

Merry Christmas!

Wed, 14 Dec 2016

In observation of Christmas, our clinic will be closed Friday, December 23 and Monday, December 26. We hope you and your family have a very Merry Christmas and a Happy New Year!

Study shows that running actually lowers inflammation in the knee joints!

Wed, 14 Dec 2016

Brigham Young University Health News, 12.12.2016

This idea that long-distance running is bad for your knees might be a myth. A recent study shows running may actually slow the process that leads to osteoarthritis. New research from BYU exercise science professors finds that pro-inflammatory molecules actually go down in the knee joint after running. In other words, it appears running can reduce joint inflammation. What we now know is that for young, healthy individuals, exercise creates an anti-inflammatory environment that may be beneficial in terms of long-term joint health," said study lead author Robert Hyldahl, BYU assistant professor of exercise science. Hyldahl said the study results indicate running is chondroprotective, which means exercise may help delay the onset of joint degenerative diseases such as osteoarthritis.

Study: Gut bacteria can cause, predict and prevent rheumatoid arthritis

Fri, 5 Aug 2016

**Rheumatoid arthritis is an autoimmune disorder; it occurs when the body mistakenly attacks itself. The body breaks down tissues around joints, causing swelling that can erode bone and deform the joints. The disease can damage other parts of the body, including the skin, eyes, heart, lung and blood vessels.

The bacteria in your gut do more than break down your food. They also can predict susceptibility to rheumatoid arthritis, suggests Veena Taneja, Ph.D., an immunologist at Mayo Clinic's Center for Individualized Medicine. Dr. Taneja recently published two studies – one in Genome Medicine and one in Arthritis and Rheumatology – connecting the dots between gut microbiota and rheumatoid arthritis.

More than 1.5 million Americans have rheumatoid arthritis, a disorder that causes painful swelling in the joints. Scientists have a limited understanding of the processes that trigger the disease. Dr. Taneja and her team identified intestinal bacteria as a possible cause; their studies

indicate that testing for specific microbiota in the gut can help physicians predict and prevent the onset of rheumatoid arthritis.

“These are exciting discoveries that we may be able to use to personalize treatment for patients,” Dr. Taneja says.

The paper published in *Genome Medicine* summarizes a study of rheumatoid arthritis patients, their relatives and a healthy control group. The study aimed to find a biomarker — or a substance that indicates a disease, condition or phenomena — that predicts susceptibility to rheumatoid arthritis. They noted that an abundance of certain rare bacterial lineages causes a microbial imbalance that is found in rheumatoid arthritis patients.

“Using genomic sequencing technology, we were able to pin down some gut microbes that were normally rare and of low abundance in healthy individuals, but expanded in patients with rheumatoid arthritis,” Dr. Taneja says.

Implications for predicting and preventing rheumatoid arthritis

After further research in mice and, eventually, humans, intestinal microbiota and metabolic signatures could help scientists build a predictive profile for who is likely to develop rheumatoid arthritis and the course the disease will take, Dr. Taneja says.

Based on mouse studies, researchers found an association between the gut microbe *Collinsella* and the arthritis phenotype. The presence of these bacteria may lead to new ways to diagnose patients and to reduce the imbalance that causes rheumatoid arthritis before or in its early stages, according to John Davis III, M.D., and Eric Matteson, M.D., Mayo Clinic rheumatologists and study co-authors. Continued research could lead to preventive treatments.

Possibility for more effective treatment with fewer side effects

The second paper, published in *Arthritis and Rheumatology*, explored another facet of gut bacteria. Dr. Taneja treated one group of arthritis-susceptible mice with a bacterium, *Prevotella histicola*, and compared that to a group that had no treatment. The study found that mice treated with the bacterium had decreased symptom frequency and severity, and fewer inflammatory conditions associated with rheumatoid arthritis. The treatment produced fewer side effects, such as weight gain and villous atrophy — a condition that prevents the gut from absorbing nutrients — that may be linked with other, more traditional treatments.

While human trials have not yet taken place, the mice’s immune systems and arthritis mimic humans, and shows promise for similar, positive effects. Since this bacterium is a part of healthy human gut, treatment is less likely to have side effects, says study co-author Joseph Murray, M.D., a Mayo Clinic gastroenterologist.

Found: A potential new way to sway the immune system

Fri, 5 Aug 2016

TSRI Study Points Way to Better Vaccines and New Autoimmune Therapies

A new international collaboration involving scientists at The Scripps Research Institute (TSRI) opens a door to influencing the immune system, which would be useful to boost the effectiveness of vaccines or to counter autoimmune diseases such as lupus and rheumatoid arthritis.

The research, published August 1, 2016, in *The Journal of Experimental Medicine*, focused on a molecule called microRNA-155 (miR-155), a key player in the immune system's production of disease-fighting antibodies.

"It's very exciting to see exactly how this molecule works in the body," said TSRI Associate Professor Changchun Xiao, who co-led the study with Professor Wen-Hsien Liu of Xiamen University in Fujian province, China.

Possible Psoriasis Drug Target Identified

Wed, 22 Jun 2016

The prevalent skin disease known as psoriasis occurs when a malfunction occurs in the communication between the immune system and the epidermis. Most current medications target the disease by inhibiting the immune system. However, a new study by Stanford University School of Medicine has identified a protein involved in wound repair, Rac1, that connects a genetic predisposition for the disease to environmental triggers. New drugs could consequently target the protein instead of the immune system, resulting in effective treatment of psoriasis without the side effect of increased vulnerability to other diseases due to a weakened immune system.

Plank Challenge

Tue, 7 Jun 2016

A strong core is the foundation to a strong body. Think about it: A tree would fall if its trunk wasn't solid and stable. Doing core work isn't just about your middle, either. Having a strong core will make you a better runner, surfer, or yogi (or whatever activity you like to do) while improving your posture and balance. Working your core can also protect you from low-back pain — and yes, it'll tone your abs, too.

One of the best core exercises out there is the plank. It forces you to stabilize your body, engaging your entire core — not just the exterior abs that you see in the mirror. This means your obliques, or all-around abs (where you'll find those love handles), and transversus abs (the deepest layer) will tighten up. Plus, you'll work your shoulders and your legs at the same time.

Here, is a 30-day plank challenge that will get you results quickly. You'll start by planking at an incline (try leaning against a wall, chair, or the back of your couch), which is easier for beginners. Then, as you get stronger, you'll move to the floor and work your way up to holding a plank for three full minutes. If it's too difficult for you to do the plank with your palms flat on the ground, you can modify it so you're resting on your forearms. Just make sure you don't hunch or strain your shoulders. Your goal is to maintain proper form (don't crane your neck or let your hips sag) while holding up your own body weight. The hardest part about planking is committing... and holding still until the end.

Facility of the Year

Fri, 13 May 2016

With the utmost humility and gratitude, we accepted the 2016 Physical Therapy Facility of the Year at the South Carolina Physical Therapy Association (SCAPTA) Conference in Charleston, SC on May 7, 2016. We are thankful to have jobs that allow us to serve our community.

First Stop Physical Therapy

Thu, 7 Apr 2016

A recent United States study found that patients who saw a physical therapist first were also less likely to be prescribed a painkiller when compared to others who saw a different type of clinician. The policy brief emphasizes that visiting with a physical therapist first will reduce the use of costly healthcare services and thereby cut spending across the board. If you are looking to eliminate pain and cut the cost of your healthcare, physical therapy should be your first stop.

Depression Linked to Back Pain

Tue, 23 Feb 2016

A new study from Australia reveals that people who suffer from depression are 60% more likely to develop low back pain in their lifetime. The study included more than 23,000 people. The study also found that people were at a much greater risk for lower back pain with more severe levels of depression. The old cliché that "Depression hurts" seems to be true!

Spicy Arthritis Treatment

Thu, 4 Feb 2016

New research has presented that turmeric has been highly effective in blocking the body's inflammatory response. The biological makeup of turmeric was clinically proven to inactivate the proteins that cause bone breakdown-making it a two for one deal, preventing bone

breakdown and inflammation. Patients with rheumatoid arthritis (RA) are benefiting from this spicy herb. More research is currently being done.