

American Housing Survey - 2005  
Selected Elements Related to Healthy Homes

Characteristics	Total Occupied Units			Const. < 4 Years	Manuf. Housing	Severe Problems	Moderate Problems	Moved in past year	Below poverty level	In MSAs, Central Cities	Urban Total	Rural Total
	Owner	Renter										
<b>Total Occupied Units (,000)</b>	<b>108,871</b>	<b>74,931</b>	<b>33,940</b>	<b>5,944</b>	<b>6,940</b>	<b>2,021</b>	<b>4,176</b>	<b>18,882</b>	<b>15,124</b>	<b>31,783</b>	<b>81,259</b>	<b>27,613</b>
<b>GENERAL</b>												
Owner occupied (,000)	74,931	74,931	-	4,919	5,516	922	1,645	6,591	6,450	17,257	51,909	23,022
Renter occupied (,000)	33,940	-	<b>33,940</b>	1,025	1,424	<b>1,099</b>	<b>2,531</b>	12,291	<b>8,674</b>	<b>14,526</b>	29,350	4,591
Owner occupied	69%	100%		83%	79%	<b>46%</b>	<b>39%</b>	35%	<b>43%</b>	<b>54%</b>	64%	83%
Renter occupied	31%		<b>100%</b>	17%	21%	<b>54%</b>	<b>61%</b>	65%	<b>57%</b>	<b>46%</b>	36%	17%
<b>Units in Structure</b>												
1, detached	64.3%	82.3%	<b>24.4%</b>	71.2%		<b>45.9%</b>	<b>41.4%</b>	41.4%	<b>43.6%</b>	<b>51.3%</b>	60.3%	76.1%
1, attached	5.7%	5.3%	<b>6.4%</b>	8.1%		<b>5.4%</b>	<b>2.8%</b>	6.9%	<b>5.6%</b>	<b>7.4%</b>	6.8%	2.2%
2 to 4	7.7%	2.1%	<b>20.1%</b>	3.4%		<b>12.6%</b>	<b>17.1%</b>	13.7%	<b>13.1%</b>	<b>12.5%</b>	9.5%	2.5%
5 to 9	4.7%	0.7%	<b>13.6%</b>	2.1%		<b>8.1%</b>	<b>9.7%</b>	9.9%	<b>8.4%</b>	<b>7.3%</b>	5.9%	1.2%
10 to 19	4.4%	0.8%	<b>12.3%</b>	3.4%		<b>8.5%</b>	<b>9.2%</b>	10.2%	<b>6.0%</b>	<b>6.4%</b>	5.5%	1.0%
20 to 49	3.3%	0.6%	<b>9.4%</b>	2.7%		<b>6.2%</b>	<b>7.3%</b>	6.4%	<b>5.4%</b>	<b>6.0%</b>	4.3%	0.4%
50 or more	3.6%	0.9%	<b>9.5%</b>	2.7%		<b>7.3%</b>	<b>5.5%</b>	5.0%	<b>7.9%</b>	<b>7.5%</b>	4.8%	0.2%
Manufactured / mobile home or trailer	6.4%	7.4%	<b>4.2%</b>	6.5%	100.0%	<b>6.0%</b>	<b>6.9%</b>	6.5%	<b>10.0%</b>	<b>1.7%</b>	3.0%	16.3%
<b>Year Structure Built</b>												
Post-2000	8.0%	9.4%	<b>4.8%</b>	100.0%	11.8%	<b>2.5%</b>	<b>2.4%</b>	14.5%	<b>5.1%</b>	<b>5.8%</b>	7.3%	10.0%
Post-1980	34.5%	37.7%	<b>27.4%</b>	100.0%	67.7%	<b>18.0%</b>	<b>18.3%</b>	40.6%	<b>26.3%</b>	<b>23.5%</b>	31.4%	43.4%
Pre-1980	65.5%	62.3%	<b>72.6%</b>	0.0%	32.3%	<b>82.0%</b>	<b>81.7%</b>	59.4%	<b>73.7%</b>	<b>76.5%</b>	68.6%	56.6%
Pre-1960	33.0%	31.5%	<b>36.4%</b>	0.0%	1.9%	<b>49.0%</b>	<b>48.5%</b>	28.2%	<b>37.0%</b>	<b>44.6%</b>	35.5%	25.9%
Pre-1940	16.2%	14.2%	<b>20.4%</b>	0.0%	0.7%	<b>27.7%</b>	<b>26.9%</b>	14.8%	<b>18.9%</b>	<b>23.8%</b>	16.5%	15.1%
<b>Foundation</b>												
1-unit building excluding manuf. housing	69.9%	87.6%	<b>30.9%</b>	79.3%	0.0%	<b>51.3%</b>	<b>44.3%</b>	48.3%	<b>49.2%</b>	<b>58.7%</b>	67.1%	78.3%
With basement under all of building	22.9%	30.2%	<b>7.0%</b>	23.4%	0.0%	<b>16.2%</b>	<b>6.8%</b>	12.6%	<b>13.7%</b>	<b>18.9%</b>	21.9%	26.0%
With basement under part of building	8.0%	10.5%	<b>2.6%</b>	3.8%	0.0%	<b>5.9%</b>	<b>3.2%</b>	4.4%	<b>4.0%</b>	<b>4.7%</b>	6.9%	11.3%
With crawlspace	17.5%	20.9%	<b>10.0%</b>	13.6%	0.0%	<b>17.5%</b>	<b>25.8%</b>	12.3%	<b>16.4%</b>	<b>14.4%</b>	14.9%	25.2%
On concrete slab	21.1%	25.8%	<b>10.9%</b>	38.1%	0.0%	<b>10.8%</b>	<b>8.2%</b>	18.7%	<b>14.7%</b>	<b>20.4%</b>	23.1%	15.3%

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	Owner	Renter	Manuf. Housing									
Total Occupied Units (,000)	108,871	74,931	33,940	5,944	6,940	2,021	4,176	18,882	15,124	31,783	81,259	27,613
<b>EXTERIOR</b>												
<b>External Building Conditions</b>												
Sagging roof	2.1%	1.8%	2.6%	0.5%	3.6%	<b>7.3%</b>	<b>7.6%</b>	2.0%	3.2%	2.1%	1.9%	2.4%
Missing roofing material	3.7%	3.2%	4.7%	2.0%	2.8%	<b>10.0%</b>	<b>8.4%</b>	3.8%	<b>5.4%</b>	4.2%	3.7%	3.5%
Hole in roof	1.8%	1.4%	2.8%	0.6%	2.7%	<b>7.3%</b>	<b>7.8%</b>	2.0%	3.2%	2.3%	1.9%	1.7%
Missing bricks, siding, other outside wall material	2.7%	2.1%	4.0%	0.7%	3.3%	<b>9.0%</b>	<b>9.7%</b>	3.1%	4.7%	3.1%	2.6%	3.0%
Sloping outside walls	1.3%	0.9%	2.1%	0.4%	2.4%	<b>6.2%</b>	<b>6.8%</b>	1.6%	2.4%	1.4%	1.3%	1.4%
Boarded up windows	0.9%	0.6%	1.6%	0.3%	1.3%	4.3%	<b>4.3%</b>	1.3%	2.3%	1.3%	0.9%	0.9%
Broken windows	3.5%	2.9%	4.8%	0.7%	<b>6.4%</b>	<b>10.1%</b>	<b>12.5%</b>	4.2%	<b>5.6%</b>	4.0%	3.3%	4.0%
Bars on windows	3.9%	2.7%	<b>6.4%</b>	0.5%	0.4%	<b>7.3%</b>	<b>8.6%</b>	3.8%	<b>6.1%</b>	<b>9.8%</b>	<b>5.0%</b>	0.5%
Foundation crumbling or has open crack or hole	2.3%	2.0%	3.0%	0.8%	1.5%	<b>7.5%</b>	<b>7.5%</b>	2.1%	3.7%	2.7%	2.3%	2.4%
<i>None of the above</i>	<i>81.8%</i>	<i>85.4%</i>	<i>74.0%</i>	<i>94.0%</i>	<i>81.6%</i>	<i>66.4%</i>	<i>58.6%</i>	<i>80.3%</i>	<i>73.4%</i>	<i>74.0%</i>	<i>80.7%</i>	<i>85.2%</i>
<b>Water Leakage During Last 12 Months</b>												
With leakage from outside structure	<b>10.7%</b>	<b>11.2%</b>	<b>9.8%</b>	<b>6.4%</b>	<b>12.3%</b>	<b>18.4%</b>	<b>27.4%</b>	<b>8.7%</b>	<b>10.1%</b>	<b>10.8%</b>	<b>10.5%</b>	<b>11.3%</b>
Roof	<b>5.4%</b>	<b>5.5%</b>	<b>5.1%</b>	2.2%	<b>8.5%</b>	<b>11.1%</b>	<b>16.5%</b>	4.1%	<b>5.8%</b>	<b>5.8%</b>	<b>5.2%</b>	<b>5.7%</b>
Basement	3.3%	4.0%	1.6%	1.4%	0.1%	3.7%	3.8%	2.0%	2.0%	2.7%	3.0%	4.1%
Walls, closed windows, or doors	2.2%	2.0%	2.7%	2.7%	3.4%	<b>6.3%</b>	<b>7.3%</b>	2.3%	2.6%	2.5%	2.4%	1.7%
Other or Unknown	1.2%	1.1%	1.4%	0.9%	1.5%	2.2%	4.0%	1.2%	1.0%	1.2%	1.2%	1.1%

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	Units	Owner	Renter	Years	Housing	Problems	Problems							
Total Occupied Units (,000)	108,871	74,931	33,940	5,944	6,940	2,021	4,176	18,882	15,124	31,783	81,259	27,613		
<b>INTERIOR</b>														
<b>Damage</b>														
Holes in floors	0.9%	0.7%	1.4%	0.3%	2.7%	5.4%	8.2%	1.0%	2.0%	1.1%	0.9%	1.0%		
Open cracks or holes	4.8%	3.7%	7.2%	2.5%	7.3%	14.0%	29.0%	5.5%	7.5%	6.1%	4.9%	4.6%		
Broken plaster or peeling paint	2.0%	1.4%	3.4%	0.5%	1.5%	7.5%	18.8%	2.1%	3.5%	3.1%	2.3%	1.3%		
<b>Water Leakage During Last 12 Months</b>														
With leakage from inside structure	8.3%	7.0%	11.3%	5.5%	10.9%	15.9%	26.7%	10.4%	9.4%	9.3%	<b>8.8%</b>	<b>7.0%</b>		
Fixtures backed up or overflowed	2.5%	2.1%	3.4%	1.9%	3.0%	6.6%	8.5%	3.5%	2.9%	2.9%	2.6%	2.1%		
Pipes leaked	3.5%	2.6%	5.6%	2.2%	5.5%	8.5%	13.4%	4.8%	4.8%	4.3%	3.7%	2.9%		
Broken water heater	0.9%	0.9%	0.7%	0.4%	1.7%	1.8%	2.3%	0.6%	0.8%	0.7%	0.9%	0.8%		
Other or Unknown	2.1%	1.8%	2.8%	1.4%	1.6%	3.7%	6.3%	2.4%	2.0%	2.3%	2.2%	1.7%		
<b>Rodents</b>														
Signs of rats in last 3 months	0.8%	0.6%	1.2%	0.2%	1.0%	4.1%	3.8%	0.7%	1.3%	1.3%	0.9%	0.5%		
Signs of mice in last 3 months	5.6%	5.2%	6.5%	2.2%	10.0%	11.8%	12.1%	4.5%	7.2%	6.0%	4.6%	<b>8.7%</b>		
Signs of rodents, not sure which kind in last 3 months	0.3%	0.2%	0.4%	0.1%	0.5%	0.9%	0.7%	0.4%	0.6%	0.4%	0.3%	0.2%		
<b>Electrical</b>														
No electrical wiring	0.0%	0.1%	0.0%	0.1%	0.0%	1.5%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%		
Exposed wiring	0.6%	0.6%	0.7%	0.9%	0.9%	1.9%	1.5%	0.7%	1.1%	0.7%	0.6%	0.7%		
Rooms without electric outlets	1.4%	1.2%	1.9%	1.2%	1.7%	4.8%	3.3%	2.1%	2.2%	1.8%	1.4%	1.3%		
With fuses or breakers blown in last 3 months	<b>9.0%</b>	<b>8.9%</b>	<b>9.1%</b>	<b>8.4%</b>	<b>8.2%</b>	<b>17.6%</b>	<b>14.0%</b>	<b>10.8%</b>	<b>7.5%</b>	<b>9.6%</b>	<b>9.2%</b>	<b>8.4%</b>		

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<b>SANITATION/WATER</b>												
Lacking complete kitchen facilities	1.6%	0.3%	4.2%	0.8%	0.6%	7.4%	<b>37.0%</b>	3.5%	3.2%	2.5%	1.9%	0.7%
Lacking some or all plumbing facilities	1.2%	0.9%	1.9%	0.2%	0.9%	<b>64.2%</b>	0.0%	1.5%	2.4%	1.7%	1.2%	1.1%
Water not safe to drink	<b>9.0%</b>	<b>7.0%</b>	<b>13.5%</b>	<b>8.0%</b>	<b>11.0%</b>	<b>13.9%</b>	<b>17.9%</b>	<b>12.2%</b>	<b>12.1%</b>	<b>11.3%</b>	<b>10.0%</b>	<b>6.2%</b>
With water stoppage in last 3 months	3.2%	2.6%	4.6%	2.1%	<b>7.1%</b>	<b>7.0%</b>	<b>7.7%</b>	3.9%	3.7%	3.5%	3.0%	3.9%
No flush toilets working some time in last 3 months	2.0%	1.1%	3.9%	1.1%	1.9%	<b>5.5%</b>	<b>10.0%</b>	3.7%	3.4%	2.5%	2.2%	1.4%
With sewage disposal breakdowns in last 3 months	1.2%	0.9%	1.6%	0.3%	1.5%	2.8%	4.3%	1.5%	1.4%	1.4%	1.2%	0.9%
<i>Septic tank, cesspool, chemical toilet</i>	20.2%	25.9%	7.6%	22.4%	54.8%	15.0%	16.7%	11.0%	16.3%	2.2%	5.6%	63.0%
With septic tank or cesspool breakdowns in last 3 months	1.3%	1.1%	2.5%	0.8%	0.9%	<b>5.0%</b>	3.7%	1.7%	1.8%	1.1%	1.8%	1.2%

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Total Occupied Units (,000)	108,871	74,931	33,940	5,944	6,940	2,021	4,176	18,882	15,124	31,783	81,259	27,613
<b>HEATING / FUEL</b>												
<b>Main Heating Equipment</b>												
Warm air furnace	62.7%	67.3%	52.5%	74.0%	75.7%	46.5%	35.2%	61.9%	55.3%	60.8%	63.8%	59.4%
Steam or hot water system	11.8%	10.3%	15.2%	2.2%	0.2%	21.1%	11.6%	9.1%	12.6%	15.9%	13.0%	8.5%
Electric heat pump	11.5%	12.1%	10.1%	20.0%	13.5%	6.8%	5.7%	13.4%	9.7%	9.3%	10.3%	14.8%
Built-in electric units	4.3%	2.8%	7.6%	1.2%	1.1%	5.6%	5.6%	5.7%	5.9%	3.7%	3.9%	5.5%
Floor, wall, or other built-in hot air units without ducts	4.7%	2.9%	8.6%	1.5%	2.5%	6.8%	6.2%	5.7%	7.2%	6.4%	5.3%	2.8%
Room heaters with flue	1.2%	1.0%	1.6%	0.2%	1.2%	2.4%	1.4%	1.0%	2.1%	0.9%	0.9%	2.2%
Room heaters without flue	1.2%	1.2%	1.3%	0.0%	1.6%	2.7%	<b>30.5%</b>	0.9%	2.7%	1.1%	0.9%	2.2%
Portable electric heaters	0.8%	0.6%	1.4%	0.3%	1.9%	2.6%	1.7%	1.0%	1.9%	1.0%	0.8%	0.9%
Stoves	0.8%	1.0%	0.5%	0.3%	1.1%	2.5%	0.7%	0.2%	1.2%	0.1%	0.2%	2.7%
Fireplaces with inserts	0.1%	0.2%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%
Fireplaces without inserts	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%
Other	0.3%	0.2%	0.4%	0.2%	0.3%	0.7%	0.4%	0.4%	0.5%	0.3%	0.3%	0.3%
Cooking stove	0.1%	0.1%	0.2%	0.0%	0.2%	0.7%	0.2%	0.1%	0.2%	0.2%	0.1%	0.1%
None	0.4%	0.3%	0.6%	0.1%	0.5%	1.5%	0.8%	0.5%	0.6%	0.4%	0.4%	0.2%
<b>Water Heating Fuel</b>												
Electricity	39.4%	37.2%	44.1%	43.3%	72.9%	35.5%	39.8%	46.7%	45.8%	29.8%	32.6%	59.4%
Piped gas	51.5%	53.3%	47.6%	50.5%	18.6%	49.0%	50.5%	47.7%	45.4%	62.8%	60.9%	24.0%
Other	9.1%	9.4%	8.3%	6.2%	8.5%	15.5%	9.6%	5.6%	8.8%	7.3%	6.5%	16.6%
<b>Clothes Dryer Fuel</b>												
Electricity	77.1%	75.2%	85.5%	79.1%	92.0%	76.2%	82.7%	83.4%	83.5%	73.8%	72.6%	88.0%
Piped gas	21.4%	23.1%	13.8%	19.2%	5.8%	22.5%	16.2%	15.8%	14.9%	25.7%	26.8%	8.5%
Other	1.5%	1.6%	0.7%	1.7%	2.2%	1.3%	1.1%	0.9%	1.5%	0.5%	0.6%	3.6%
<b>Heating Problems</b>												
Uncomfortably cold for 24 hours or more last winter	<b>7.3%</b>	<b>5.9%</b>	<b>11.0%</b>	<b>5.5%</b>	<b>10.0%</b>	<b>40.6%</b>	<b>17.4%</b>	<b>10.0%</b>	<b>10.3%</b>	<b>9.0%</b>	<b>7.2%</b>	<b>7.5%</b>
Heating equipment breakdowns	2.4%	1.8%	4.0%	1.5%	2.2%	35.6%	2.9%	3.2%	3.1%	3.3%	2.6%	1.8%
Other causes	<b>5.1%</b>	4.2%	<b>7.3%</b>	4.1%	<b>8.0%</b>	<b>8.9%</b>	<b>15.0%</b>	<b>7.1%</b>	<b>7.6%</b>	<b>6.0%</b>	4.8%	<b>5.8%</b>
Utility interruption	1.5%	1.7%	1.1%	1.6%	3.2%	1.4%	1.9%	1.3%	1.4%	1.2%	1.1%	2.8%
Inadequate heating capacity	1.0%	0.5%	2.3%	0.5%	1.3%	3.2%	5.2%	1.7%	2.3%	1.5%	1.1%	0.7%
Inadequate insulation	0.9%	0.5%	1.8%	0.5%	1.9%	3.6%	3.9%	1.9%	2.0%	1.2%	0.9%	0.7%
Cost of heating	0.8%	0.7%	1.1%	0.5%	1.2%	1.4%	2.5%	1.1%	1.4%	0.8%	0.7%	0.9%
Other	1.5%	1.1%	2.4%	1.5%	1.3%	2.7%	4.8%	2.1%	2.1%	2.0%	1.6%	1.2%

American Housing Survey - 2005  
Selected Elements Related to Healthy Homes

Characteristics	Total Occupied Units			Const.	Manuf.	Severe Problems	Moderate Problems	Moved in past year	Below poverty level	In MSAs, Central Cities	Urban Total	Rural Total
	Units	Owner	Renter	< 4 Years	Housing							
Total Occupied Units (,000)	108,871	74,931	33,940	5,944	6,940	2,021	4,176	18,882	15,124	31,783	81,259	27,613
<b>SELECTED PHYSICAL PROBLEMS</b>												
<b>Severe physical problems (,000)</b>	<b>2,021</b>	<b>922</b>	<b>1,099</b>	<b>34</b>	<b>122</b>	<b>2,021</b>	<b>-</b>	<b>396</b>	<b>583</b>	<b>845</b>	<b>1,562</b>	<b>459</b>
Severe physical problems	<b>1.9%</b>	<b>1.2%</b>	<b>3.2%</b>	0.6%	<b>1.8%</b>			<b>2.1%</b>	<b>3.9%</b>	<b>2.7%</b>	<b>1.9%</b>	<b>1.7%</b>
Plumbing	<b>1.2%</b>	0.9%	<b>1.9%</b>	0.2%	0.9%	<b>64.2%</b>	0.0%	<b>1.5%</b>	<b>2.4%</b>	<b>1.7%</b>	<b>1.2%</b>	<b>1.1%</b>
Heating	0.6%	0.3%	<b>1.2%</b>	0.3%	0.8%	<b>31.8%</b>	0.0%	0.6%	<b>1.2%</b>	0.9%	0.6%	0.5%
Electric	0.1%	0.1%	0.1%	0.1%	0.0%	<b>3.6%</b>	0.0%	0.1%	0.2%	0.1%	0.0%	0.1%
Upkeep	0.0%	0.0%	0.1%	0.0%	0.1%	<b>2.6%</b>	0.0%	0.0%	0.2%	0.1%	0.1%	0.0%
<b>Moderate physical problems (,000)</b>	<b>4,175</b>	<b>1,645</b>	<b>2,531</b>	<b>65</b>	<b>287</b>	<b>-</b>	<b>4,175</b>	<b>1,065</b>	<b>1,131</b>	<b>1,659</b>	<b>3,217</b>	<b>959</b>
Moderate physical problems	<b>3.8%</b>	<b>2.2%</b>	<b>7.5%</b>	<b>1.1%</b>	<b>4.1%</b>			<b>5.6%</b>	<b>7.5%</b>	<b>5.2%</b>	<b>4.0%</b>	<b>3.5%</b>
Plumbing	0.1%	0.1%	0.3%	0.0%	0.2%	0.0%	3.7%	0.3%	0.3%	0.2%	0.2%	0.1%
Heating	1.2%	1.1%	1.2%	0.0%	1.6%	0.0%	<b>30.5%</b>	0.9%	2.5%	1.1%	0.9%	2.1%
Upkeep	1.1%	0.7%	2.0%	0.2%	2.0%	0.0%	<b>29.0%</b>	1.2%	2.0%	1.7%	1.2%	0.8%
Hallways	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	2.8%	0.2%	0.2%	0.2%	0.1%	0.0%
Kitchen	1.4%	0.3%	3.9%	0.8%	0.5%	0.0%	<b>37.0%</b>	3.2%	2.7%	2.2%	1.7%	0.5%
<b>Overall Opinion of Structure</b>												
1 (worst)	0.4%	0.2%	1.0%	0.1%	0.9%	3.4%	2.4%	0.7%	<b>13.3%</b>	0.7%	0.5%	0.4%
2	0.3%	0.2%	0.7%	0.1%	1.2%	1.4%	1.7%	0.6%	0.7%	0.5%	0.3%	0.3%
3	0.6%	0.3%	1.4%	0.2%	1.0%	1.9%	2.3%	1.0%	1.3%	1.0%	0.7%	0.5%
4	0.9%	0.4%	2.0%	0.2%	1.8%	2.9%	3.0%	1.4%	1.6%	1.3%	1.0%	0.7%
5	<b>5.1%</b>	3.3%	<b>9.1%</b>	2.1%	<b>9.3%</b>	<b>12.1%</b>	<b>12.8%</b>	<b>6.4%</b>	<b>8.6%</b>	<b>6.4%</b>	<b>5.2%</b>	<b>5.0%</b>
6	4.9%	3.6%	7.7%	2.3%	8.2%	8.1%	7.9%	6.2%	6.2%	5.8%	5.1%	4.3%
7	13.6%	11.6%	18.0%	8.6%	14.0%	15.1%	16.8%	16.8%	12.6%	15.4%	14.6%	10.6%
8	27.5%	27.9%	26.8%	21.8%	22.3%	20.5%	22.7%	28.5%	23.3%	27.9%	28.1%	25.7%
9	15.7%	17.6%	11.4%	20.2%	12.1%	11.7%	9.4%	13.3%	11.6%	14.3%	15.5%	16.0%
10 (best)	27.6%	31.4%	19.1%	42.6%	25.5%	20.1%	18.0%	22.4%	28.0%	23.1%	25.7%	33.1%

# American Housing Survey: A Healthy Homes Perspective

## Overview

The survey is conducted by the Bureau of the Census for the Department of Housing and Urban Development (HUD). The results and details are available at [www.census.gov/hhes/www/housing/ahs/ahs.html](http://www.census.gov/hhes/www/housing/ahs/ahs.html).

The American Housing Survey (AHS) collects data on the Nation's housing, including apartments, single-family homes, mobile homes, vacant housing units, household characteristics, income, housing and neighborhood quality, housing costs, equipment and fuels, size of housing unit, and recent movers. National data are collected in odd numbered years, and data for each of 47 selected Metropolitan Areas are collected currently about every six years. The national sample covers an average 55,000 housing units. Each metropolitan area sample covers 4,100 or more housing units.

The AHS returns to the same housing units year after year to gather data; therefore, this survey is ideal for analyzing the flow of households through housing.

## Key Definitions Related to Healthy Homes

1. **Broken plaster or peeling paint (interior).** The area of peeling paint or broken plaster must be on the inside walls or ceilings and at least one area of broken plaster or peeling paint must be larger than 8 inches by 11 inches.
2. **Electric fuses and circuit breakers.** These statistics are presented for occupied housing units. The data show whether an electric fuse has blown or circuit breaker has tripped in the home in the 3 months prior to the interview, or while the household was living in the unit if less than 3 months. A blown fuse or tripped breaker switch results in the temporary loss of electricity until the fuse is replaced or the breaker switch reset. Blown fuses inside major pieces of installed equipment (such as some air conditioners) are counted as blown fuses or tripped breaker switches. The item may identify inadequate wiring, but it also happens commonly when people move into houses and are unfamiliar with which items can be turned on at the same time.
3. **Electric wiring.** A housing unit is classified as having exposed electric wiring if the unit has any wiring that is not enclosed, either in the walls or in metal or plastic coverings. Excluded are appliance cords, extension cords, chandelier cords, and telephone, antenna, or cable television wires.
4. **Electric wall outlets.** A housing unit is classified as having rooms without electric wall outlets if there is not at least one working electric wall outlet in each room of the unit. A working electric wall outlet is one that is in operating condition; that is, it can be used when needed. If a room does not have an electric wall outlet, an extension cord used in place of a wall outlet is not considered to be an electric wall outlet.
5. **Flush toilet and flush toilet breakdowns.** A privy or chemical toilet is not considered a flush toilet. Flush toilets outside the unit were not counted. The statistics on breakdowns of flush toilet are shown for housing units with at least one flush toilet for the household's use only. The flush toilet may be completely unusable because of a faulty flushing mechanism, broken pipes, stopped up sewer pipe, lack of water supplied to the flush toilet, or some other reason. For households with more than one toilet, the question asked about times when *all* toilets were unusable.
6. **Foundation.** This item is restricted to one-unit buildings and excludes mobile homes. A structure has a basement if there is an enclosed space at least partially underground in which a person can walk upright under all or part of the building. The basement is under all the building if it is under the entire main structure, excluding garages, car-ports, and porches. Crawl space is space between the ground and the first floor of the house, but it is not high enough for a person to walk upright. A house is built on a concrete slab

## American Housing Survey: A Healthy Homes Perspective

if it is built on concrete that has been poured on the ground. The “other” category refers to a house built on stilts or pilings (for example, beach houses), boats, and motor homes. housing unit is still too cold for the occupants. *Inadequate insulation* refers to air drafts through window frames, electrical outlets, or walls that are cold. *Cost of heating* refers to the occupants turning down their thermostat or turning the equipment off altogether to save money. This category includes utilities/fuels that are unavailable due to unpaid bills.

7. **Holes in floors.** Respondents were asked about holes in the interior floors of the unit. The holes may or may not go all the way through to a lower floor or to the exterior of the unit. The holes are only counted if large enough for someone to trip in.
8. **Light fixtures in public halls.** These statistics are presented for housing units in two-or-more-unit structures. Data include whether or not there are light fixtures in the public halls and whether or not some, none, or all of the light fixtures are in working order. Light fixtures include wall lights, ceiling lights, or table lamps in the public halls of the building. Public halls are used by the occupants and guests to get to their apartment doors.
9. **Open cracks or holes (interior).** Statistics are presented on open cracks or holes in the interior wall or ceilings of the housing unit. Included are cracks or holes that do not go all the way through to the next room or to the exterior of the housing unit. Hairline cracks or cracks that appear in the walls or ceilings but are not large enough to insert the edge of a dime, are not counted. Very small holes caused by nails or other similar objects are also not counted.
10. **Plumbing facilities.** The category “With all plumbing facilities” consists of housing units that have hot and cold piped water as well as a flush toilet and a bathtub or shower. For units with less than two full bathrooms, the facilities are only counted if they are for the exclusive use of the occupants of the unit. Plumbing facilities need not be in the same room. Lacking some plumbing facilities or having no plumbing facilities for exclusive use means that the housing unit does not have all three specified plumbing facilities (hot and cold piped water, flush toilet, and bathtub or shower) inside the housing unit, or that the toilet or bathing facilities are also for the use of the occupants of other housing units. See also the definitions “Complete bathrooms,” “Flush toilet and flush toilet breakdowns,” and “Sewage disposal and sewage disposal breakdowns.”
11. **Signs of mice or rats.** The statistics on signs of mice or rats refer to respondents who reported seeing mice or rats or signs of mice or rats inside the house or building during the 3 months prior to interview or while the household was living in the unit if less than 3 months. Signs of mice or rats include droppings, holes in the wall, or ripped or torn food containers.
12. **Water leakage during last 12 months.** Data on water leakage are shown if the leakage occurred in the 12 months prior to the interview or while the household was living in the unit if less than 12 months. Housing units with water leakage are classified by whether the water leaked in from inside or outside the building and by the most common areas (roof, basement, walls, closed windows, or doors) or reasons (fixtures backed up or over-flowed or pipes leaked) of water leakage.
13. **Room heater without flue** refers to any room heater that burns kerosene, gas, or oil, and that does not connect to flue, vent, or chimney.

# American Housing Survey: A Healthy Homes Perspective

## AHS's Rating System for Physical Problems

Physical Problems	Severe (any one of 5 categories)	Moderate (any one of 5 categories but none severe)
Plumbing	Lacking hot or cold piped water or a flush toilet, or lacking both bathtub and shower, all inside the structure (and for the exclusive use of the unit, unless there are two or more full bathrooms).	On at least three occasions during the last 3 months, all the flush toilets were broken down at the same time for 6 hours or more.
Heating	<ol style="list-style-type: none"> <li>1. Having been uncomfortably cold last winter for 24 hours or more because the heating equipment broke down, and</li> <li>2. It broke down at least three times last winter for at least 6 hours each time.</li> </ol>	Having unvented gas, oil, or kerosene heaters as the primary heating equipment.
Electric / Kitchen	<p><i>Electric Physical Problems</i></p> <ol style="list-style-type: none"> <li>1. Having no electricity, or</li> <li>2. All of the following three electric problems:               <ol style="list-style-type: none"> <li>a. Exposed wiring,</li> <li>b. A room with no working wall outlet, and</li> <li>c. Three blown fuses or tripped circuit breakers in the last 90 days.</li> </ol> </li> </ol>	<p><i>Kitchen Physical Problems</i></p> <p>Lacking a:</p> <ol style="list-style-type: none"> <li>1. Kitchen sink,</li> <li>2. Refrigerator, or</li> <li>3. Cooking equipment (stove, burners, or microwave oven)</li> </ol> <p>inside the structure for the exclusive use of the unit.</p>
Hallways	<p>Having all of the following four problems in public areas:</p> <ol style="list-style-type: none"> <li>1. No working light fixtures.</li> <li>2. Loose or missing steps.</li> <li>3. Loose or missing railings.</li> <li>4. No working elevator.</li> </ol>	Having any three of the four problems listed under “Physical problems—severe” under Hallways.
Upkeep	<p>Having any five of the following six maintenance problems:</p> <ol style="list-style-type: none"> <li>1. Water leaks from the outside, such as from the roof, basement, windows, or doors.</li> <li>2. Leaks from inside structure such as pipes or plumbing fixtures.</li> <li>3. Holes in the floors.</li> <li>4. Holes or open cracks in the walls or ceilings.</li> <li>5. More than 8 inches by 11 inches of peeling paint or broken plaster.</li> <li>6. Signs of rats in the last 90 days.</li> </ol>	Having any three or four of the six problems listed under “Physical problems—severe” under Upkeep.

# American Housing Survey: A Healthy Homes Perspective

## Potential Errors in American Housing Survey

All numbers from the American Housing Survey (AHS), except for sample size, are estimates. As in other surveys, errors come primarily from the following:

- **Incomplete data** – Incomplete data are adjusted by assuming that the respondents are similar to those not answering, and the size of these errors is estimated.
- **Wrong answers** – The U.S. Census Bureau does not adjust for wrong answers and does not estimate the size of the errors.
- **Sampling** – Sampling errors are not adjusted and the size of the error is estimated.

### WRONG ANSWERS

Wrong answers happen because people misunderstand questions, cannot recall the correct answer, or do not want to give the right answer. The table below shows which items have been measured for inconsistency when people are reinterviewed after a few weeks. The actual survey did not catch and reconcile these inconsistencies and continuously occurring errors are not measured at all. Thus, a high rate of wrong answers remains for some items. The Census Bureau categorizes these levels of inconsistency into three ranges:

1. Less than 20 is considered a low level of inconsistency.
2. Between 20 and 50 is considered a moderate level of inconsistency.
3. Greater than 50 is considered a high level of inconsistency indicating that responses are not reliable.

Table Y. **Different Answers a Month Apart**

<b>HIGH LEVEL OF INCONSISTENCY</b>	
Other kinds of heating equipment (central warm-air)	91
Water came in from other places	81
Difficulty hearing with or without a hearing aid	72
Water safe for drinking	66
Other kinds of heating equipment (none)	63
Peeling paint on the ceiling	63
Other kinds of heating equipment (unvented room)	62
Electric fuses or breaker switches blown	58
Open cracks or holes in building	58
Other major repairs over \$500 each—repair done	57
Central air conditioning/dehumidifier	56
Broken plaster or peeling paint	55
Water came in from walls, doors, windows	55
A working electric wall outlet	55
Other kinds of heating equipment (fireplace with no insert)	54
Broken plaster on the ceiling	53
Water came in from roof	53
Other major repairs over \$500 each	
—someone in household did the work	51
Rate the place (10 categories)	51

# American Housing Survey: A Healthy Homes Perspective

## **MODERATE LEVEL OF INCONSISTENCY**

Holes in the floors	50
Other kinds of heating equipment (other built-in electric)	50
Central air fuel	50
Other kinds of heating equipment (portable electric)	47
Water came in from basement	45
Water leaked into home from outdoors	43
Other kinds of heating equipment (fireplace with insert)	43
Heat breakdown	41
Heating equipment broke down for 6 hours or more	41
Other kinds of heating equipment (stove)	36

## **LOW LEVEL OF INCONSISTENCY**

Heating equipment broke	18
Clothes dryer fuel	12
Source of water	8