

NAME OF DISORDER: Headache.

ESSAY TITLE: Stress and headache.

AUTHOR: Dr Stuart Cathcart, PhD.

INSTITUTION: Centre for Applied Psychology, University of Canberra

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CONTENT:

It is common to hear people say that their headaches are 'caused' by stress. But what do we really know about the relationship between stress and headache?

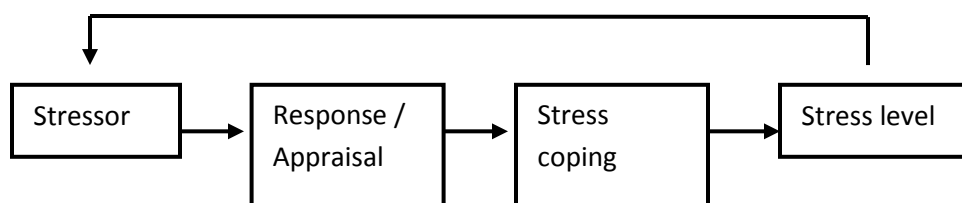
To start, let us consider what we mean by 'cause'. Typically, when people say 'cause' they are often referring to things that happen before a headache attack. In research terms we may refer to this as a 'trigger'. In fact, many may things are reported by patients as headache triggers, including lack of or too much sleep, dehydration, noise, postural things (e.g. sitting in certain positions), coffee, alcohol, certain foods (too much or not enough of them), sex, and so on. Of all the things reported as headache triggers, stress is by far the most common (1). A number of research studies have experimentally demonstrated that stress can indeed trigger a headache attack (2).

It is important to consider that headache triggers may, however, not be the cause of headache. For example, it could be that a headache in one individual is caused by the interaction of a number of things, such as stress aggravating an abnormality in the brain that underlies or predisposes to headache (3). The underlying causes of headaches are a topic of ongoing research around the world and in Australia.

Another point to consider is the difference between effect of stress on a headache attack and the effect of stress on the development of a headache condition or diagnosis. While the potential for stress to trigger a headache attack has been demonstrated, the importance of stress in someone developing a headache condition has been harder to establish. Scientists cannot ethically induce prolonged stress in people's lives and wait to see if they start getting headaches. However, when these things are measured over time in people, there is some evidence that periods of high stress are associated with an increased risk of starting to get headaches in the future (4).

We must also appreciate that stress is a complex process involving physiological, psychological and social factors. Figure 1 shows a common conceptualization of the stress process, containing 'stressors' (stress events), stress response and appraisal (one's physiological and psychological response to an event), stress coping (what one does to manage stress), and 'stress' outcome (the resultant level of physiological and psychological arousal). In the case of headache sufferers, headache is of course itself a stressor.

Figure 1. Transactional model of stress



A considerable amount of research has confirmed that each of the components of the stress process may be different in headache sufferers and related to severity of headache activity within headache sufferers (see 1,2 for comprehensive reviews). While it is beyond the scope of the present essay to explore this literature in detail, one robust example is a type of coping called catastrophizing, where problems are tended to be seen as insurmountable, is associated with increased headache activity (5).

Exactly how stress contributes to headache, if in fact it does, is unclear and is the topic of ongoing research. It was previously thought that stress increased muscle tension to painful levels in headache sufferers, however many studies have now not supported that idea (see 6 for review). An alternative proposition receiving increasing support is that stress aggravates an already existing increase in pain sensitivity, particularly around the head region, in headache sufferers (2).

What does this mean for headache sufferers?

1. Headache sufferers may benefit from keeping a diary to identify things that trigger and relieve their headaches. Such information may be invaluable in determining if stress is a factor in your own headaches.
2. If stress is a contributing factor, identifying what aspects of stress are related to one's headache may be useful. For example, an individual patient may find they do not have unduly frequent or severe 'stressors' but may notice they cope with stress in a way that may aggravate their headaches (e.g. catastrophizing).
3. Armed with the knowledge of what aspects of stress are likely to affect one's headache, patients and their treating professionals can develop individualized treatment plans. Such plans could include things like training in particular stress management techniques, enhancing particular coping styles, relaxation training to reduce overall stress levels. There are many proven techniques for altering components of the stress process.

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