How Temperature and Other Weather Elements Impact Migraine

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Migraines and Weather

If you suffer from migraines, you know that a wide array of factors influence their occurrence and severity.

Many migraine sufferers say that the weather affects their headaches and several research projects have confirmed that the weather does indeed impact the occurrence of migraine headaches.

While some experts believe that the weather is not as great a factor in triggering migraines as patients report, a recent Greek study shows that almost 47% of migraine patients report that the weather influences their headaches.

Other research indicates that the occurrence of weather-induced migraine headaches is even higher, although variables in the studies may be partially due to the location they were conducted. For example, the effects of weather may be more extreme in areas where greater changes in temperature, humidity, and wind are more variable than in areas where those factors are more constant and moderate.

Weather triggers include changes in temperature, barometric pressure, wind speed, and amount of sunlight. Exposure to bright sunshine is consistently the most significant weather-related trigger, according to the Greek researchers.

Young people who suffer from migraine headaches appear to be particularly sensitive to bright light. Over 70% of young adults state that their migraines are impacted by exposure to bright light, according to a study out of Iraq.

Temperature Changes and Migraine Headaches

The Iraqi researchers discovered that changes in temperatures resulting in extreme warmth or cold precipitate migraine headaches in over 65% of the headache sufferers enrolled in their study. They found that weather changes impacted males and females equally, but noted that sensitivity to changes in temperature provoked migraines more frequently in older adults than younger adults.

A Taiwanese study also demonstrates that temperature changes impact migraines in sensitive individuals. By analyzing headache diaries kept by study participants for between seven month and one year, they concluded that exposure to cold and hot temperatures may provoke a migraine.

While any temperature changes and extremes may precipitate migraines, cold weather is more likely to exacerbate occurrences of headaches than hot weather is. Temperature changes are more likely to stimulate mild headaches rather than moderate or severe ones, according to the Taiwanese researchers.

Among people whose migraines are temperature sensitive, migraines are more common in winter than in summer. The researchers proposed that this may be related to perception. Temperature fluctuations are often

greater in winter than in summer, and people who are sensitive to temperature change may recognize the association more clearly when the temperature drops several degrees. Changes in temperature during the summer months are less likely to make people feel uncomfortable overall the way frigid winter temperatures do.

Headaches are known to occur frequently when cold fronts move in. Cold fronts have subtle impacts on the body's balance of fluids, including the circulation of blood. Since migraines are partially due to blood flow, it makes sense that the incidence of headache increase when cold fronts are present. Cold fronts are often accompanied by clouds and precipitation. The drop in barometric pressure impacts the body's hemodynamic processes.

Migraines and Weather — The Bottom Line

Much more research needs to be conducted to determine precisely what weather characteristics impact migraines. This is a challenging area for research as the environment involves multiple factors including temperature, wind speed, humidity, and the presence or lack of pollutants.

Meanwhile, migraine sufferers can take heart in knowing that they have been right all along — the weather does make a difference.