; (3) this bottle of oil could not be confirmed to be the same oil used to prepare the Famous Yeti's food.

The Wisconsin State Lab of Hygiene does not test food samples for THC unless submitted by law enforcement. Additional conversations with DATCP showed that testing at their laboratory would provide little value to the investigation. Given that the owner admitted to using the THC oil and there was no more of the THC-affected food in the restaurant, food testing would not have contributed additional information to the investigation.

## Efforts to Alert the Public

The Communications Team was an important part of this response due to the fact that contaminated food may still have been available for people to eat and because there was not a way to reach out to everyone who ate at Famous Yeti's other than by the media. Public notification needed to happen quickly and a news release in conjunction with a social media post was the fastest way to alert the public. A news release was published at 5:57 pm on Thursday, October 24, 2024, instructing customers to not eat the pizza, discard leftovers, and to complete a questionnaire if they became sick. The time between first hearing about a possible foodborne illness issue, investigating, and publishing the news release was under six hours. In the urgency to get this information out to the public, the date in the press release and social media posts of when the contaminated food was served—Monday, October 21 through Thursday, October 24—was inaccurate; Famous Yeti's was closed on Monday, October 21. The correct date was updated, along with a note of the original error: "A previous version of this news release reported pizza was served starting on Monday (10/21). The contaminated pizza was only served Tuesday (10/22) through Thursday (10/24)."

## Epidemiologic Investigation

There were several limitations to the questionnaire that influenced the data collected. The questionnaire did not specifically ask if someone tested positive for THC, so that information was only collected through open ended questions if someone chose to include it. The questionnaire also did not ask if the individual had consumed THC at a different time in the past 30 days, so people who tested positive could have had a different source for their positive test, although all individuals who reported a positive test also reported symptoms within five hours of consuming food from Famous Yeti's.

The questionnaire included an open-ended question about the food eaten from Famous Yeti's but did not include specific food items. This is because initial reports from Famous Yeti's indicated that only pizza was affected. One individual submitted a questionnaire stating that they had symptoms of THC intoxication but ate only a grinder that was purchased during the affected timeframe. Upon questioning, Famous Yeti's stated that the oil was also used for grinders, garlic bread, and cheese bread. Since initial reports only mentioned pizza, individuals who ate other items might not have completed a questionnaire.

The questionnaire asked if other household members or people who shared the meal became ill and contained a statement that a questionnaire should be completed for each ill person including children. Comparing the questionnaires received and comments about other ill people, it appears that people often did not complete additional questionnaires for children who were affected or that there were not questionnaires submitted for more than one person at an address, even when a person indicated others were ill. The inability for respondents to easily add information for other people likely led to less information being collected.

The questionnaire did not account for the fact that people might have eaten affected food more than once or that they might have purchased food one day and eaten it on a different day. This caused some uncertainty about how to complete the questionnaire for some people and some people may not have completed a questionnaire because they were unsure how to include their situation.

Public Health did not publicize an option for people to call in to complete a questionnaire by phone other than for Spanish-speaking people. Any individuals without access to the internet or who were not comfortable completing an online questionnaire were not able to provide their information.

## INVESTIGATION CONTRIBUTORS

- Wisconsin State Laboratory of Hygiene
- Department of Agriculture, Trade, and Consumer Protection
- Stoughton Police Department
- Stoughton EMS and Fire
- Stoughton Hospital

# OUTBREAK QUESTIONNAIRE

Begins on next page.

# Famous Yeti's

## Personal information

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1. Name: \*

2. Date of birth: \*

3. Gender: \*

- Male
- Female
- Transgender, male to female
- Transgender, female to male
- A different gender not listed
- Prefer not to answer

4. Phone number: \*

5. Email address:

**6. Address: \***

Address

City

State

Zip code

**Meal information**

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**7. What day did you eat food from Famous Yeti's Pizza? \***



**8. What time did you eat food from Famous Yeti's? (hh:mm am/pm)? \***

**9. What did you eat from Famous Yeti's? Please include all items. If you ordered a pizza, include the toppings (for example, thin crust pizza with pepperoni). Famous Yeti's menu**

\*

10. Did you get sick after eating food from Famous Yeti's Pizza? \*

- Yes
- No
- Not sure

Illness information

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11. Did you have any of the following symptoms? \*

	Yes	No	Not sure
Dizziness *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased blood pressure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased heart rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nausea *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vomiting *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxiety *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Panic attack *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Paranoia *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Short term memory impact/time distortion *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleepiness *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hallucinations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Please list other symptoms:

13. If yes, what day did your symptoms begin (mm/dd/yyyy)? \*

14. What time did your symptoms begin (hh:mm am/pm)? \*

15. If you have recovered, what day did you feel better (mm/dd/yyyy)?

16. If you have recovered, what time did you feel better (hh:mm am/pm)?

17. Did you see a doctor or other health care provider about your symptoms? \*

Yes

No

**Health care provider information**

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**18. If yes, provider's name and address:**

**19. What was the provider's diagnosis?**

**20. Did you go to the emergency room or were you hospitalized for at least one night due to your symptoms? (check all that apply)**

- Emergency room
- Hospitalized at least one night
- Didn't go to the hospital

**21. If you were hospitalized, what was the first day you were in the hospital (mm/dd/yyyy)?**

**22. If you were hospitalized, what was the last day you were in the hospital (mm/dd/yyyy)?**

**Others ill?**

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**23. Did anyone else that ate Famous Yeti's food with you get sick?\***

- Yes
- No
- Not sure

**24. Who else got sick? Please share the survey link with anyone else who got sick and please complete a survey for any children that got sick. If you provide their phone number we can share the link with them.**

**25. Is there anything you'd like to add?**