

## Cardiovascular Disease and Depression

Depressive disorders have been associated with risk factors for cardiovascular disease (CVD), such as smoking and physical inactivity, and mental illness in general, has been associated with increased mortality due to CVD. In general, persons who are depressed are more likely to develop coronary artery disease, and meta-analyses reveal that the relative risk for developing heart disease in individuals with depression or depressive symptoms is approximately 1.6 times greater than among nondepressed persons, which is more than the risk conferred by passive smoking.

A stronger effect size was reported for clinical depression than for depressive symptoms, suggesting the presence of a dose-response relationship. Depression has been positively associated with the metabolic syndrome among women (but not men) younger than 40 years, suggesting that early detection and treatment of depression may potentially forestall the risk of cardiovascular disease among women.

### Stroke

Depression or depressive symptoms are also predictive of stroke: persons with significant depressive symptoms are approximately twice as likely as those with few depressive symptoms to have a stroke within 10 years. Moreover, depression is associated with an increased risk for stroke morbidity and mortality.

In addition to being a predictor of stroke, depression commonly develops after a stroke, especially after a stroke affecting the left hemisphere of the brain. More than half of patients experiencing a stroke report depressive symptoms within 18 months of having a stroke. Post-stroke depression has been associated with impairments in response to rehabilitation and with increased mortality up to two years after the stroke.

Antidepressant treatment of post-stroke depression is warranted and, in addition to alleviating depression, may foster recovery of cognitive function and significantly increase survival.

### Myocardial infarction

Depressive disorders also appear related to the occurrence of heart attack, or myocardial infarction (MI). Persons with a history of major depression are more than four times as likely to have an MI than those with no history of depression, and high levels of depressive symptoms are associated with an increased risk of MI.

Approximately one in six persons who have experienced an MI suffer from major depression, and at least twice that many experience significant depressive symptoms. Patients who have had an MI and are also depressed have more medical comorbidities and cardiac complications and are at greater risk for mortality than their nondepressed peers. Increased mortality is also evident in persons who had an MI and who manifest very low levels of depressive symptoms, underscoring the importance of mental health to physical health outcomes.

Persons with depression after an MI are less likely to adhere to recommended lifestyle and behavioral changes, potentially increasing their risk for subsequent cardiac events. This is particularly unfortunate because cardiac rehabilitation has been found to improve depressive symptoms. However, the use of a specific class of antidepressant medications—the selective serotonin reuptake inhibitors (SSRIs)—may, in addition to their beneficial effect on depression, exert antiplatelet effects protecting against MI. In addition to being safer in overdose, SSRIs are also less likely to induce arrhythmia than other classes of antidepressant medications.

It has further been concluded that the combination of cognitive behavioral therapy (CBT) with an SSRI is frequently the most effective treatment of depression in persons with CVD.

**Source:** Centers for Disease Control and Prevention