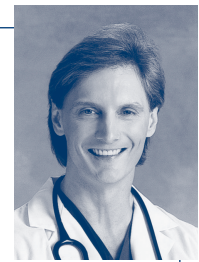


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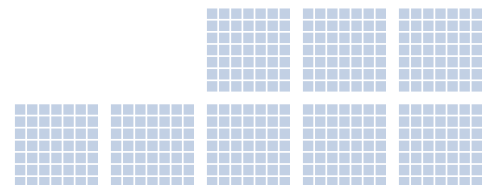
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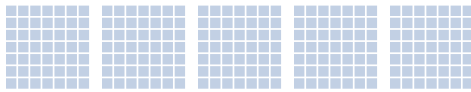


Don Colbert, M.D. is board certified in Family Practice. He attended the University of Mississippi, Christ for the Nations in Dallas, and Oral Roberts University. He did his internship and residency at Florida Hospital in Orlando, Florida, and has specialized training in Preventive Medicine, Nutritional Medicine, and Dermatological Service and Surgery.

He has written several best-selling books, including: *Walking in Divine Health*, *What You Don't Know May be Killing You*, *Dr. Colbert's Guide to Ultimate Health*, *Toxic Relief*, *What Would Jesus Eat* and *The Bible Cure Booklets*, which won the Christian Retailer's Choice award for best booklet series. Dr. Colbert also writes a monthly column entitled "Doctor's Orders" for *Charisma* magazine. In addition he contributes a column to *Joyce Meyer's Partners* magazine and can be seen on his own national talk show, *Your Health Matters*, with his wife, Mary.



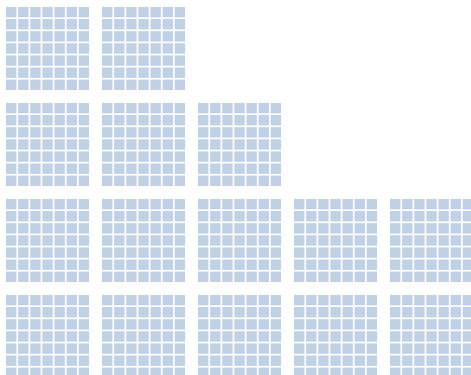




ADHD/ASD
ANTIAGING
CARDIOVASCULAR
CHRONIC FATIGUE
DETOXIFICATION
DIGESTION
IMMUNE HEALTH
METABOLISM
MENS HEALTH
MUSCULOSKELETAL
PODIATRY
NEUROLOGICAL
SEXUAL HEALTH
WOMEN'S HEALTH

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Enzymes Are Key to Reduction of Pain and Inflammation

-Don Colbert, MD

According to the American Pain Foundation (APF), the presence of pain is a national healthcare crisis. More than 50 million Americans are suffering from chronic headaches, back pain, muscle strain, and arthritis, as well as pain from chronic illnesses, such as diabetes, lupus, fibromyalgia, and multiple sclerosis. Another 25 million are dealing with acute pain as a result of injury or surgery. And although most pain can be relieved or greatly eased with proper care, the tragedy is that most pain goes untreated, under-treated, or is improperly treated.¹

What's so frustrating about this suffering, is that since 1987 we have been conducting an incredible amount of research into how pain affects our bodies. The results have proven that pain should never be ignored. We've learned we need to assess it thoroughly and treat it aggressively, and in some cases manage it as a chronic condition. We've learned that when pain is managed, stress is reduced, and the body heals faster. And we also know that when people with pain take an active role in their pain management, they get the best results possible: less pain and a better quality of life.²

Part of this research has shown that inflammation is frequently a component of pain. While we have long associated acute pain - pain that happens suddenly - such as a sprained ankle or a tension headache - with inflammation, we now know that inflammation is present in chronic pain, too. Inflammation is actually the cause of the pain in osteoarthritis, rheumatoid arthritis, multiple sclerosis, lupus, and fibromyalgia. Furthermore, we have learned that inflammation is associated with heart disease and other chronic health conditions.^{3,4}

But without a doubt, the most crucial and maybe the most unexpected information we've discovered is that inflammation can also be triggered by the foods we eat. In fact, if our digestive systems are not functioning up to par or if our bodies are not properly absorbing protein or other nutrients, inflammation will often result.⁵

While there are powerful prescription medications available to treat chronic pain and inflammation, they only provide temporary relief. They often have unpleasant and potentially harmful side effects. And they don't get to the root of the problem.

To do that - to eliminate the beginnings of inflammation and the pain it causes - requires safe, highly effective, natural interventions. In this issue, we're going to show how supplemental pancreatic enzymes improve digestion and nutrient absorption, prevent inflammation triggers - and reduce chronic pain.

Q. What exactly is inflammation?

A. Most of us have experienced the redness, warmth, swelling, and pain that signals inflammation - maybe as a sore throat, or a sprained wrist or ankle. It begins when white blood cells release chemicals in response to a virus or bacteria (the germs infecting your throat) or to provide protection immediately after an injury (that ankle you sprained). Some of the chemicals cause a leak of fluid into the affected tissues, which results in swelling. An increased blood flow to the area, an automatic response to injury or infection, causes the redness and warmth. These protective actions stimulate nearby nerves, which in turn causes the pain. Once the sore throat resolves or the sprained ankle heals, the inflammation goes away and so does the pain.⁶

However, when chronic inflammation occurs, the warmth, redness, swelling, and pain never fully resolve. Not only does the inflammation continue, it actually causes destruction of surrounding tissues.⁶ This is what happens in autoimmune diseases - a varied group of illnesses where the body's immune response is directed against its own tissues. For some unknown and unnecessary reason, white blood cells continually release their chemicals in targeted areas of the body resulting in inflammation and tissue destruction. In the case of rheumatoid arthritis, the body's immune response mistakenly targets the linings of the joints. White blood cells release their chemicals and the joints become red, warm, swollen, and painful. This continued inflammation can slowly destroy the lining of the joint and eventually, the joint itself.⁷

Q. What about chronic pain that's not caused by autoimmune disease? Is inflammation a part of this kind of pain?

A. Yes, it is. Chronic back pain, an inflammatory pain condition, is the number one reason adults seek help from their healthcare practitioners. It affects millions of Americans every day. While it can originate from an injury or trauma to the back, chronic back pain can also occur from poor posture or the presence of abdominal fat. Once back muscles become strained, inflammation results and pain persists.⁸

Osteoarthritis is another type of arthritis and is most often seen in middle-aged and older people. Defects that develop in certain joints over time can lead to cartilage breakdown in the joints. Inflammation begins as the cartilage breakdown causes bones to rub against each other. This continual bone-on-bone rubbing creates significant pain and can lead to deformities and loss of movement.⁹

Q. OK, I understand about the connection between inflammation and pain. But how can the foods I eat trigger inflammation?

A. Research into nutrition has resulted in a much better understanding of how certain fats and oils react in our bodies. When we consume arachidonic acid from animal fats or trans fats from hydrogenated oils (unhealthy fats and oils) our bodies make "pro-inflammatory compounds." These compounds can initiate unnecessary inflammation - the kind of inflammation that's seen in autoimmune disease, chronic back pain, and osteoarthritis. If our diet is high in these fats, we could be promoting pain and inflammation every time we eat a meal.^{10,11}

Q. How can poorly digested protein trigger inflammation?

A. The structure of proteins is very complex. Proteins are our only source of amino acids - compounds that form every aspect of the human body. The proteins we eat in foods (such as meat, fish, poultry, eggs, cheese, and soy) must be broken down by a number of protein enzymes, or proteases, that are made in the stomach and pancreas. The proteases break down proteins into smaller and smaller molecules, and finally into individual amino acids that are ready for absorption.¹²

However, if we are stressed, using antacids for heartburn, eating unhealthy food, or are deficient in the pancreatic enzyme, protease, the proteins we consume will be poorly digested and not broken down into small enough units for proper absorption. Oversized protein molecules may result. Oversized protein molecules in the intestines can trigger the release of histamine and other inflammatory compounds. This can result in gas, bloating, belching, feeling full for a long time after eating, constipation, diarrhea, nausea, AND inflammation. More problems arise if these oversized proteins are accidentally absorbed into the body - often called "leaky gut syndrome." If poor protein digestion happens with every meal, inflammation can be triggered throughout the day, never allowing the inflammatory process to die down.¹³

Q. Does this mean that autoimmune disease is caused by poorly digested proteins triggering inflammation?

A. Because autoimmune diseases are very complex and they involve so many different parts of the body, this connection has yet to be firmly established. However, we do know that if our intestines are exposed to undigested proteins, they release histamine. Histamine in

turn causes the intestines to become inflamed. Inflamed intestines allow poorly digested proteins to pass into the bloodstream. Antibodies in the bloodstream identify these proteins as foreign invaders and alert the immune system to initiate an unneeded and unnecessary immune response that has the potential to cause great harm.¹⁴

It is theorized that this erroneous immune response initiates the inflammation in autoimmune disease. In rheumatoid arthritis, the joints become inflamed. In multiple sclerosis, the myelin sheaths around nerve cells become inflamed. And in lupus, it's the collagen. In fact, it is now highly suspected that the very beginning of heart disease is associated with inflammation as well.¹⁴

Q. I thought heart disease resulted from high cholesterol, high blood pressure, and high homocysteine levels. What does inflammation have to do with it?

A. Researchers who study heart disease have recently discovered that a specific protein, called highly sensitive c-reactive protein (hs-CRP), is an extremely reliable predictor of heart disease. In fact, its presence indicates more heart health hazards than the other markers of cardiovascular disease: high blood pressure, high cholesterol, and high homocysteine levels.¹⁵⁻¹⁷ Inflammation plays a major role in atherosclerosis (the process of fatty deposits building up in the lining of arteries) and heart attacks by causing the heart's blood vessels to constrict, spasm, and create clots. Researchers have also determined that hs-CRP reflects the presence of continual low-grade inflammation in other places of the body, too, and may result in several serious health conditions.¹⁸⁻²⁰

While research into pain, inflammation, and hs-CRP is relatively recent, the study of proper digestion and assimilating protein goes back to the 1920s. Scientists have known for many years that using supplemental, animal-based enzymes can result in greatly improved health. And they've known that the best results are achieved with a high-potency pancreatic enzyme complex.⁵

Q. How do pancreatic enzyme supplements work to improve digestion and reduce inflammation?

A. To understand how supplemental pancreatic enzymes work to improve our digestion, we need to first understand how the pancreas itself works. Our pancreas is a digestive organ that's located behind the stomach. It's about 10 inches long and looks a little like a tadpole. In fact, the pancreas has a "head" and a "tail" just like a tadpole does.²¹ While,

the pancreas has a number of fascinating functions, we're going to focus on its enzyme production.

The pancreas makes many different enzymes - each responsible for breaking down different types of food into small particles suitable for absorption. When the enzymes leave the pancreas, they are secreted into the intestines where they become activated. The main pancreatic enzymes are the amylases (which digest carbohydrates), proteases (which digest protein), and lipases (which digest fats).²¹

Pancreatic enzyme supplements can assist the work of our pancreas, improve digestion, prevent damage caused by autoimmune disorders, and reduce inflammation. However, all pancreatic supplements are NOT the same. There is a vast disparity in these nutritional supplements.⁵

Q. Sometimes my weekend activities (jogging, racquetball, golf) result in sore leg and arm muscles. Can I take pancreatic enzyme supplements for pain and inflammation that's not chronic?

A. Yes, you can. Many people who don't take pancreatic enzyme supplements routinely, find great relief from pain and inflammation that results from being a weekend warrior. Simply take two tablets three times a day between meals until the pain and inflammation are gone.

Q. Why between meals?

A. Because enzymes taken with meals exert their activity to digest food. In the absence of food (between meals) the enzymes perform in a systemic manner, meaning they are active throughout the body, not just in the digestive tract. This allows them to perform other functions - such as combating inflammation.

Q. The labels on pancreatic enzyme supplements are very confusing. How can I be sure I'm purchasing the most effective pancreatic extract enzyme supplement?

Most pancreatic enzyme supplements are prepared from fresh porcine (pig) pancreases. The United States Pharmacopoeia (USP) has set strict level definitions using units and milligrams to measure levels of activity. If you purchase a 1X USP pancreatic enzyme (pancreatin) product, it must contain not less than 25 USP units of amylase activity, not less than 2 USP units of lipase activity, and not less than 25 USP units of protease activity. The higher the potency number (X USP), the higher its strength. For example, a pancreatic extract that is 6 times stronger than the USP standard would be labeled as 6X USP.⁵

Make sure the product you purchase contains the highest potency pancreatic enzyme complexes available -10X full-strength, undiluted pancreatic enzymes. Make sure the label identifies it as a full-strength product. Full strength pancreatic enzyme supplements (10X) are preferred to lower potency products, because lower potency preparations are often diluted with salt, lactose, or galactose to achieve desired strength.⁵

While enzymes are also very helpful in aiding digestion of your food when taken with meals, take them between meals to address issues related to pain and inflammation.

More health benefits of high potency full-strength, pancreatic enzyme supplements:

Pancreatic enzymes may also be helpful as part of a treatment plan for cancer. A small study looked at people with pancreatic cancer (that could not be treated with surgery) who also took supplemental pancreatic enzymes, other nutritional supplements, and ate a diet primarily consisting of organic foods. After two years, 45% of the participants were still alive and well, a very high number considering that the average number of people still living two years after a diagnosis of pancreatic cancer is about 10%.²² In a study of people receiving radiation treatment for head and neck cancer, patients who also received pancreatic enzymes had significantly reduced side effects from the conventional treatment. They experienced less skin irritation and had fewer problems swallowing (a result of treatment for throat cancer) than patients who did not get the supplemental enzymes. Finally, in a laboratory study of lung cancer, 100% of animals who received supplemental enzymes within 24 hours after exposure to cancer-causing agents survived at least 100 days. None of the group who did not get the enzymes were still alive after 100 days.

These studies, and others, offer evidence that pancreatic enzymes can both improve survival rates for cancer patients, and minimize the effects of sometimes harsh conventional cancer treatments.

The Common Cause, The Common Answer

By simply taking a 10X full-strength, uncut, undiluted pancreatic enzyme supplement every day, just think how improved our health and quality of life could be:

- Reduced pain and inflammation
- Improved protein digestion
- Lowered risk of heart disease
- Less chance of autoimmune disease
- Increased lean muscle mass
- Less stored fat

You can live your life without pain and inflammation and pancreatic extract enzyme supplements can help.