The Alliance Update

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Fall 2021 Edition

Alliance Chiropractic & Wellness Clinic

Chiropractic-Massage-Naturopathic Medicine

Health Newsletter

Exposure to Tobacco Smoke in Early Life Accelerates Biological Aging

Source: September 3, 2021; By Barcelona Institute for Global Health (ISGlobal); Environment International, 2021; 155: 106683
DOI: 10.1016/j.envint.2021.106683

Accelerated biological aging is associated with exposure to tobacco smoke during pregnancy and early childhood, as well as with indoor exposure to black carbon. These are the conclusions of an analysis led by the Barcelona Institute for Global Health.

Exposure to environmental factors during pregnancy and early childhood can significantly — and sometimes irreversibly — alter our metabolism and physiology, thereby determining our health status later in life. It can also accelerate the process of biological aging, which has been associated with a higher risk of metabolic, cardiovascular, or neurodegenerative diseases. At the cellular level, aging is a continuous process that starts early in life, and can be measured using epigenetic clocks. These clocks use the levels of DNA methylation in certain regions of the genome to infer biological aging of a person.

After selecting the best suited epigenetic clock for the study and adjusting for multiple factors, the research team found that exposure to maternal tobacco smoke during pregnancy was associated with an acceleration in epigenetic aging. The analysis showed association with two exposures: parental smoking and indoors levels of black carbon, an air pollutant which results from the incomplete combustion of fuels.

The positive association between epigenetic age acceleration and exposure to tobacco smoke during pregnancy and early childhood are consistent with previous results obtained in the adult population. The epigenetic modifications could affect pathways involved in inflammation, toxin elimination, and cell cycle, with a subsequent impact on health.

These associations do not prove causality, but this and future early life toxin exposure studies will help guide health policies to reduce certain environmental exposures and promote “healthy aging” from early life stages.

Air Pollution — Second Leading Cause of Lung Cancer

Source: Medscape; by Liam Davenport; September 13, 2021

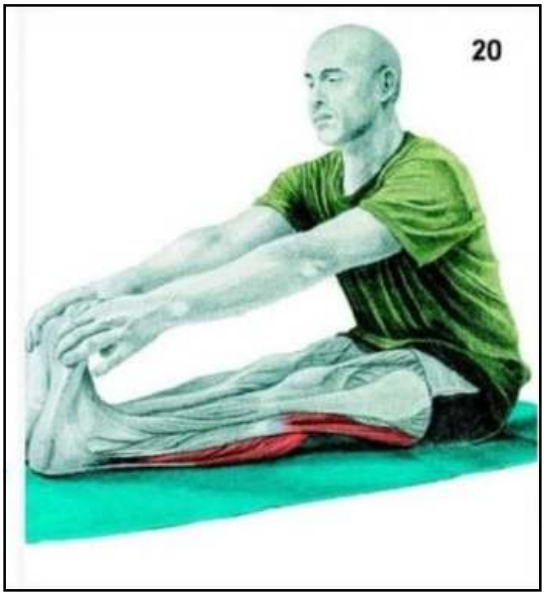
Air pollution is the second leading cause of lung cancer globally, after smoking, results of a novel analysis suggest. The researchers call for concerted action to reduce global air pollution.

The new data show that the rate of lung cancer deaths attributable to air pollution varies widely between countries: Serbia, Poland, China, Mongolia, and Turkey are among the worst affected. The analysis shows an association between deaths from lung cancer and the proportion of national energy that is produced from coal.

Overall, data from GLOBOCAN 2018 indicate that annually, there are approximately 2.1 million incident cases of lung cancer and almost 1.8 million lung cancer deaths around the globe. Worldwide, 14.1% of all lung cancer deaths, including people who have never smoked, are directly linked to air pollution. This makes air pollution the second leading cause of lung cancer behind smoking.

To Stretch or Not to Stretch Before Exercise: What You Need to Know About Warm-ups

Source: March 1, 2021; By David George Behm, Anthony Blazevich, Anthony David Kay, Gabriel S. Trajano



Over the past 20 years, static muscle stretching has gotten a bad rap. Once considered an essential part of any sport or exercise warm-up, static stretching has now been removed as a recommendation entirely.

Extensive research showed that static stretching (stretching and then holding the muscle at an extended length for seconds or minutes), can reduce muscle strength (reflected in things like lifting weights), power (for example, jump height), running speed, balance, and other capacities for a short time after the stretching.

To put the research into context, the average performance decrease (in strength, power, speed) after static stretching across all studies is about three to five per cent. It may not sound like much, but if you consider that sprinter Usain Bolt beat Justin Gatlin by 0.8 per cent and Andre de Grasse by one per cent at the 2016 Olympics, then it's safe to say that a three to five per cent deficit could be life-changing. So, at first glance it may appear reasonable for static stretching to be removed from the picture. However, it seems that many of these studies were not designed to answer the specific question of whether static stretching affects performance when used in a typical warm-up.

In the authors' recent review of the research, they found that these studies tell a different story. When looking at only those studies where participants performed muscle stretching within a full sport warm-up — that is, when lower-intensity exercise is done before static stretching of less than 60 seconds per muscle, and higher-intensity sports-specific exercises are performed after stretching — static stretching within this comprehensive warm-up had no significant effects on actual performance.

If stretching might not improve performance, why include it at all?
The most obvious reason is that stretching increases the range of motion of the joints through its effects on muscles and the nervous system. Essentially, there is an improved capacity to move with ease during activities such as sprint running, hurdling, being placed in extreme positions in wrestling, performing the splits in dance or gymnastics, playing soccer, hockey, and other activities that need an enhanced range of motion.

Also, most muscle and tendon injuries occur when the muscle is being stretched during vigorous activities. Muscle stretching not only increases joint range of motion but also allows the muscle to exert more force when at longer lengths. Together, these changes may reduce the chance of injury.

Muscle stretching also has other advantages. Stretching can be used as a form of self-diagnosis, checking different regions of the body for soreness or tightness before or after sports and exercise. Also, muscle stretching can decrease muscle tone, heart rate and blood pressure, reduce anxiety, and improve the function of blood vessels. Thus, stretching may play an important role in maintaining cardiovascular health and promoting relaxation.

So static stretching is back, albeit with some caveats. The advantages of static stretching before exercise seem to outweigh the disadvantages when the stretching is incorporated into a full warm-up and when the duration is reasonable (less than 60 seconds per muscle group).

Health Humour

My dad died when we couldn't remember his blood type. As he died, he kept insisting for us to "be positive," but it's hard without him.

Body Fuel: A Look at Anti-Inflammatory Nutrition

Source: Chiropractic & Naturopathic Doctor; September 10, 2021; By Howard Zamick

Nutrition goes hand in hand with pain management and acts as one of the most powerful adjunctive complements to chiropractic. Promoting essential nutrition and a healthy lifestyle is an important goal, and can have profound effects on pain relief as well as boost energy while reducing fatigue.

One of the greatest predictors of pain seen in the chiropractic industry is inflammation. Inflammation has a significant effect on the severity of pain we experience, our perception of pain and the healing process. There are many contributing factors to inflammation, such as obesity, smoking, chronic stress, and excessive alcohol consumption. However, diet provides one of the greatest impacts and acts as the most significant predictor of inflammation. More specifically the SAD diet (standard American diet) is a culprit of inflammation. The SAD diet includes highly processed and packaged foods, high intakes of red meat, high-fat dairy products, refined carbs, and processed sugars. A diet rich in these foods will manifest as inflammatory processes, joint pain, muscle pain, and other health concerns.

What is the anti-inflammatory diet?

The anti-inflammatory diet focuses on restricting intake of the previously mentioned foods as seen in the SAD diet and puts emphasis on feeding the body with foods to help combat and reduce the body's pro-inflammatory responses while preventing chronic pain. The focus of this diet is to incorporate nutrient-dense foods such as whole grains, plant-based proteins, healthy fats, and fish. Dark leafy greens and antioxidant-rich fruits are high in essential vitamins and minerals and also contain significant amounts of fibre. For healthy fats high in omega-3 fatty acids, patients should consume cold water fish (ie. salmon) and try adding olive oil, avocados, and nuts to their daily diet. It is also important to try limiting red meat consumption to roughly once weekly. This diet facilitates minor weight reductions, which can help alleviate joint pain by reducing pressure and stress placed on joints daily.

What supplements can reduce inflammation?

Fish oil

Omega-3 fatty acids play an important role in reducing inflammation, supporting cardiovascular health, and reducing serum triglycerides. Omega-3's are important to supplement, as it is difficult to reach a therapeutic dose from food alone. The main omega-3 fatty acids are eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Both EPA and DHA help block inflammation. Supplementing with fish oil provides a significant benefit when patients are suffering joint pain due to rheumatoid arthritis, lupus, or experiencing generalized morning stiffness. In addition, studies have suggested fish oil as a highly effective complement to the use of NSAIDS in reducing discogenic pain. When choosing a fish oil, choose one with a 2:1 EPA:DHA ratio and take a minimum of 1-3g daily dose to achieve optimal anti-inflammatory effects.

Curcumin

Curcumin is famous in the natural health industry as being the go-to anti-inflammatory supplement. It is a major constituent found in turmeric, which has been used traditionally in the treatment of inflammation for many years. There is clinical evidence to suggest it decreases pain for cases of osteoarthritis, joint swelling, generalized joint pain, and morning stiffness. Turmeric also aids in improving joint mobility. Choosing a curcumin supplement can be difficult to navigate. Look for capsules that are coated to increase bioavailability and absorption and more importantly to avoid first pass metabolism. This ensures that turmeric is readily utilized by the body and absorbed rather than being quickly metabolized and excreted.

Glucosamine and chondroitin

These serve an important purpose for the reduction of joint pain by assisting in the structural support of joints. While possessing minor anti-inflammatory properties, they assist in the structural support by reinforcing cartilage, connective tissue, and assisting in joint lubrication. Supplementation has been shown to reduce associated joint pain and improve joint function and mobility. In practice, both supplements have demonstrated benefits for reducing joint degeneration, osteoarthritis of the spine, and reducing chronic low back pain. Studies suggest supplementing 1500mg of glucosamine and 1200mg of chondroitin daily for optimal therapeutic benefit.

With all factors considered, it is important to keep in mind that although diet is a strong predictor of health and pain management, it is wise to consider that it is largely enhanced with the support of other practices. These practices include engaging in regular physical activity and limiting tobacco and alcohol use. Fuelling with proper nutrition and supplementation is a key component in pain management, and is fundamental to the healing journey.

Disclaimer: To patients taking other medications and dealing with complex health concerns, consult with an ND or MD prior to engaging in supplementation to determine what is right for you based on your personal health history.

Effect of Ivermectin on Mild COVID

Source: JAMA. 2021;325(14):1426-1435.

There has been a lot of anecdotal and case study evidence suggesting Ivermectin may be an effective treatment for early stage COVID cases. This prompted a well designed placebo controlled trial to look at the effectiveness of Ivermectin using a more rigorous scientific process.

Importance Ivermectin is widely prescribed as a potential treatment for COVID-19 despite uncertainty about its clinical benefit.

Objective To determine whether Ivermectin is an efficacious treatment for mild COVID-19.

Question What is the effect of Ivermectin on duration of symptoms in adults with mild COVID-19?

Findings In this randomized clinical trial that included 476 patients, the duration of symptoms was not significantly different for patients who received a 5-day course of Ivermectin compared with placebo (median time to resolution of symptoms, 10 vs 12 days).

Meaning The findings do not support the use of Ivermectin for treatment of mild COVID-19, although larger trials may be needed to understand effects on other clinically relevant outcomes.

Clinic Services

1. Chiropractic Care
2. Laser Therapy
3. Electrical Therapy
4. Sports Injury Care
5. Custom Foot Orthotics
6. Massage Therapy[1]
7. Naturopathic Medicine
8. Acupuncture

Clinic Hours

Please note:

1. Massage therapy is available outside core office hours.

Monday	8:00am— 12:00pm	3:30pm - 7:30pm
Tuesday	8:00am— 12:00pm	
Wednesday	8:00am— 12:00pm	3:30pm –7:30pm
Thursday		3:30pm –7:30pm
Friday	8:00am – 12:00pm	

Announcements

- Check out our WEBSITE at *www.alliancechiroandwellness.com*. You can find archived issues of our newsletter as well as other clinic information. Please note appointment requests should be made by calling the office at 905-648-0661. We do not accept appointment cancellations, bookings, or reschedules via our web site. These should be done by calling the office directly.
- Just a reminder to use the hand sanitizer when you enter the office, and face masks are mandatory. Thank-you!
- We continue to operate with mandated screening, cleaning, and mask protocols in place for the protection of staff and patients.
- Like us on *Facebook*! To see the latest in health news, research, updates, and announcements, check us out at *www.facebook.com/AllianceChiropracticandWellnessClinic*

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