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Noise Pollution: How it Can Affect Your Health

Presented by: **Dr. Brandon L. Kikuchi, DC**

Introduction

Noise pollution is any environmental noise - from vehicles, machinery or other noise producers - that is irritating, distracting or physically injurious. It is widely known that listening to high-decibel sounds over a prolonged period can cause hearing impairment but the effects of noise pollution on human health are significantly greater than hearing issues alone..

The possible underlying causes of these wide-ranging health problems, notes a 2005 article published in the journal *Environmental health* Perspectives, include booming population growth, loss of rural land to urban sprawl, inadequate anti-noise regulations, the electronic nature of our lives, busier airports and an increasing number of vehicles on the road.[1]

Talking with your chiropractor is one of the best ways to better understand how noise pollution affects your health. Your chiropractor can counsel you on how best to avoid the negative health affects of noise pollution, including simple strategies you can employ in your daily life, both at work and at home. In this issue of the Wellness News Network, we explore in greater detail a few of the most common health effects associated with noise pollution.

Increased Stress Levels

Community noise exposure - from industry, transportation and neighbors - may cause increased stress levels in people of all ages. According to a 2001 study published in the *Journal of the Acoustical Society of America*, children may be particularly susceptible to increased stress levels from noise pollution. In this study, researchers discovered that children living in noisier areas experienced higher levels of overnight urinary cortisol (a stress marker), showed elevated heart rate reactivity to a stressor and rated themselves higher in perceived stress symptoms than children who lived in quieter areas.[2]

Another study, published in 2001 in the *International Journal of Epidemiology*, notes that chronic aircraft noise exposure is associated with greater levels of annoyance and perceived stress in

QUESTION:
Which of the health problems can be affected by noise pollution?

A) damage to hearing
B) stress
C) loss of sleep
D) all of the above

ANSWER:
D) all of the above

True or False?
High blood pressure has been linked to chronic noise exposure

ANSWER:
True

QUESTION:
Children subjected to noise pollution can show signs of...

A) stress
B) poor eating habits
C) poor reading comprehension
D) none of the above

ANSWER:
A) stress & C) poor reading comprehension
C) diabetes

Presented by: Dr. Brandon L. Kikuchi, DC
2875 S. King St. Suite 205 Hon. HI 96826
phone: (808) 373-3384 www.kikuchichiro.com

children, along with poorer reading comprehension and ability to maintain focus or attention.[3]

For adults, excessive workplace noise is a major influencer of stress levels and other health considerations. According to a study published in the *Journal of Occupational & Environmental Medicine*, industrial workers who are exposed to chronic noise experience higher cortisol levels at the end of the workday and higher levels of accumulated fatigue and post-work irritability compared to industrial workers who are not exposed to chronic and excessive noise.[4]

Cardiovascular Problems

The two major cardiovascular problems that appear to be associated with chronic noise exposure are hypertension (i.e., high blood pressure) and ischemic heart disease (i.e., reduced blood supply to the heart). One study, published in 2009 in the journal *Occupational & Environmental Medicine,* found an association between residential road traffic noise and hypertension in men.[5] Another study, published in 2007 in the *Journal of Occupational and Environmental Medicine,* states that exposure to road traffic noise may be linked to high blood pressure in individuals between the ages of 45 and 55, and that associations appear to be stronger with higher noise levels.[6.]

Noise, especially traffic noise, is a major psychosocial stressor and some research studies indicate that chronic noise-related stress is a risk factor for ischemic heart disease. According to a study published in 2003 in the journal *Occupational & Environmental Medicine*, annoyance and disturbance caused by road traffic noise is associated with a greater incidence of ischemic heart disease.[7]

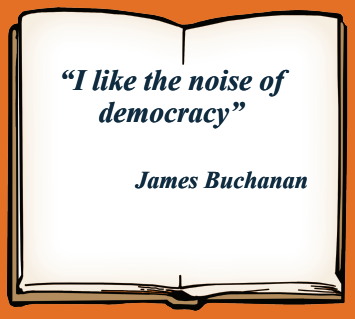
Sleep Disruption

Sleep disruption is a major problem associated with noise pollution. A 2007 review article published in the *Southern Medical Journal* reports that the potential health effects of noise pollution are "numerous, pervasive, persistent and medically and socially significant," Noise may interfere with sleep, concentration, communication, and recreation.8 Another study, published in 2004 in the journal *Noise & Health*, states that noise from airplanes or vehicles experienced during sleep may be perceived by your brain as danger signals and cause the release of stress hormones.[9]

Conclusion

Noise pollution is a growing problem that continues to be overlooked by mainstream health care. Contemporary society ignores the negative health effects of noise pollution in much the same way that the use of tobacco products was ignored in the 1950s. Chiropractic care is a complementary alternative approach to health care that considers *all* possible contributors to poor health. Ask your chiropractor about strategies you can use to protect yourself from noise pollution and its many negative health effects.

Quote to Inspire



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