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Pinellas County PCCS Chiropractic Society

May/June 2021

The Audible Release

Chronic Inflammation and Oxidative Stress in Pain & Degeneration

By Jen Gantzer, DC, MS, FACN, DACBN, LAc

It's not a secret *Chronic Inflammation* has become a hot topic and key word in many discussions of disease and aging, and the use of anti-inflammatories are commonly prescribed and purchased over the counter, such as Naproxen, Ibuprofen, Aspirin which are collectively called NSAIDs, non-steroidal anti-inflammatories. What's less well known are ways we can naturally influence the very reason we need these (pro-inflammatory body habitus) and ways to naturally combat this pain, aging, and disease-driving inflammation without synthetic NSAIDS which come with long-term side effects, but naturally with constituents that act in the same manner. Secondarily, it's not fair to give chronic inflammation all the attention when its evil cousin *Oxidative Stress* is just as at-fault and must be supported and combatted equally in order to truly attain the attack on pain, aging, disease, and degeneration because the very core of the physiological mechanism of action, they are both culprits and need to be addressed together to prevent their excess. (1-7)

The most important foundational understanding before it's warranted to discuss inflammation and oxidative stress further, *is that they are both vitally functional at normal basal physiologically levels*; it's not until they become existent in chronic excessive perpetual amounts that they become damaging and drivers of disease. (4-7)

Inflammation on a molecular level correlates to small molecules, typically proteins, of communication such as cytokines, chemokines, interleukins, which we introduced in the March "Keeping Us Healthy" article. The body communicates like a trail of ants, responding to signals and its environment. In regard to our hot topic keywork *Chronic Inflammation* we must introduce one more category of signaling and communicating molecules which also direct the body's responses to injury, infection, growth, and repair and those are the *Eicosanoids* which come from *Essential Fatty Acids* the famous omega-3 in marine foods and fish oil supplements (EPA/DHA) or its evil twin omega-6 high in vegetable oils, processed/boxed/bagged foods, grains, and grain-fed livestock (Arachadonic Acid). Both are physiological necessary in physiological amounts because of their functional role as the source of signaling molecules, the Eicososoids, because they actually are the "thing" that gets changed into the eisconoid signaling molecules. (4,8,9)

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VISIT US ONLINE AT PCCSCHIRO.ORG

PCCS general dinner meetings resume in July

June Social at Caddy's Maderia Beach; see pg 4 for details

URGENT!!! RENEWAL of PR CERTIFICATION JUNE 22ND; See pg 4

June is also FINAL MONTH for online CE reimbusement

2021 updates to the CPT codes – by Mark Wieland

Just in case you missed it, 2021 began the year with updated changes in the CPT codes, primarily to the E & M guidelines allowing you to use a time basis **OR** continuing to use the medical decision-making model. There were also updates in the last year too specific codes for dry needling instead of using acupuncture and updates in the acupuncture codes.

E&M updates saw the elimination of the 99201 code, the rationale for this was that both 99201 and 99202 were classified as straightforward decision making. If you are using the time basis for the codes it still requires you to perform and document a medically appropriate history **and** clinical examination with the following time parameters for the total encounter.

99202 - Straightforward medical decision making, 15-29 minutes of total time is spent
99203 – Low level of medical decision making. 30-44 minutes of total time is spent
99204 - Moderate level of medical decision making. 45-59 minutes of total time is spent
99205 - High level of medical decision making. 60-74 minutes of total time is spent

Established patients require medically appropriate history **and / or** examination as well as the appropriate time spent on the encounter.

99211- Office visit of an established patient, usually, the presenting problem(s) are minimal.

- may not require the presence of a physician and or qualified health care professional

99212 - Straightforward medical decision making, 10-19 minutes of total time is spent
99213 – low level of medical decision making. 20-29 minutes of total time is spent
99214 - Moderate level of medical decision making. 30-39 minutes of total time is spent
99215 - High level of medical decision making. 40-54 minutes of total time is spent

Prolonged Patient Encounter:

99354- Prolonged service(s) requiring direct patient contact beyond the time of the usual service

- Not to be used with 99202- 99205, 99211- 99215

These are just a few of the highlights, for detailed aspects please refer to the ACA's chiro code handbook. https://www.chirocode.com/

Acupuncture:

97810 - Manual manipulation of needles, initial 15 min.
97811 - Manual manipulation of needles, additional 15 min. (includes re-insertion of needles)
97813 – Electrical stimulation of needles, initial 15 min.
97814 – Electrical manipulation of needles, additional 15 min. (includes re-insertion of needles)

Dry Needling:

20560 – Dry Needling; 1 – 2 muscles
20561 – Dry Needling; 3 or more muscles

Cordain recommends a hunter gatherer approach and recommends omega6:omega3 ratio of around 1:1, Lord et al suggests that ratio may be too low due to the important role the omega-6 has in healing and its directive role in tissue growth thereby recommends no less than 4:1, and it's well known that ratios higher than 8:1 which directly result from eating too many omega6 foods and not enough omega3 ones, is directly clinically correlated to increased pain, aging, degeneration, and disease. Sadly, the western American diet averages a 18:1 to 20:1 and is clinically associated with degenerative diseases and metabolic disturbance disorders known for their underlying *Chronic inflammation* which directly corresponds to the body habitus of dietary intake of the omega6:omega3 ratio. (6, 10, 11)

When the body eats these "essential fatty acids" – essential because we need them for vital physiological roles but we cannot make them intrinsically on our own – we put these fatty acids in all of our tissues and also in all of our lipid (fat) transport molecules called lipoproteins which carry fat-soluble foods and vitamins as well as cholesterol the molecule (the actual steroid itself) to peripheral body tissues for maintenance, repair, and synthesis reactions. Once these essential fatty acids make it to their target tissue they get incorporated cellularly, and once there, they are available to interact in reactions that convert them into the eicosonoid signaling molecules; prostaglandin PGE, thromboxane TXA, and leukotriene LTB which then further cross talk with other tissue and cellular targets influencing the rates of expression of other cytokines/chemokines and interleukins. The more these are all expressed and persist, the more pro-inflammatory and degenerative the body habitus, directly clinically correlated to increased pain, aging, degeneration, and disease. The best way to prevent or reverse this pathological ratio is a shift away from high intake of the omega6 food sources and shift towards more omega3 foods and supplement daily with Fish Oil as well as a high dose DHA for its additional neuroprotective and cardioprotective roles. Additionally, natural agents that combat excessive generation of the eicosanoids from the same pathway and shared mechanism of action of the NSAIDS, is switching to White Willow, Boswellia, Turmeric & Curcumin, Ginger, and Flavonoids in colored produce. Eating these and supplementing with them directly act in the same manner as the Ibuprofen/Aspirin/Naproxen the OTC or prescription NSAIDs. Many natural anti-inflammatory products have these in synergistic doses. (4, 6, 11-13)

So, inflammation on the molecular level exists as cytokines/chemokines/interleukins (IL1 IL6 IL17 TNF IFN etc) & eicosanoids (PGE TXA LTB) in excess are drivers of pain, disease, and degeneration but necessary at low basal normal physiological levels due to their signaling/communicating functional roles. So then why is Oxidative Stress different then Chronic Inflammation and what qualifies as Oxidative Stress?

Oxidative Stress occurs when there is deficient *Antioxidant* protection against a subset of molecules known as *Free Radicals* also called *Reactive Species*, you may have heard of "Reactive Oxygen Species" or "Reactive Nitrogen Species" (O2-/OH-/ONOO-/H202) which cause damage to local tissue when they exist in a system of unequal amounts of combatting antioxidants and/or excessive levels of their generation (hypertension, hyperglycemia, hyperlipidemia, obesity, diabetes, metabolic syndrome, chronic infection, heavy metal toxicity, impaired liver detox; to name some common sources). (4-6, 14-18)

Just like the inflammatory signaling molecules, these are generated at low basal levels in a healthy normal physiological system, and they too act as communicating molecules, which the body orchestrates with a perfect balance of antioxidant protection against this basal amount preventing their damaging effects. *Antioxidants*, another hot topic keyword that most people know they should have, do their physiological roles by fighting free radicals, and they happen to be essential vitamins, minerals, and dependent on sufficient supply of amino acid building blocks since several of them are proteins. The simplest list of ensuring the primary ones in all physiological systems are: Vitamin C, Vitamin E, B2 and B3, CoQ10, Alpha Lipoic Acid, the amino acids: Cysteine or

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For details & submission details visit https://pccschiro.org/1-free-online-ce-hour/

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PCCS June Social
Caddy's Madeira Beach

Tuesday June 29th 6:30 – 8:30 pm

Appetizers and 2 drink tickets included

Join us upstairs at the beachfront outdoor patio and open patio bar

Member and Sponsors please RSVP to the Evite.

URGENT RENEWAL of CPR CERTIFICATION MEETING

St. Pete Marriot
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Tuesday June 22nd 7 pm – 8 pm

No dinner will be provided, recertification class only.

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Dr. Jason Miller: Editor

The Audible Release provides news and information that is both educational and informative to the chiropractors and their associates in the Pinellas County area.

Society news, staff changes, personal announcements, photos and success stories are welcome. Articles about chiropractic procedures and issues concerning the practice of chiropractic should be submitted to the editor. Advertising inquires should be made to the publisher or visit us online at www.pccschiro.org

The deadline for ads and articles is the 7th of every month.

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NUHS Summer Ambassadors Deric Lovett & Alan Norman Welcome Alan

Alan is a 9th trimester intern at the university's PPC Whole Health Clinic pursuing his DC degree as well as an Acupuncture certificate. He has participated with ACA & FCA, and plans to stay involved in local, state, and national organizations that promote and develop the field of Chiropractic and is excited to be the newest student board member.

Derik is a 10th trimester intern graduating in August, serving his 2nd semester as a student board member.

Calendar of Events

MARK YOUR CALENDARS

Monthly Dinner Meetings
Resume in July
In-Person & Virtual for 2021

Join us In-Person
Last Tuesday of the Month
St. Pete Marriot 6:30-8:30 pm
Join us Virtual via Zoom

www.pccschiro.org/annual-calendar

July/Sept/Oct Speakers:
Brain Injury Enhanced Imaging
Joint Meeting with HCCS & NSCS
Thermography Cancer Screening

June Social in-person Kick-off
Caddy's Madeira Beach; pg-4
June Board meeting 8th 12:30pm Zoom
July Board meeting 13th 12:30pm Zoom
August Board meeting 10th 12:30pm Zoom

Be Watching for or educational video series underway

General Meeting remain cancelled returning as soon as possible.

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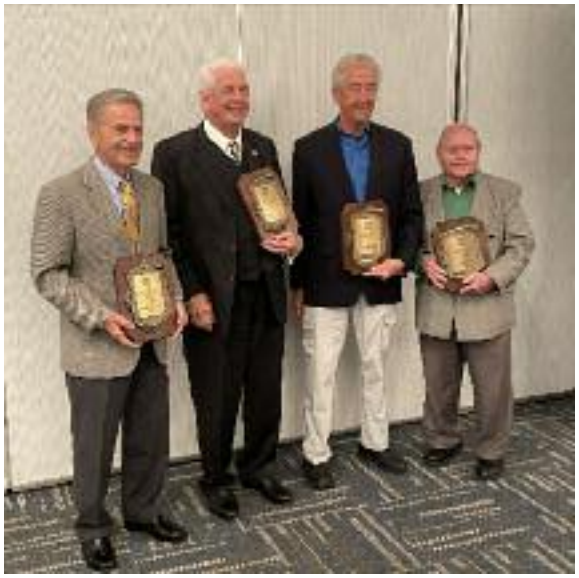

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See page 15 for the 2021 Membership Application if you have not already mailed it in.
Contact Jennifer Comey, Executive Director, with any questions regarding membership at ed@pccschiro.org

We appreciate your support of our society which works hard to serve & represent you.
Names listed in BOLD have donated to the PAC In their membership dues (Political Action Committee)

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THE RADIOLOGIST'S VIEW

RADIOLOGISTS AND PILOTS HAVE A COMMON FOE, COMPLACENCY

There is an expression often used by pilots to describe the experience of flying; long periods of boredom, interspersed by moments of sheer terror. Think about it. On a typical commercial flight, the pilot spends the majority of time monitoring instruments while the autopilot maintains the plane in a straight and level position. Even the takeoff and landing are carefully executed but essentially routine maneuvers. But the pilot knows that at any moment chaos and terror can ensue due to a mechanical failure or other catastrophic event.

Pilot training is extensive, requiring both the intellectual capability and motor skills that not everyone is capable of achieving. The majority of the training involves preparation and practice in handling emergencies which include bringing the plane to its limits, such as recovering from simulated aerodynamic stalls, and learning how to prevent the plane from falling from the sky. In other words, the overwhelming majority of pilot training involves planning for the rarest of events that can lead to disaster (terror), while in realty the overwhelming majority of the time the pilot flies straight and level (long periods of boredom). So, what does this have to do with radiology?

In a similar manner, a radiologist in training dedicates the vast majority of time learning to understand and recognize diseases, conditions, syndromes and rare disorders that make up a small percent of a radiology practice. Most of the radiologist's time in clinical practice will consist of reading essentially normal studies or describing the common disease entities, such as degenerative joint disease, disc bulges and osteoporosis. This can lead to potential problems.

The day-to-day practice of the typical radiologist (long periods of boredom) can lead to a sense of complacency. The repetition of describing disc degeneration, postural changes, disc herniation and bulges can cause the radiologist to lose focus and to arrive at incorrect assumptions. That is, the thought process that the images are most likely normal becomes the default. The readiness for that "Jack in the Box" pop-up urgent or unexpected finding, is blunted. Like the pilot, the radiologist needs to be consistently ready, as it is likely that one of those "sheer terror" moments is waiting in that pile of films or on the PACs work list.

When the non-radiologist evaluates a film there is a level of confidence that comes with experience. After all, one may have been in practice for twenty years and claim to have never had a case of metastatic disease or unexpected finding. But much of that is simply due to a numbers game. The vast majority of clinical training encompasses studying both the common and esoteric disease processes, but in reality, those entities make up a fraction of the conditions that present to a clinic. The absolute number of "terror" cases that one may come across is very small since the percent of those cases in the general population is small. The number of images that a radiologist sees in one day is likely to equate to several weeks of a clinical, non-radiologist practice. So, if it is unusual for the radiologist to find a serious case it is much less likely that a non-radiologist will find one.

It would be interesting (albeit unethical) to simply take an x-ray, put it away and guess what the findings would have been. For example, x-rays of the cervical spine on a 70 year old female is likely to demonstrate degenerative disc disease, facet arthrosis and some degree of osteopenia. Diagnostic accuracy would be on the order of 99%. The chances that that particular patient has an unusual or urgent finding would be very small, but the consequences of missing that finding would be enormous.

The pilot, the radiologist and the clinician have much in common. The majority of training is designed to correctly react to the emergency while the reality is that most of the time is spent in cruise mode. Don't get complacent, stay alert and know your limits. When it comes to radiology, sit back, relax and let some one else fly the plane.

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its other form NAC, Glycine, and Glutamate to synthesize Glutathione, also mineral-dependent enzymes requiring Copper, Zinc, and Manganese for Superoxide Dismutase, Selenium for Glutathione Peroxidase, and Iron as Heme for Catalase. You don't get to pick and choose any of that list… *you need ALL OF THEM and ALL THE TIME*.

When these are not bioavailable due to low supply (dietary intake) or high demand (body habitus of chronic inflammation, injury, infection) then they cannot combat free radicals, and that is *Oxidative Stress*, a system of too many damaging free radicals with not enough antioxidant protection. Just like chronic inflammation, it's well known in medical literature that oxidative stress - *code for lack of essential nutrient antioxidant protection and too much free radical* - is highly clinically correlated to many degenerative disease and metabolic disturbance disorders as well. Since these are essential nutrients, the best dietary source is plant-based soil-grown fruits, vegetables, nuts, seeds, grains, legumes but we need protein regardless so ensure meat or substitute with a protein shake or protein powder in poor meat digestive people and/or vegans/vegetarians for amino acid support.

It's not recommended to high dose minerals, phyto-green powders are a better daily choice, and only take supplemental minerals in high dose short-term, couple days to a week, and for therapeutic and/or episodic instances, feel a cold/flu coming on, and even then is short term supporting the episode. 6, 11, 19,21)

An excellent way to compliment your chiropractic and conservative care strategies while adding a revenue source is by selling in-office Fish Oil & DHA products such as Protocol for Life DHA-500, a synergistic anti-inflammatory such as Pro-Enz or Nutra Disc by Anabolic Labs, and a vitamin/mineral-rich phyto-green powder such as Greens First which together dually attack the sources of pain, degeneration, aging, and disease to assist your patients fight against the negative effects of debilitating chronic inflammation and damaging free radicals. (21-24)

Check out my video as part of the educational series at https://pccschiro.org/online-videos/.

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PCCS 2021Membership Application & Invoice

January 1, 2021 thru December 31, 2021

The following will be displayed in the website member directory

Name:_____

Credentials and Post-doctorate certifications:

Circle all that apply: DC MS LAc DABCI DACBN DACNB DACBSP DACBR DICCP

Select One: New Member / Renewal / New Member 1st Year DC

Renewals Only: complete below IF YOUR CONTACT INFO has changed

Office or Company Name:_____

Office or Company Address: _____

Multiple office locations:_____

Email:_____

Office Phone:_____ Office Fax:_____

Cell phone (for PCCS communications): _____On directory? Y / N

*Membership is for the chiropractor listed above only & is non-transferable.

New Members and Renewals:

- □ **Annual Dues with a $50 voluntary contribution to the PAC = $225.00**
- □ Annual Dues = $175.00

1st Year DC: Graduated in 2020

- □ **1st Year Licensed D.C. Annual Dues +$50 contribution to the PAC = $149.00**
- □ 1st Year Licensed D.C. Annual Dues = $99.00

ONLINE APPLICATION AND RENEWALS NOW AVAILABLE

www.pccschiro.org/join-now

Online Pay Options: Venmo/Paypal

Join by Mail: enclose this completed form & check payable to:

PCCS

P.O. Box 7515

Seminole, FL 33775-7515

NEW FOR 2021: General Meetings will be held In-Person and Virtual via Zoom to accommodate travel and social distancing**

****General Meetings will remain postponed until further notice awaiting CDC post-holiday updates; returning as soon as possible**

PCCS membership annual dues support the chiropractic profession and Florida scope of practice;
thank you for your chiropractic financial support

Know someone interested in joining as a DC/Sponsor/Advertiser; www.pccschiro.org click "Join Now or Get Involved"

Email Jen Comey, Executive Director ED@PCCSChiro.org or Dr. Gantzer, President drjgantzer@gmail.com with questions.
*Contributions to the PCCS-PAC are not deductible as charitable contributions for federal income tax purposes.

Audible Release

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P.O. Box 7515
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www.pccschiro.org

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