

James L. Holly, M.D.

Cardiovascular Disease Risk Factors Part X – Psychosocial Stress

By James L. Holly, MD

Your Life Your Health

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As we continue to examine the cardiovascular disease risk factors, we arrive at “stress.” Most people believe that stress adversely affects health. By experience, we all know that stress can weaken our immune system and make us more susceptible to opportunistic organism such as “cold sores,” “fever blisters,” and respiratory infections. But what about cardiovascular disease? Can “stress” cause or contribute to the cause of cardiovascular disease and if so, what can and should you do about it?

In recent studies on the relationship; between “stress” and heart disease, only four psychosocial factors proved to contribute to cardiac risk; they are:

- Type A Personality as evidence by hostility
- Depression and anxiety,
- Work related stress
- Absence of social supports

There are three ways in which psychosocial factors can affect your cardiovascular health.

- First, psychosocial factors may affect health related behaviors such as smoking, diet, alcohol consumption, or physical activity, which in turn may influence the risk of coronary heart disease.
- Second, psychosocial factors may cause direct acute or chronic disease changes.
- Third, access to and content of medical care may be influenced by social supports (but there is little direct evidence for this). Socioeconomic status such as poverty or social isolation is inversely associated with coronary heart disease.

Hostility and type A behavior

Type A behavior pattern is the only personality trait which can be proved to contribute to cardiovascular disease risk. Type A personalities are:

- hard driving
- competitive
- a potential for hostility
- pronounced impatience
- vigorous speech stylistics

Unlike other psychosocial factors, type A is distinguished by being the subject of numerous trials. On the basis of early positive findings in the Framingham study and the Western Collaborative Group's eight-year follow up, the National Institutes of Health declared type A an independent risk factor for coronary heart disease.

However, with the publication of negative findings it was proposed that a more specific component of type A, namely hostility, might be the problem. The solution is obvious. Don't suppress hostility and aggressive impulses, which only makes matters worse. Learn to forgive others; learn patience by caring more about others than yourself. Repression of aggression only prepares a person for a major blow up. Being honest about feelings and learning to dialogue with others are much more constructive approaches to anger.

Depression and anxiety

The relation between depression and anxiety and coronary heart disease differs from those of other psychosocial factors for several reasons.

- First, unlike other psychosocial factors, depression and anxiety represent well defined psychiatric disorders, with standardized instruments for measurement.
- Second, depression and anxiety are commonly the consequence of coronary heart disease, and the extent to which they are also the cause poses important methodological issues.
- Third, the ability to diagnose and treat such disorders makes them attractive points for intervention.
- Finally, depression and coronary heart disease could share common antecedents, for example, environmental stressors and social supports.

Eleven prospective studies that investigated depression or anxiety all show a positive relationship between depression as a contributing cause of coronary heart disease. All three of the prospective studies examining the effect of anxiety in the cause of coronary heart disease had positive results. Intriguingly, there is some evidence that this effect is strongest specifically for phobic anxiety and sudden cardiac death.

Depression in patients after myocardial infarction seems to be of prognostic importance beyond the severity of coronary artery disease. Although discrete major depressive episodes are not uncommon after a myocardial infarction, depressive symptoms are more prevalent.

There are excellent medications with which to treat depression. And, increasingly depression is losing its stigma so that more people are being treated. One of the most constructive ways of dealing with the sadness of minor depression is to get involved in the lives of others. Giving to others, both of time, energy and affection, is medicinal in treating depression in your own self.

Psychosocial work characteristics

The longstanding observation that rates of coronary heart disease vary markedly among occupations -- more than can be accounted for by conventional risk factors for coronary heart disease -- has generated a quest for specific components of work that might be responsible. The dominant "job strain" model of psychosocial work characteristics grew out of secondary analyses of existing survey data on the labor force. This model proposes that people in jobs characterized by low control over work and high conflicting demands might be high strain. A subsequent addition to the model was that social support might buffer this effect.

Again, people skills help eliminate this stress. The ability to talk to supervisors or subordinates; the ability to define responsibilities and possibilities realistically; the commitment to do an excellent job within the constraints of time and resources, all contribute to mental health and decrease the stress of the work place.

Social network structure and quality of social support

Social supports and networks relate to both the number of a person's social contacts and their quality (including emotional support and confiding support). Marital status is a simple measure of social support, and the ability of low social support to predict all cause mortality has long been recognized. It has been proposed that social supports may act to buffer the effect of various environmental stressors and hence increase susceptibility to disease, but most of the evidence supports a direct role.

Five of the eight prospective cohort studies that investigated aspects of social support in relation to the incidence of coronary heart disease were positive. Nine of the 10 prognostic studies were positive.

As the song declares, "People who need people are the luckiest people in the world." And, "needing people" is a choice which we all can make. "Needing people" is a direct consequence of "being needed" by others. This is not an accident of birth or of happenstance, but it is the result of choices which we make to get involved in the lives of others. As with Type A personalities, depression and work-related stress, social contacts are a matter of caring about others which always results in our being care about.

Psychosocial components of secondary prevention

Secondary prevention means how to improve an illness once it has developed. How can psychosocial stress factors be dealt with in order to help people who already have cardiovascular disease. Clinicians should consider:

- Detecting and treating depression
- Mobilizing social support
- Using socioeconomic status and psychosocial factors to risk stratify patients. This simply means that the clinician recognizes the increased risk of cardiovascular disease in those who are isolated from a network of caring relationships.

Primary prevention relates to how to eliminate psychosocial risk factors before cardiovascular disease develops. Largely, the potential for primary prevention in relation to psychosocial factors lies largely outside the scope of clinical medicine. Psychosocial factors themselves are determined largely by social, political and economic factors and it is therefore policy makers who influence the structure and function of communities, in the public and private domains, who may have scope for primary prevention.

Measuring Your Stress

One of the best little instruments for measuring stress is the Reeder Stress Inventory which consists of four statements:

- In general, I am usually tense or nervous
- There is a great amount of nervous strain connected with my daily activities
- At the end of the day, I am completely exhausted mentally and physically
- My daily activities are extremely trying and stressful

A rather complex score is derived by applying the following responses from 1 (low perceived stress) to 8 (high perceived stress) as below.

- 1, "not at all" on all four statements
- 2, not at all on any three with any other response on the fourth
- 3, not at all on any two with "not very accurately" on the other two
- 4, not at all on any one or two with any other response on the remainder but not those in 3
- 5, all others not specified on 1, 2, 3, 4, 6, 7, or 8
- 6, "to some extent" on all four or to some extent on three and "exactly" on the fourth
- 7, exactly on any three with to some extent or "not very accurately" on the fourth or exactly on two with to some extent on two
- 8, exactly response to all four statements.

Stress scores results:

- high (6-8),
- medium (4 and 5)
- low (1-3; box).

Summary

Understanding the relationship between stress and cardiovascular disease isn't easy. Is Type-A behavior unhealthy? Does stress cause your blood pressure to rise? Can stress cause you to have a heart attack? While differing opinions exist about these and other issues, research has shown that stress does play a role in many cardiovascular disorders.

While our knowledge about stress and cardiovascular diseases is incomplete, most experts agree on the following points:

- Stress does contribute to heart disease in certain individuals.
- Stress also contributes to high blood pressure, high cholesterol, and other cardiac risk factors (e.g. smoking, overweight, etc.) in many individuals.
- Whether or not stress caused your illness to occur, suffering a heart attack or other cardiac condition is itself quite stressful for most individuals and their families.

What Is Stress, And Why Are People Confused About It?

Remember that "stress" is just a word! It is merely a term human beings use to stand for **hundreds** of specific **problems** in our lives. When we are feeling angry, frustrated, worried or depressed, for example, we often say we are "stressed." When we have too many pressures, responsibilities, or work-related demands, we also use the very same term. We also use the word "stress" to refer to a wide range of physical problems and symptoms that occur within our bodies. Thus, whenever we say we are suffering from "stress," what we really mean is we are having problems or conflicts -- emotional, physical, financial, etc.-- that are painful or troubling to us.

By the same token, when people say "I don't have any stress," they have merely forgotten that "stress" is just a word. If you ask instead if they ever have **problems** in their lives, most people would admit that they frequently do.

Strategies for Coping with Stress

There are three basic strategies for coping with stress (other than ignoring or denying your problems). These are:

1. **The Band-Aid Approach**--using alcohol, drugs (prescription or illegal), cigarettes, food, sex, or anything else to temporarily relieve the symptoms of "stress." While these coping strategies "work" in the short-run, they have harmful long-term effects which make them undesirable.
2. **The Stress Management Approach**---using diet, exercise, meditation, biofeedback, or other relaxation exercises to cope with your "stress." While these coping strategies have definite advantages over band-aid methods, they still focus mainly on just the symptoms of your problems.
3. **The Ideal Approach**--- making stress disappear, quickly and naturally, by modifying or correcting its underlying causes. While this is by far the best way to deal with problems in life, most people fail to use this approach because they incorrectly understand what causes their stress to occur.

In recent years, new insights about the causes of human stress have emerged. These new insights focus on the difference between **obvious** and **non-obvious** causes. Obvious causes of stress include the things that happen to us and around us--i.e. the things we easily see. Non-obvious causes include conversations and behavior patterns that become

triggered within our bodies. These include expectations, judgments, evaluations, needs for control, needs for approval, and many others.

The more you learn to recognize and deal with these non-obvious causes of your problems, the less stress, tension, and physical ailments you will likely experience.

Remember, it is your life and it is your health.