



# Epi Data Tables

New York City Department of Health and Mental Hygiene

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## Ambient Noise Disruption in New York City

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### Data Sources

**Data sources: Community Health Survey (CHS) 2009** is a survey of approximately 9,000 adults aged 18 and older, conducted annually by the Health Department. Estimates presented here are age-adjusted to the US 2000 Standard Population, except for age-specific estimates. The CHS has included adults with landline phones since 2002 and, starting in 2009, also has included adults who can be reached only by cell phone. For survey details, visit [www.nyc.gov/health/survey](http://www.nyc.gov/health/survey).

**311 Noise complaints, 2009:** Data on all complaints to 311, the City's non-emergency services line, from 2009 are presented here. The New York City Noise Code was updated in 2007 with the objective to reduce noise. In order to enforce this objective, the New York City Department of Environmental Protection (DEP) and the New York City Police Department (NYPD) share duties based on the type of noise complaint. For more information about the NYC Noise Code, visit: <http://www.nyc.gov/html/dep/html/noise/index.shtml>.

**United States Census Bureau:** Rates were calculated using NYC DOHMH population estimates, modified from US Census Bureau interpolated intercensal population estimates from 2009, updated July 22, 2013.

**Traffic Density:** A traffic metric created based on the MPSI TrafficMetrix (<http://www.pb.com/software/Data-Products/Street-and-Transportation-Data/MPSI-TrafficMetrix.shtml>) and the New York Best Practice Model by the New York Metropolitan Transportation (<http://www.nymtc.org/project/bpm/bpmindex.html>)

To access the related Epi Data Brief, go to [nyc.gov/health/html/doh/downloads/pdf/epi/databrief45.pdf](http://nyc.gov/health/html/doh/downloads/pdf/epi/databrief45.pdf).

**Table 1. Frequency of self-reported weekly noise disruption within the past three months among New York City adults, 2009**

Source: NYC Community Health Survey, 2009

During the past 3 months, how often has noise in your building or from outside disrupted your activities at home? (categorical)	Percent	95% Confidence Interval
<b><i>Less than 3 times per week</i></b>	<b>80.3</b>	<b>(79.1 - 81.5)</b>
None	61.8	(60.3 - 63.3)
Less than once per week	9.5	(8.7 - 10.5)
Once or twice per week	9.0	(8.2 - 9.9)
<b><i>FDNE*</i></b>	<b>19.6</b>	<b>(18.5 - 20.9)</b>
3-6 times per week	5.8	(5.2 - 6.6)
7 or more times per week	13.8	(12.8 - 14.9)

\*Frequent Disruptive Noise Exposure (FDNE) is defined as a person experiencing noise disruption three or more times per week. 95% Confidence Intervals are a measure of estimate precision. The wider the interval, the more imprecise the estimate.

**Table 2. Age-adjusted prevalence of sources of disruptive noise exposure reported by New Yorkers, among those reporting any noise disruption in the past 3 months, 2009***Source: NYC Community Health Survey, 2009*

Noise Source	Among Any Noise Disruption	Among FDNE*	Among Disrupted by Noise less than 3 times per week
Traffic**	56.0%	62.0%	50.0%
Neighbors	50.0%	50.0%	51.0%
Sirens	49.0%	54.0%	44.0%
Street **	46.0%	48.0%	43.0%
Construction	37.0%	40.0%	33.0%
Animals	22.0%	24.0%	19.0%
Subway	10.0%	14.0%	5.0%
Restaurant	8.0%	7.0%	8.0%

\*Frequent Disruptive Noise Exposure (FDNE) is defined as a person experiencing noise disruption three or more times per week.

\*\*Traffic noise: Cars, trucks, or other vehicles, not including noise from emergency sirens; Street: noise from activity of people on street (other than traffic, neighbors, construction, and restaurants).

Categories of noise are not mutually exclusive.

**Table 3. Percent of New York City adults ages 18 and older who experienced noise disruption more than three times per week by demographic characteristics, 2009**

Source: NYC Community Health Survey, 2009

Characteristic	Percent	95% Confidence Interval	T-test P-Value
<b>Among all adult New Yorkers</b>	<b>19.6</b>	<b>(18.5 - 20.9)</b>	
<b>Health Status</b>			
<b>General Health Status</b>			
Poor	30.6	(23.2 - 39.1)	Ref
Fair	25.0	(20.9 - 29.7)	0.236
Good	20.4	(18.3 - 22.6)	<b>0.016</b>
Very Good	18.3	(16.2 - 20.6)	<b>0.004</b>
Excellent	14.7	(12.7 - 17.0)	<b>0.000</b>
<b>Serious Psychological Distress</b>			
Yes	36.2	(29.6 - 43.3)	<b>0.000</b>
No	18.7	(17.5 - 20.0)	<b>Ref</b>
<b>Socio-demographics</b>			
<b>Age</b>			
18 - 24	17.8	(13.5 - 23.1)	0.354
25 - 44	21.6	(19.6 - 23.8)	<b>0.000</b>
45 - 64	20.3	(18.6 - 22.0)	<b>0.000</b>
65+	15.4	(13.6 - 17.3)	Ref
<b>Gender</b>			
Male	17.8	(16.1 - 19.6)	Ref
Female	21.3	(19.7 - 23.0)	<b>0.005</b>
<b>Marital Status</b>			
Married/Member Unmarried Couple	18.2	(16.4 - 20.2)	<b>0.022</b>
Divorced/Separated/Never Married	21.3	(19.5 - 23.2)	Ref
Widowed	17.1	(9.4 - 29.3)	0.418
<b>Nativity</b>			
US born	20.1	(18.6 - 21.7)	Ref
Foreign born	19.1	(17.3 - 21.1)	0.445
<b>Race/Ethnicity</b>			
White*	20.2	(18.3 - 22.4)	Ref
Black*	17.9	(15.8 - 20.2)	0.124
Hispanic	20.7	(18.4 - 23.1)	0.796
Asian/Pacific Islander*	18.8	(15.3 - 23.0)	0.531
Other*	15.9	(10.0 - 24.4)	0.254
<b>Education</b>			
Less than high school	16.9	(14.3 - 20.0)	Ref
High school graduate	20.3	(17.9 - 23.0)	0.084
Some college/technical school	21.3	(18.8 - 23.9)	<b>0.027</b>
College graduate	19.2	(17.3 - 21.3)	0.196
<b>Employment Status</b>			
Employed for Wages or Self-Employed	18.0	(16.5 - 19.6)	<b>0.000</b>
Homemaker/Retiree/Student	18.3	(15.8 - 21.1)	<b>0.001</b>
Unemployed	21.7	(17.9 - 26.0)	<b>0.043</b>
Unable to work	28.8	(23.6 - 34.8)	Ref

95% Confidence Intervals are a measure of estimate precision. The wider the interval, the more imprecise the estimate.

Bolded values indicate statistically significant differences between groups (i.e., p-value < 0.05).

\*Non-Hispanic

**Table 3. Percent of New York City adults ages 18 and older who experienced noise disruption more than three times per week by demographic characteristics, 2009**

Source: NYC Community Health Survey, 2009

Characteristic	Percent	95% Confidence Interval	T-test P-Value
<b>Household Characteristics</b>			
<b>Income (combined household income)</b>			
<400% FPL <sup>^</sup>	21.9	(20.1 - 23.7)	Ref
400% - < 600% FPL <sup>^</sup>	16.3	(13.7 - 19.3)	<b>0.001</b>
> 600% FPL <sup>^</sup>	17.2	(14.5 - 20.4)	<b>0.009</b>
Don't know/Refused	17.7	(14.0 - 22.0)	0.074
<b>Language Spoken at Home</b>			
English	19.0	(17.6 - 20.4)	Ref
Spanish	18.3	(15.6 - 21.3)	0.674
Other	25.3	(21.4 - 29.6)	<b>0.004</b>
<b>Household Size</b>			
1 person	20.2	(17.6 - 23.2)	Ref
2 persons	19.1	(16.8 - 21.5)	0.522
3 persons	20.9	(18.2 - 23.9)	0.743
4 persons	19.2	(16.2 - 22.5)	0.613
5 or more persons	15.0	(12.3 - 18.1)	<b>0.011</b>
<b>Number of household adults</b>			
1-3 Adults	20.3	(19.0 - 21.6)	Ref
4 or more Adults	14.9	(11.7 - 18.8)	<b>0.005</b>
<b>Number of children</b>			
No children	20.1	(18.4 - 21.9)	Ref
One children	19.5 <sup>U</sup>	(16.6 - 22.9)	0.762
Two or more kids	16.8	(14.4 - 19.5)	<b>0.034</b>
<b>Housing Characteristics</b>			
<b>Home Ownership</b>			
Owned	14.8	(13.1 - 16.6)	Ref
Rent/occupy without payment	22.6	(21.1 - 24.3)	<b>0.000</b>
<b>Housing Units</b>			
1-2 units	14.0	(12.2 - 16.1)	<b>0.000</b>
3-9 units	19.5 <sup>D</sup>	(16.9 - 22.5)	<b>0.007</b>
10 or more units	24.3	(22.4 - 26.3)	Ref
Do not know	17.2	(12.6 - 23.0)	<b>0.011</b>

95% Confidence Intervals are a measure of estimate precision. The wider the interval, the more imprecise the estimate.

Bolded values indicate statistically significant differences between groups (i.e., p-value < 0.05).

<sup>^</sup>FPL: Federal Poverty Level

<sup>D</sup> Data round down to the nearest whole number.

<sup>U</sup> Data round up to the nearest whole number.

**Table 4. 311 noise-related calls rates per 1,000 adults (18 years and older) by neighborhood (UHF34)^ and noise source, New York City, 2009**

Sources: 311 Noise complaints, 2009; NYC DOHMH population estimates, modified from US Census Bureau interpolated intercensal population estimates, 2009.

Updated July 22, 2013.

UHF34 Code	UHF34 Name	Total	Loud Music or Parties <sup>1</sup>	Social Environment <sup>2</sup>	Traffic or Transit <sup>3</sup>	Construction <sup>4</sup>	Animals <sup>5</sup>	Other
101	Kingsbridge - Riverdale	10.2	2.0	3.3	2.0	1.5	1.1	0.2
102	Northeast Bronx	8.3	3.0	1.8	1.8	0.7	0.8	0.1
103	Fordham - Bronx Park	18.0	7.6	4.9	4.1	0.6	0.8	0.0
104	Pelham - Throgs Neck	11.1	3.9	2.6	2.5	0.6	1.4	0.1
105/106/107	South Bronx	14.6	5.5	3.3	4.7	0.5	0.6	0.0
201	Greenpoint	38.1	16.3	8.8	8.0	3.9	1.0	0.2
202	Downtown - Heights - Slope	27.1	9.0	6.7	5.1	4.9	1.3	0.2
203	Bedford Stuyvesant - Crown Heights	18.0	7.6	3.6	4.3	1.4	1.0	0.0
204	East New York	10.6	4.1	2.0	3.6	0.4	0.4	0.0
205	Sunset Park	12.9	4.6	3.5	3.0	0.8	1.0	0.1
206	Borough Park	12.2	2.2	2.6	5.3	1.1	0.8	0.2
207	East Flatbush - Flatbush	14.1	5.9	3.0	4.0	0.6	0.6	0.1
208	Canarsie - Flatlands	6.3	2.2	1.1	1.3	0.5	1.1	0.1
209	Bensonhurst - Bay Ridge	9.4	2.7	2.1	1.1	2.0	1.4	0.2
210	Coney Island - Sheepshead Bay	7.9	2.3	2.1	1.3	1.0	1.1	0.1
211	Williamsburg - Bushwick	18.4	7.6	4.2	4.4	0.9	1.3	0.0
301	Washington Heights - Inwood	45.3	15.8	10.7	15.7	2.2	0.7	0.2
302	Central Harlem - Morningside Heights	28.9	10.6	7.7	5.6	3.8	1.1	0.1
303	East Harlem	25.3	12.2	5.1	4.5	2.7	0.7	0.0
304	Upper West Side	25.6	6.7	6.6	4.6	6.5	0.8	0.3
305/307	Upper East Side - Gramercy	24.5	5.2	5.5	3.1	9.6	0.8	0.3
306/308	Chelsea - Village	53.3	20.5	11.0	6.2	14.1	1.1	0.3
309/310	Union Square, Lower Manhattan	39.4	16.5	8.6	5.0	8.4	0.8	0.2
401	Long Island City - Astoria	19.5	7.5	5.5	2.4	2.5	1.4	0.2
402	West Queens	9.9	3.5	3.2	1.6	0.7	0.8	0.1
403	Flushing - Clearview	6.2	1.2	1.7	1.0	1.0	1.1	0.2
405	Ridgewood - Forest Hills	11.1	3.3	2.6	2.5	1.2	1.3	0.2
407	Southwest Queens	11.9	4.2	2.7	2.9	0.6	1.3	0.1
408	Jamaica	9.2	3.0	2.6	1.9	0.5	1.1	0.0
409	Southeast Queens	5.9	1.4	1.3	1.6	0.4	1.2	0.1
410	Rockaway	6.5	1.7	1.6	1.3	0.6	1.0	0.2
404/406	Bayside - Meadows	5.6	1.2	1.5	1.1	0.7	1.0	0.2
501/502	Northern SI	12.1	3.8	2.4	2.2	0.9	2.5	0.3
503/504	Southern SI	6.9	1.3	1.7	0.9	0.6	2.2	0.2

^The United Hospital Fund (UHF) classifies New York City into 42 neighborhoods, comprised of contiguous zip codes, several of which were combined to create the 34 neighborhoods presented here.

<sup>1</sup> Loud Music or Parties: noise from loud music.

<sup>2</sup> Social Environment Noises: noise from neighbors, loud talking, loud TV, alarms going off, ice cream trucks, or noise from ventilation units.

<sup>3</sup> Traffic or Transportation: noise from collection trucks, honking horn, car or truck music, or engine idling.

<sup>4</sup> Construction: noise from construction going on before/after hours, construction equipment, or jack hammering.

<sup>5</sup> Animals: barking dog or any other animal noise.

**Table 5: Prevalence of noise by type, source, and traffic density, by neighborhood (UHF34)<sup>a</sup>, New York City, 2009**

Sources: NYC Community Health Survey, 2009; MPSI TrafficMetrix, 2013; New York Metropolitan Transportation Council, 2012

UHF34 Code	Neighborhood (UHF34) <sup>a</sup>	Type		Source (among those reporting any noise disruption in the past 3 months)				Traffic Density <sup>c</sup>
		Any Noise	FDNE <sup>b</sup>	Traffic	Neighbors	Sirens	Street	
101	Kingsbridge - Riverdale	38.0*	18.6	60.1*	59.1*	51.6*	37.2*	32.7
102	Northeast Bronx	38.6	16.7	48.8*	54.5*	42.8*	48.7*	22.2
103	Fordham - Bronx Park	42.2	28.4	43.0	72.3*	47.6*	45.7*	32.7
104	Pelham - Throgs Neck	33.5	15.6	46.0*	50.5*	41.8*	48.4*	29.7
105/106/107	South Bronx	44.0	27.8	48.5	64.9	51.7	54.3	42.0
201	Greenpoint	41.2	22.7	48.3*	59.2*	43.4*	57.1*	40.8
202	Downtown - Heights - Slope	47.3	21.1	62.2	38.9*	47.7*	42.4*	56.2
203	Bedford Stuyvesant - Crown Heights	44.3	22.3	59.4*	58.7*	53.5*	55.2*	46.4
204	East New York	44.1	30.9	53.6*	57.7*	53.2*	65.7*	26.2
205	Sunset Park	43.6*	27.3*	66.1*	43.9*	53*	44.1*	41.2
206	Borough Park	38.8	20.0	60.7*	47.4*	61.9*	41.5*	29.9
207	East Flatbush - Flatbush	36.7	15.1	31.2*	71.1*	32*	41.9*	36.9
208	Canarsie - Flatlands	29.2	11.4	57.1*	63.2*	54.5*	53.9*	22.7
209	Bensonhurst - Bay Ridge	42.9	15.4	45.8*	51*	31.6	28.4*	32.3
210	Coney Island - Sheepshead Bay	42.1	23.6	60.9*	51.7*	41.2*	44.4*	21.7
211	Williamsburg - Bushwick	29.9	14.5	59.8*	48.6*	57.1*	58.9*	21.5
301	Washington Heights - Inwood	34.8	19.5	63.3	42.8*	47*	57*	59.9
302	Central Harlem - Morningside Heights	49.4*	35.3*	67.3*	57.5*	68.3*	55.9*	46.7
303	East Harlem	40.0	27.7*	65.5*	29.7*	65*	38.4*	67.6
304	Upper West Side	40.4	14.4	37.7*	37.2*	39.5*	24*	66.7
305/307	Upper East Side - Gramercy	42.6	21.3	58.3*	37.0	62.3*	26.2	80.7
306/308	Chelsea - Village	48.2	25.4	72.5	26.0	62.8	44.9	61.8
309/310	Union Square, Lower Manhattan	46.9	23.9	59.6*	32.4	56.5	62.6	62.6
401	Long Island City - Astoria	37.9	18.9	45.0	52.6*	47.4*	45.5*	25.8
402	West Queens	36.1	18.0	62.5	57.9	46.7*	47.5*	53.5
403	Flushing - Clearview	36.9	18.5	55*	47.7*	42.8*	29.9*	27.2
405	Bayside - Meadows	32.3	12.6	61.7*	49.0*	50.9*	22.8	46.4
407	Ridgewood - Forest Hills	43.9	22.1	63.9*	28.6	54.8*	43.4*	36.9
408	Southwest Queens	34.1	16.4	61.4*	46.9*	35.6*	46.2*	29.9
409	Jamaica	27.6	13.9	62.2*	63.6*	39.3*	60.7*	38.7
410	Southeast Queens	22.8	13.8	56.2*	33.4*	44.6*	58.4*	36.3
404/406	Rockaway	40.5*	16.3	41.5*	63.4*	28.2*	46.7*	6.6
501/502	Northern SI	33.5	12.6	45.8*	52.0*	37.3*	40.2	16.1
503/504	Southern SI	28.3	13.4	65.0	52.2	36.9	41.8*	12.0

\*Estimate should be interpreted with caution.

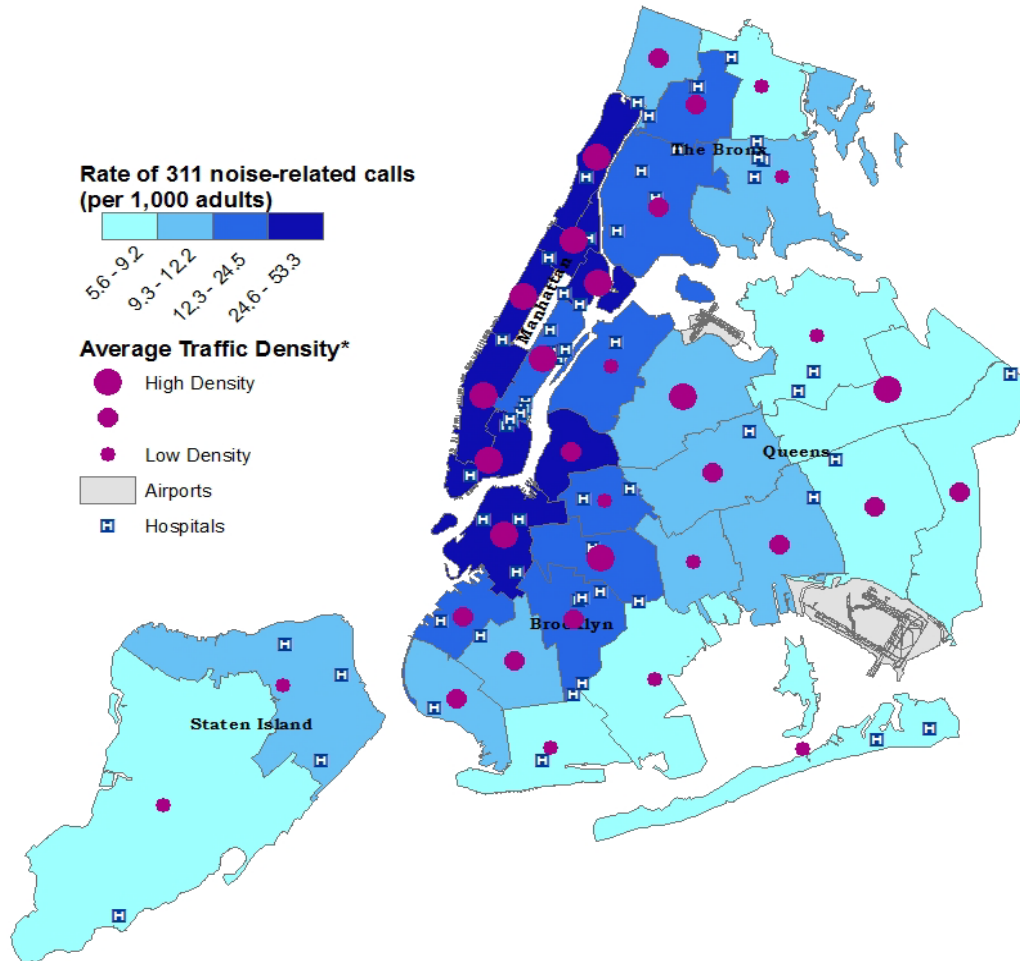
(a) The United Hospital Fund (UHF) classifies New York City into 42 neighborhoods, comprised of contiguous zip codes, several of which were combined to create the 34 neighborhoods presented here.

(b) Frequent Disruptive Noise Exposure (FDNE) is defined as a person experiencing noise disruption three or more times per week.

(c) Traffic Density: Kernel road density (weighted by NYMTC traffic counts).

**Map1: Noise-related complaints filed with the 311 system by neighborhood (UHF34),^ New York City, 2009**

Sources: 311 Noise complaints, 2009; MPSI TrafficMetrix, 2013; New York Metropolitan Transportation Council, 2012.



^The United Hospital Fund (UHF) classifies New York City into 42 neighborhoods, comprised of contiguous zip codes, several of which were combined to create the 34 neighborhoods presented here.

\*Traffic Density: Kernel road density (weighted by NYMTC traffic counts).



**Table 6: Frequency of source of noise reported to the 311 system, New York City, 2009***Source: 311 Noise complaints, 2009*

Noise Category	Frequency	Percent
Loud Music and Party <sup>1</sup>	38139	34.0%
Social Environment <sup>2</sup>	26282	24.0%
Traffic and Transportation <sup>3</sup>	22856	20.0%
Construction <sup>4</sup>	16690	15.0%
Animals <sup>5</sup>	6810	6.0%
Other	953	1.0%

1 Loud Music or Parties: noise from loud music.

2 Social Environment Noises: noise from neighbors, loud talking, loud TV, alarms going off, ice cream trucks, or noise from ventilation units.

3 Traffic or Transportation: noise from collection trucks, honking horn, car or truck music, or engine idling.

4 Construction: noise from construction going on before/after hours, construction equipment, or jack hammering.

5 Animals: barking dog or any other animal noise.

**Table 7: 311 noise complaints rates by New York City borough, 2009**

*Sources: 311 Noise complaints, 2009; NYC DOHMH population estimates, modified from US Census Bureau interpolated intercensal population estimates, 2009. Updated July 22, 2013.*

Borough	Rate of Noise complaints (per 1,000 Adults)
Bronx	13.2
Brooklyn	15.1
Queens	9.9
Manhattan	35.2
Staten Island	9.1

## Appendix: Data Notes

### Text of questions from the Community Health Survey, 2009:

**Q10.4** - During the past 3 months, how often has noise in your building or from outside disrupted your activities at home, such as watching television, listening to the radio, conversation or sleep?

1\_\_ PER DAY

2\_\_ PER WEEK

3\_\_ PER MONTH

777 DON'T KNOW/NOT SURE

888 NONE / NEVER / RARELY

**Q10.5** – (Only if Q10.4 different from 777, 888, or 999) Which of these sources of noise have been disruptive to you in your home over the past 3 months? How about [INSERT]

- a. Neighbors
- b. Construction
- c. Cars, trucks or other vehicles, not including noise from emergency sirens
- d. Emergency sirens, including fire engines, ambulances and police sirens
- e. Restaurants, bars or clubs
- f. Other activity of people on the street or sidewalk
- g. Dog barking or other animal noise
- h. Subways or trains