

The Health Hazards of Anger

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Abstract

Anger, hostility, and aggression are six times more predictive of those who will develop heart disease than cholesterol, blood pressure, or smoking. Are you at risk? We'll discuss the physiology of anger and appropriate and inappropriate ways of handling anger.

Over the past decade or so, we in the western world have been concentrating on dietary factors (such as reducing the amount of cholesterol, fat, and meat in the diet, and increasing vegetables, fruits, complex carbohydrates and foods rich in beta carotene, vitamins C & E and other antioxidant factors) in order to prevent cancer, and heart disease. Now we are beginning to see research papers in medical journals showing a correlation between specific emotions and the incidence of cancer and coronary heart disease. In 1993 the New Zealand Medical Journal; (ref. 1) published research showing that anger, hostility, aggression, hopelessness, helplessness, and depression are six times more predictive of those who will develop cancer and coronary heart disease. In an earlier paper, *The Psychology of Cancer Prevention* (ref. 2) I described research linking helplessness, hopelessness, and despair to cancer. In this paper, we'll examine some of the evidence linking anger, hostility, and aggression to cancer and coronary heart disease.

Anger and Cancer

Dr. Bernie Siegel has described cancer as "the disease of nice people." Why are they nice? Because you usually don't see them expressing unpleasant emotions such as anger. Do such nice people not feel angry and anxious, or do they deliberately suppress such feelings? While working at King's College Hospital in London, psychiatrist Steven Greer (ref. 3) found that close to 50% of cancer patients he studied were extreme suppressors of anger. Only 15% of a control group suppressed their anger.

Dr. Lawrence LeShan (ref. 4) found that the cancer patients seen during his research (over 500) all seemed to have more emotional energy than they had ways of expressing it. Their emotions were "bottled-up": they were unable to give vent to their feelings, to let other people know when they felt hurt, angry, or hostile. They

had difficulty in showing anger or aggression in defense of themselves. They did have aggressive feelings, often quite strong ones, but they were unable to verbalize them.

Anger and hostility are even more strongly correlated with heart disease.

Anger and Heart Disease

In 1974, two San Francisco cardiologists, Meyer Friedman and Ray Rosenman, published the book *Type A Behavior and Your Heart* (ref. 5) where they showed that Type A's had an increased risk of developing coronary heart disease. Type A's were described as ambitious, driven, goal-orientated, always taking on a lot of work, pushing against deadlines, worrying about satisfying both supervisors and those working beneath them, eating too fast, drinking too much, not sleeping enough, and easily stirred to anger by even trivial annoyances.

Since 1974, there have been over 2000 papers on various aspects of Type A behavior published in scientific and medical journals, but not all have confirmed Friedman and Rosenman's results. More recent research focusing on various aspects of Type A behavior has identified hostility as the "toxic core" of Type A behavior.

One of the primary researchers exploring hostility and its relationship to coronary heart disease is Redford Williams, M.D. (ref. 6). He and his colleagues describe a hostile person this way:

1. **Cynical:** a generally negative view of humankind, depicting others as unworthy, deceptive and selfish.
2. **Emotionally negative:** negative emotions in association with social relationships; admissions of anger, impatience and loathing when dealing with others.

3. **Aggressive:** a tendency to use anger and aggression as a response to problems or to endorse these behaviors as reasonable and justified.

Williams estimates that about 20% of the population has levels of hostility high enough to be dangerously unhealthy, another 20% has very low levels, with the rest of the population falling somewhere in between.

How Anger Affects the Body

In a stressful situation, the body is readied for the fight/flight response. If we take the "fight" response we will experience anger and aggression, there will be a large increase in noradrenaline, small increases in adrenaline and testosterone, and little or no change in cortisol levels. Excessive levels of noradrenaline can lead to heart and circulatory diseases, as noradrenaline's most potent action is to constrict blood vessels. During the first stage of the stress cycle – the alarm stage – blood vessel constriction increases the blood pressure, so the heart must work harder to overcome the high pressure in order to circulate the blood. At the same time, noradrenaline steps up the heart rate, further increasing the heart's workload. A higher workload requires that more oxygen and glucose be delivered to the heart muscle (myocardium) via the coronary arteries. However, for people with atherosclerosis or plaque build-up in the arteries, insufficient blood may move through the coronary arteries to reach the heart muscle to support its workload. This may result in pain across the chest known as angina pectoris, or there may be a heart attack where part of the myocardium dies.

The oxygen-starved myocardium may also send the heart into ventricular fibrillation (chaotic rapid contractions of the main pumping chambers of the heart) rendering the heart useless as a pump. Under these circumstances, the circulation stops and the person dies unless the fibrillation is quickly corrected by using a cardiac defibrillator. According to one study, about 20% of those who suffered sudden cardiac arrest (ventricular fibrillation), had experienced acute psychological stresses in the preceding 24 hours. Research also indicates that anger is a common pre-death emotion (ref. 7).

Noradrenaline probably also adversely affects the heart in a least five other ways. Excessive noradrenaline can probably cause rupture of the

plaque, leading to a sudden blockage of the coronary artery. The newly exposed material of the plaque creates a surface on which a blood clot can form. Clot formation is also encouraged by noradrenaline. This can cut off blood supply to the myocardium, if not already achieved by plaque rupture, resulting in a heart attack.

Heart attacks can also occur in the absence of significant coronary artery disease. High levels of noradrenaline can cause muscular spasm of the coronary arteries which close up, thereby reducing or stopping blood flow to the heart muscle.

Excessive levels of noradrenaline and adrenaline are also known to damage the heart muscle cells directly, reducing the contractile ability of the heart. Excessive levels of these two hormones can also directly trigger abnormal electrical activity in the heart, resulting in abnormal rhythms which may cause fatal ventricular fibrillation.

Appropriate Ways to Handle Anger

1. Suppressed anger is known to be common for many people with cancer, rheumatoid arthritis and migraines and is a likely cause of high blood pressure (90 - 95% of which has an unknown cause according to medical researchers). Therefore, it would seem to be healthy to begin to express anger appropriately.
2. Some people from Christian backgrounds think it is wrong to be angry. Instead, the bible says: "Be angry and sin not...." Apparently it is possible to express anger without violating someone else's rights or your own (by suppressing or repressing it). The same verse (Ephesians 4:26) advises us not to let the sun go down upon our wrath, i.e. we are to use the anger to move us to some appropriate action rather than stew on it or suppress it.
3. When you are in an anger-provoking situation avoid a hostile response by asking yourself the following questions:
 - Is the matter worth my continued attention.
 - Am I justified?
 - Do I have an effective response?

4. When you become aware of your own hostile attitudes or thoughts, practice stopping them.
5. If you can't change an anger-arousing situation, distract yourself by focusing on something else; call a friend, be by yourself, take a walk, or read a novel.
6. If your anger is deep or chronic, write down a list of all the people you remember being angry at – currently and in the past. Identify why you are angry with each person. Look for one or two common denominators. Rejection? Disappointment? Feeling used? Look for the payoff in staying angry. Work through this.
7. Research by James Pennebaker (ref. 8) of Southern Methodist University has shown that writing for at least 20 minutes for four successive days about a particularly stressful situation will cause the emotions to come to the surface. Research shows T-cell levels to be elevated for up to 3 - 4 months after this exercise showing its obvious value to your immune system.
8. Victims are stuck. They usually have much anger that they weren't allowed to express, or didn't feel safe to express and they are often allowing people to misuse them. They feel powerless. Learning to express anger at the mistreatment or person, directly to the person, if appropriate, will help stop people from doing things to you that you don't like and begin to move you from victim status.
9. Angry at someone? Write them an appropriate letter then throw it away or burn it.
10. Develop the three qualities of "hardiness" – control, commitment, and challenge – so that you are better able to handle stress, becoming more proactive, and less reactive (ref. 9).
11. Learn to forgive. When an injustice is done to you, no matter how wrong, it can't be changed. Staying angry about it only harms you.
12. Decide to make fun of yourself for getting so worked up over something trivial and unreasonable. Lighten up!

References

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