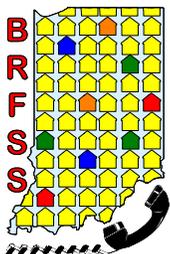


# Indiana Behavioral Risk Factor Surveillance System Newsletter



## Knowledge of Heart Attack/Stroke Symptoms: Results from the 2009 Indiana BRFSS



According to the American Heart Association, about 785,000 people in the US have an initial heart attack and 610,000 have a first or new stroke each year. An additional 470,000 have a recurrent heart attack each year. Knowledge of the symptoms of heart attacks and stroke and the appropriate action to take to improve health outcome is important. A person's chances of surviving a heart attack or stroke are increased if emergency treatment is given to the victim as soon as possible.

To assess the knowledge of symptoms of these two conditions, as well as the action to take if someone were having a heart attack or stroke, the Heart Attack and Stroke Module was included in the 2009 Indiana Behavioral Risk Factor Surveillance System (BRFSS) survey through collaboration with the Indiana State Department of Health's Division of Chronic Disease Prevention and Control. The module consists of questions on whether or not certain symptoms are indicative of a heart attack or stroke, with response categories of yes, no and don't know/not sure. Respondents were asked if the following were symptoms of a heart attack: pain or discomfort in the jaw, neck or back; feeling weak, lightheaded, or faint; sudden chest pain or discomfort; sudden trouble seeing in one or both eyes; pain or discomfort in the arms or shoulder; and shortness of breath. All are symptoms except for sudden trouble seeing. Respondents were also asked if the following were symptoms of a stroke: sudden confusion or trouble speaking; sudden numbness or weakness of face, arm or leg, especially on one side; sudden trouble seeing in one or both eyes; sudden chest pain or discomfort; sudden trouble walking, dizziness or loss of balance; and severe headache with no known cause. All are symptoms of a stroke except for chest pain/discomfort.

Many health conditions and behaviors are not reportable; hence, prevalence data must be obtained from other sources. The BRFSS survey is an annual, random digit-dial telephone survey of adults aged 18 years and older.

The BRFSS survey is conducted through a cooperative agreement with the Centers for Disease Control and Prevention (CDC), and all states and the District of Columbia participate. The BRFSS relies on self-reported data. This type of survey has certain limitations that should be understood when interpreting the data. Many times, respondents have the tendency to under-report behaviors that may be considered socially unacceptable (e.g., smoking, driving after drinking alcohol). Conversely, respondents may over-report behaviors that are desirable (e.g., physical activity, fruit and vegetable consumption).

The differences reported below are statistically significant ( $p < 0.05$ ) unless otherwise noted.



### Heart Attack Symptoms

The highest prevalence of correct “yes” responses for symptoms of a heart attack were chest pain/discomfort, arms or shoulder pain/discomfort and shortness of breath (Figure 1). The highest prevalence of “don’t know/not sure” responses were for the questions about whether sudden trouble seeing in one or both eyes was a symptom of a heart attack (correct response is “no”) with 24.7%.

Females were more likely than males to know the correct response for four of the five heart attack symptom questions. There was no difference between males and females in knowing that feeling weak, light headed or faint are symptoms of a heart attack. White adults were more likely to be aware of the five heart attack symptoms than black adults (Figure 2).



Having high blood pressure or high cholesterol, smoking, having had a previous heart attack, a previous stroke, or diabetes can increase a person’s chances of having a heart attack. Respondents with high blood pressure, high cholesterol, current smokers, a previous heart attack, or diabetes were more likely than those without those conditions/risk factors to know that pain/discomfort in the jaw, neck or back was a symptom of a heart attack. There were no differences among those with and without those conditions in knowing the other four heart attack symptoms.

### Stroke Symptoms

The highest percentage of correct “yes” responses for stroke symptoms were sudden numbness/weakness in the face, arm or leg and sudden confusion or trouble speaking (Figure 3). A sudden severe headache with no known cause was the least known symptom.

Figure 1

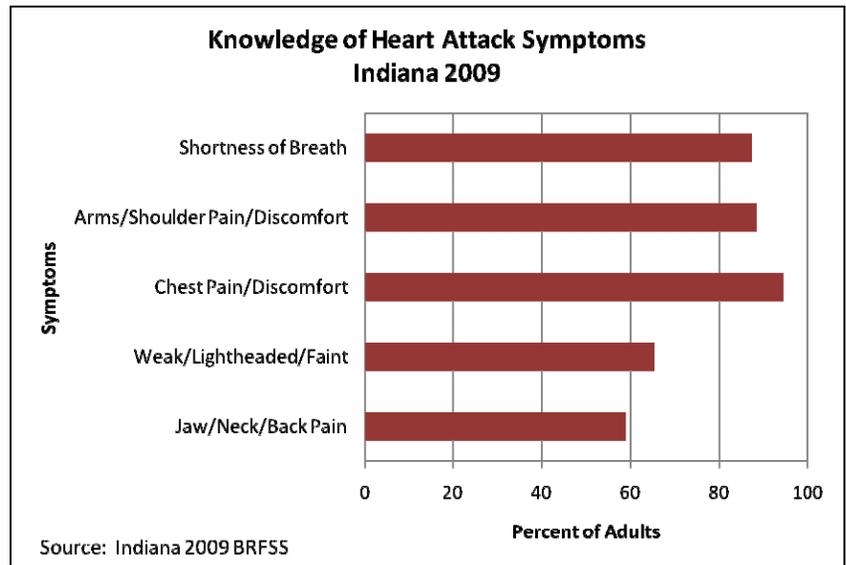
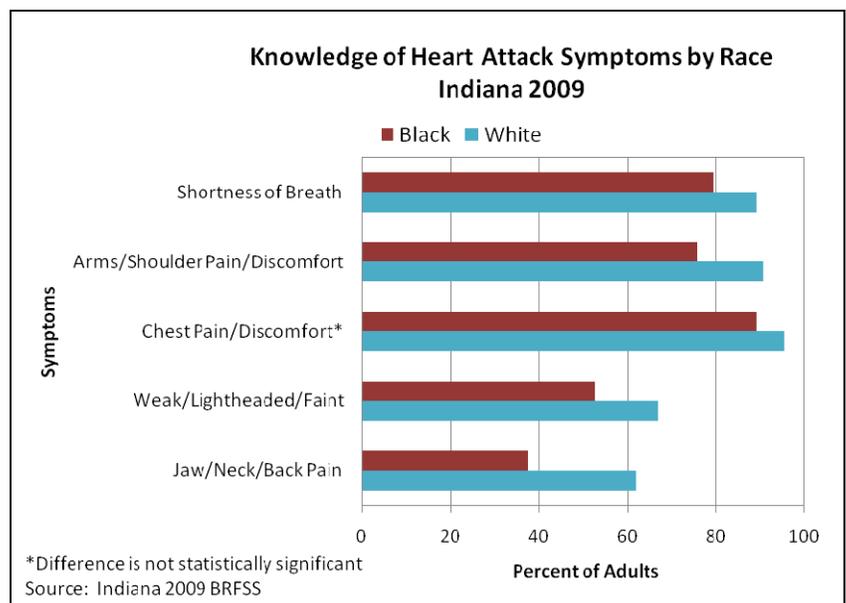
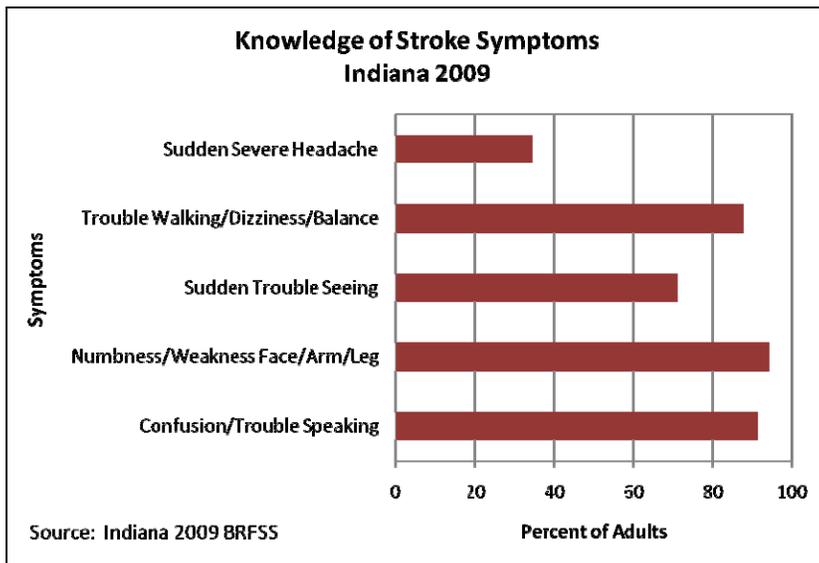


Figure 2

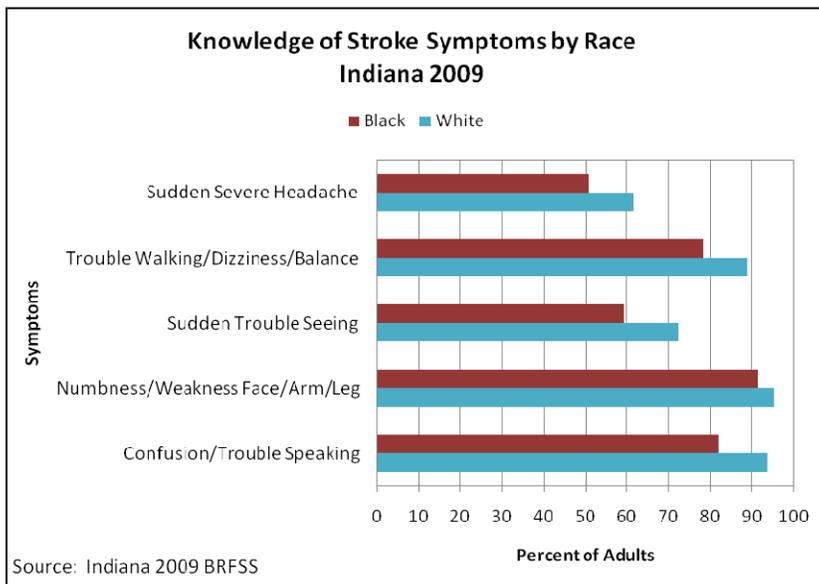


**Figure 3**



Blacks have a much higher risk of death from a stroke than whites. This is partly because blacks have higher risks of high blood pressure, diabetes, and obesity, which are risk factors for stroke [American Heart Association]. Even though they have higher risk, blacks were less likely than whites to know each of the warning signs of a stroke (Figure 4).

**Figure 4**



Being physically inactive, considered obese based on body mass index, having high blood pressure or high cholesterol, current smoking, or being diabetic can increase a person's chances of having a stroke. Respondents with physical activity in the past month were more likely than those without to be aware of the five stroke symptoms. Those individuals considered obese based on body mass index, have high blood pressure, who have high cholesterol, or currently smoke, were no more likely to know the risk factors than those without those conditions/risk factors. Respondents with diabetes were more likely than those without diabetes to know that a sudden, severe headache was a symptom of a stroke. There were no differences for the other four risk factors.



The CDC and American Heart Association recommend that 911 should be called if a person thinks they or someone they know is having a heart attack or stroke. Overall, 85.8% of respondents answered that calling 911 was the first thing they would do, followed by taking the person to the hospital (8.5%) and doing something else (4.1%). Only 41.8% of males and 58.2% of females were aware of the five major symptoms of a heart attack and would call 911 if someone were having a heart attack. The results were similar for those knowing the five major symptoms of a stroke and would call 911 (46.0% and 54.0%, respectively).

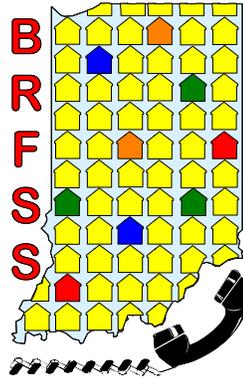
Additional information on heart attack and stroke can be found through the CDC's Division for Heart Disease and Stroke Prevention at <http://www.cdc.gov/dhdsp/> and the American Heart Association at <http://www.heart.org/HEARTORG/>.



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