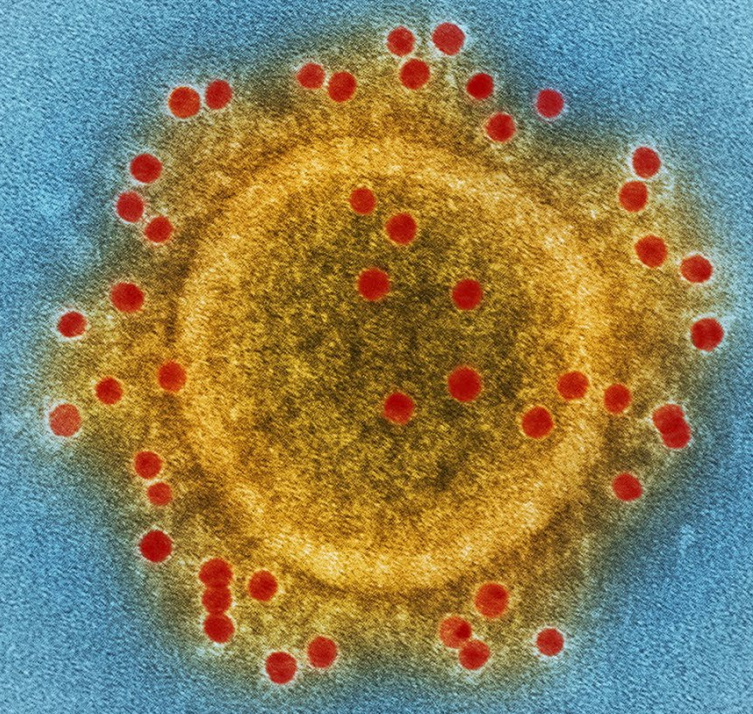


Autoimmune Diseases: A Route to Resolution

NHAND Conference

November 5, 2022

Todd A. Born, ND, CNS

Born Integrative Medicine Specialists, PLLC

www.bornintegrativemedicine.com

BORN INTEGRATIVE MEDICINE SPECIALISTS, PLLC

Disclosures

Born Integrative Medicine Specialists, PLLC

- Co-owner and medical director
  - www.bornintegrativemedicine.com

Allergy Research Group LLC

- Director of new product development, Scientific Advisor, Editor-in-chief of Focus Newsletter

International Medical Wellness Association

- Medical Wellness Advisor
  - https://www.medicalwellnessassociation.com/

Goals & Objectives

Understand clinical presentation of autoimmune diseases.

Understand conventional and more expanded diagnostic workup, to ascertain more precise targets for therapy.

What do all the various autoimmune diseases have in common?

Be able to implement conventional and naturopathic interventions, which are evidence and clinically based, to alleviate symptoms and hopefully have the patient go into remission.

Stats & Facts

80-100

- https://www.aarda.org/diseaselist/

~ 25-50 million Americans. One of the leading causes of death and disability.

- https://www.womenshealth.gov/a-z-topics/autoimmune-diseases

$591 million spent on research vs. $6.1 billion for cancer

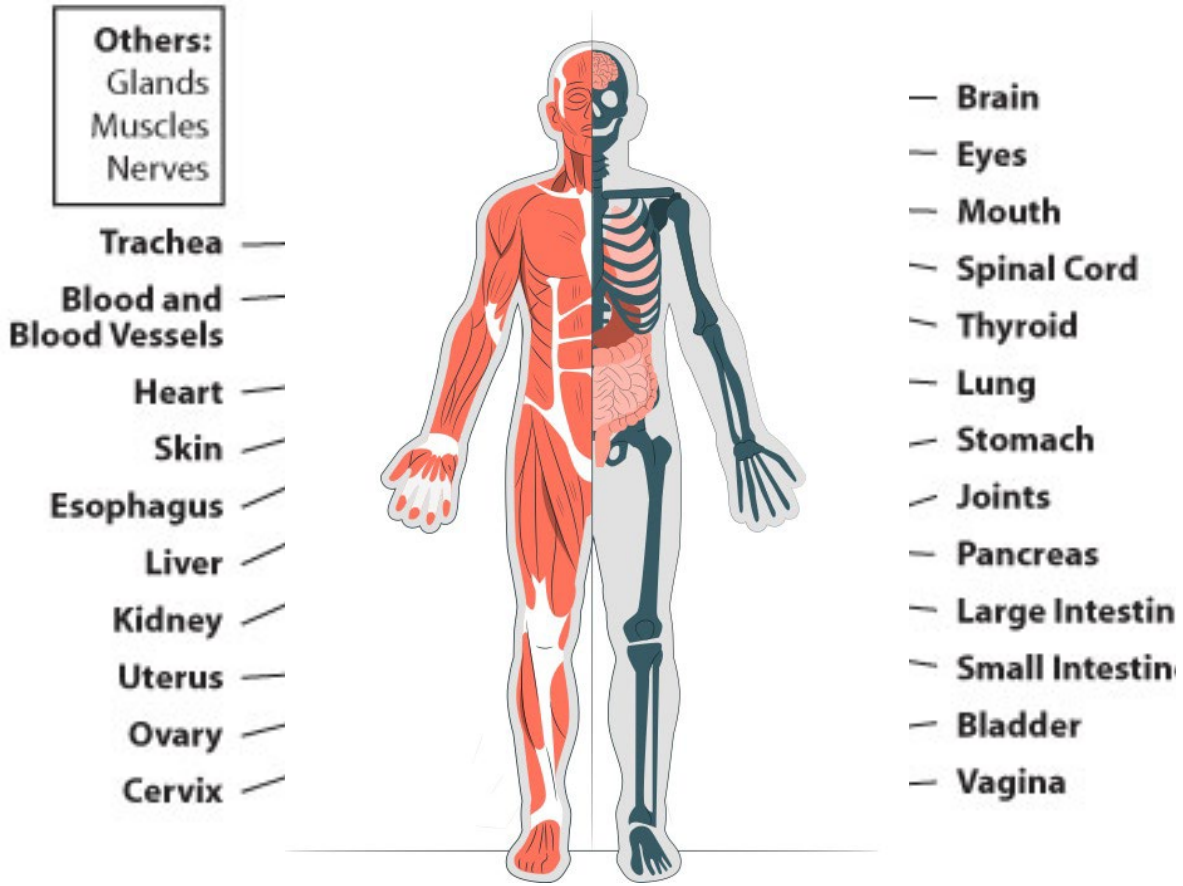
- https://www.aarda.org/news-information/statistics/

1.3 new cases/1000 females and 0.5/male

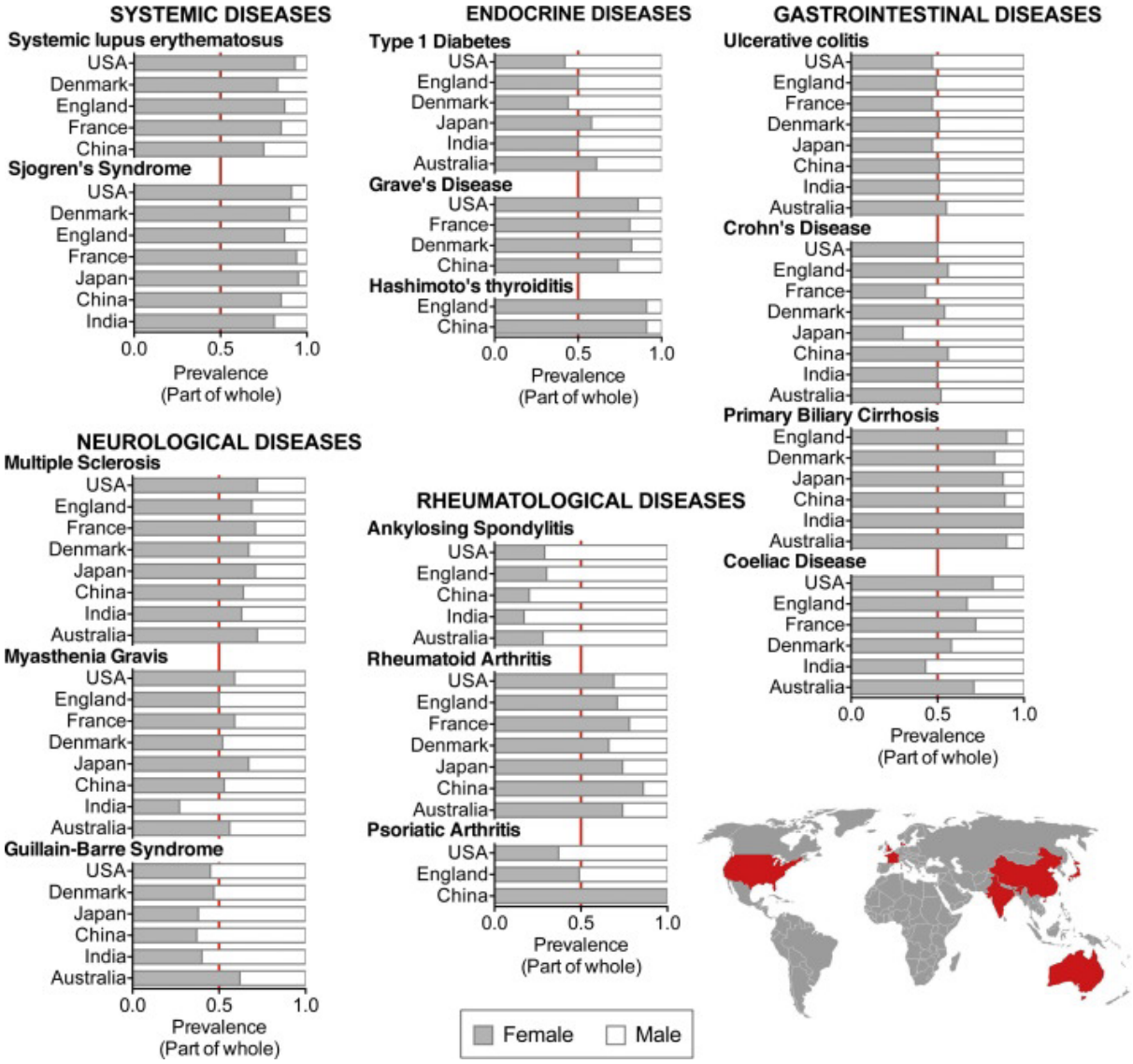
- Autoimmune Diseases Coordinating Committee. NIH. 2002

https://www.womenshealth.gov/files/images/autoimmune-1.jpg

Body parts that can be affected by Autoimmune Diseases

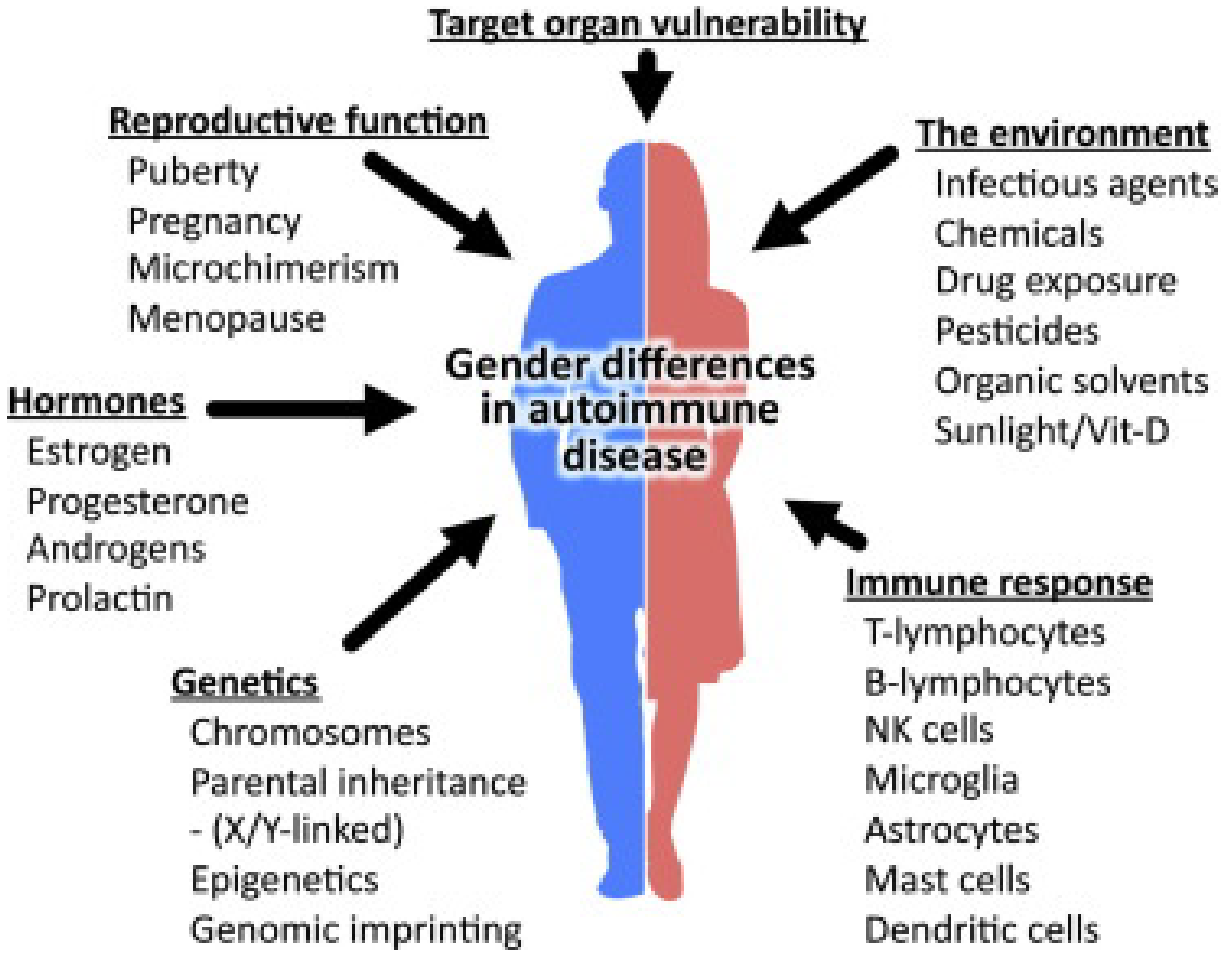


Disease Stats by Country



Ngo ST, et al. Front Neuroendocrinol. 2014 Aug;35(3):347-69.

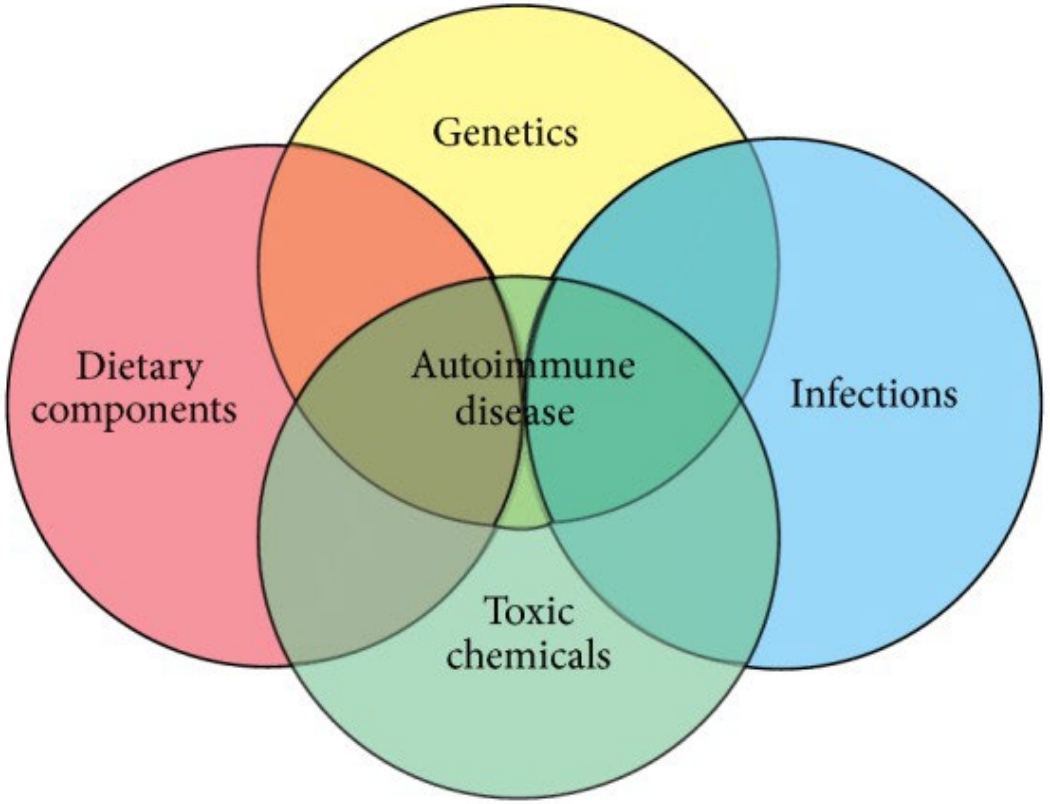
Etiologies



Ngo ST, et al. Front Neuroendocrinol. 2014 Aug;35(3):347-69.

General Characteristics

- Immune system attacks healthy cells by mistake
  - Th1/Th17 & Th2/Treg balance altered (IFNγ, IL-6, IL-17, IL-23)
    - Yang J, et al. Targeting Th17 cells in autoimmune diseases. Trends Pharmacol Sci. 2014 Oct;35(10):493-500.
- Criteria: Autoantibodies, RF, HLA-B27, diagnostic exclusion, clinical presentation, imaging
- Genetics
  - Fulvia Ceccarelli, et al. Genetic Factors of Autoimmune Diseases. J Immunol Res. 2016; 2016: 3476023.
- Epigenetics
  - Jeffries Matlock, et al. Autoimmune disease in the epigenetic era: how has epigenetics changed our understanding of disease and how can we expect the field to evolve? Expert Rev Clin Immunol. 2015 Jan; 11(1): 45–58.
- Infectious agents
  - See future slides
- Toxicants
  - Vojdani A, et al. Environmental Triggers and Autoimmunity. Autoimmune Dis. 2014; 2014: 798029.
- Gut microbiome
  - Li B, et al. The microbiome and autoimmunity: a paradigm from the gut–liver axis. Cell Mol Immunol. 2018 Jun;15(6):595-609.



Li B, et al. The microbiome and autoimmunity: a paradigm from the gut–liver axis. Cell Mol Immunol. 2018 Jun;15(6):595-609.

Genetics Loads the Gun, Environment Pulls the Trigger

Moreover, studies have shown that Zot enhances the transport of drug candidates of varying molecular weight (mannitol, PEG4000, inulin) or low bioavailability (doxorubicin, paclitaxel, acyclovir, cyclosporin A, anticonvulsant enaminones) up to 30-fold as seen with paclitaxel across Caco-2 cell monolayers without modulating the transcellular transport.[70,71] In addition, the transport-enhancing effect of Zot was reversible and nontoxic.[71] Recent studies have identified a smaller 12-kDa fragment of Zot, referred to as ΔG that retains Zot's biological activity on TJs.[36] *In vitro* studies showed that ΔG is capable of significantly increasing the apparent permeability coefficients for a wide variety of therapeutic agents and markers across the Caco-2 cell model.[72–74] In addition, ΔG improved the bioavailability of paracellular markers, mannitol, inulin, and PEG4000 after intraduodenal administration to rats.[72,73] The transport/absorption of different therapeutic agents exhibiting different physicochemical

regulated cross talk between epithelial, neuroendocrine, and immune cells highlights other less-studied, yet extremely important functions of the GI tract. Of particular interest is the regulation of antigen trafficking and intestinal mucosa-microbiota interactions. These functions dictate the switch from tolerance to immunity and are likely integral mechanisms involved in the pathogenesis of GI inflammatory processes.

The classical paradigm of autoimmune pathogenesis involving specific genetic makeup and exposure to environmental triggers has been challenged recently by the addition of a third element, the loss of intestinal barrier function. Genetic predisposition, miscommunication between innate and adaptive immunity, exposure to environmental triggers, and zonulin-dependent loss of intestinal barrier function secondary to a dysfunction of the intercellular TJs, all seem to be key ingredients involved in the pathogenesis of several autoimmune diseases.

Hindawi Publishing Corporation
Autoimmune Diseases
Volume 2014, Article ID 152428, 12 pages
http://dx.doi.org/10.1155/2014/152428

Review Article

Autoimmunity and the Gut

Andrew W. Campbell

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Received 31 December 2013; Accepted 11 February 2014; Published 13 May 2014

Academic Editor: Aristo Vojdani

Autoimmune diseases have increased dramatically worldwide since World War II. This is coincidental with the increased production and use of chemicals both in industrial countries and agriculture, as well as the ease of travel from region to region and continent to continent, making the transfer of a pathogen or pathogens from one part of the world to another much easier than ever before. In this review, triggers of autoimmunity are examined, principally environmental. The number of possible environmental triggers is vast and includes chemicals, bacteria, viruses, and molds. Examples of these triggers are given and include the mechanism of action and method by which they bring about autoimmunity.

Current and Future Immunomodulation to Restore Tolerance in Autoimmune Disease

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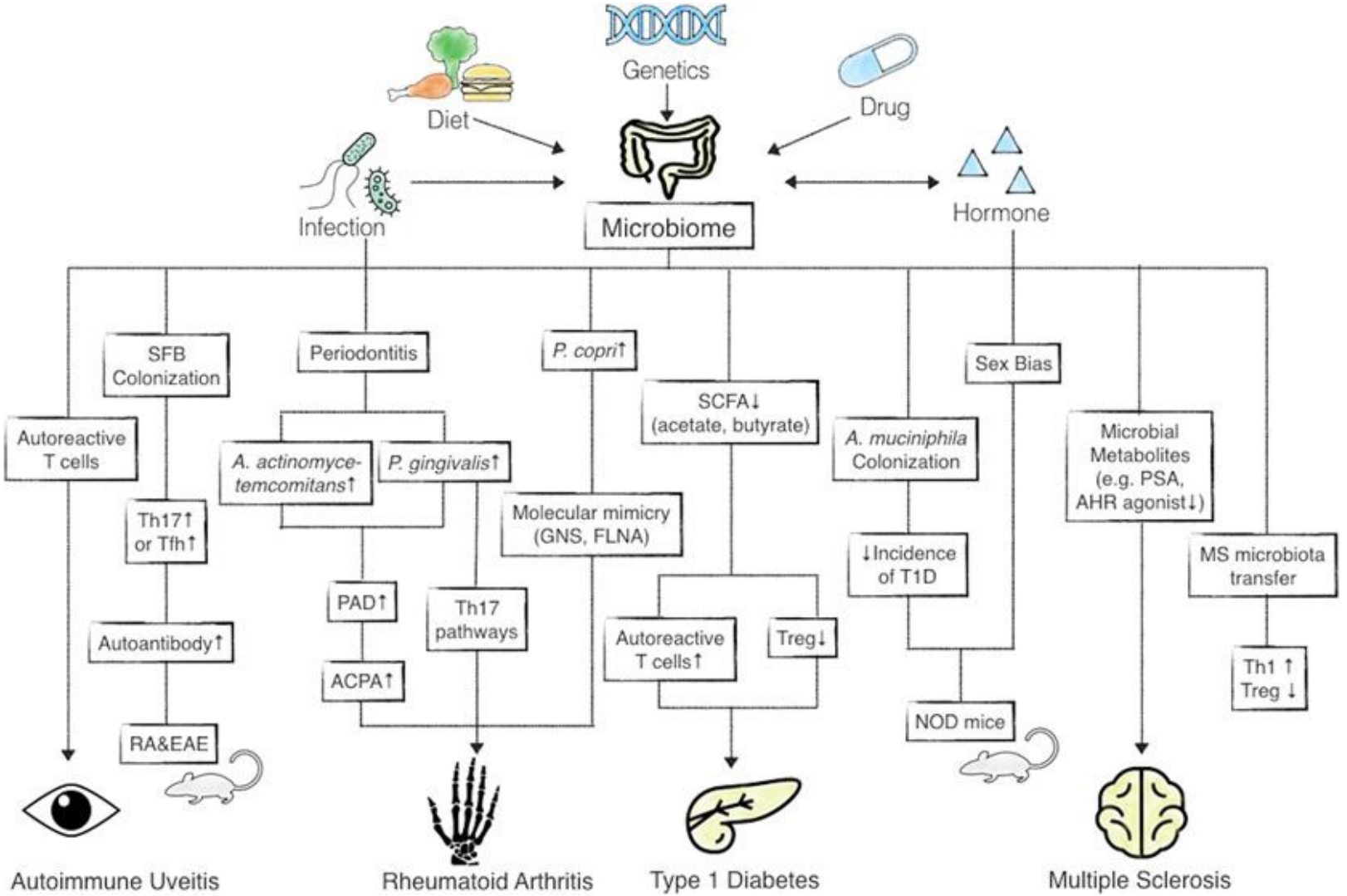
Correspondence: Jeff.Bluestone@ucsf.edu

Autoimmune diseases reflect a breakdown in self-tolerance that results from defects in thymic deletion of potentially autoreactive T cells (central tolerance) and in T-cell intrinsic and extrinsic mechanisms that normally control potentially autoreactive T cells in the periphery (peripheral tolerance). The mechanisms leading to autoimmune diseases are multifactorial and depend on a complex combination of genetic, epigenetic, molecular, and cellular elements that result in pathogenic inflammatory responses in peripheral tissues driven by self-antigen-specific T cells. In this article, we describe the different checkpoints of tolerance that are defective in autoimmune diseases as well as specific events in the autoimmune response which represent therapeutic opportunities to restore long-term tolerance in autoimmune diseases. We present evidence for the role of different pathways in animal models and the therapeutic strategies targeting these pathways in clinical trials in autoimmune diseases.

Table 2. Selected Infectious Etiologies of Autoimmune Diseases	
Autoimmune Disease	**Proven or Postulated Infectious Etiology**
Reactive arthritis (also called Reiter's syndrome)	*Chlamydia trachomatis, Salmonella, Shigella, Yersinia, Campylobacter jejuni*
Ankylosing spondylitis	*Klebsiella*, other bacteria
Crohn's disease	*Mycobacterium avirn, paratuberculosis sbsp*, enteric bacteria, *Yersinia, Listeria*, other microbes
Diabetes mellitus, type I	*Coxsackie virus, Rubella virus*, other enteroviruses, other viruses
Lyme arthritis	*Borrelia burgdorferi*
Guillain-Barré Syndrome	*Campylobacter jejuni*
Multiple sclerosis	*Human herpes virus 6* [HHV-6], *Chlamydia pneumoniae, Epstein-Barr virus*, other viruses and bacteria
Wegener's granulomatosis	*Staphylococcus aureus*
Cardiomyopathy	*Coxsackie B virus*, other enteroviruses, other microbes
Uveitis or retinitis	*B. burgdorferi, Toxoplasma gondii*
Vasculitis (e.g., polyarthritis nodosa, small vessel vasculitis, cryoglobulinemia)	*Hepatitis B virus, Hepatitis C virus*, other viruses

Autoimmune Diseases Coordinating Committee. US Dept of Health & Human Services. 2002.

Autoimmune Disease	Infectious Etiology
Rheumatoid arthritis	*Prevotella copri*
	Pianta A, et al. Evidence of the immune relevance of Prevotella copri, a gut microbe in patients with rheumatoid arthritis. *Arthritis Rheumatol.* 2017 May;69(5):964–975. Scher JU, et al. Expansion of intestinal Prevotella copri correlates with enhanced susceptibility to arthritis. *Elife.* 2013 Nov 5;2:e01202.
	Proteus spp
	Ebringer A & Rashid T. Rheumatoid arthritis is caused by a Proteus urinary tract infection. *APMIS.* 2014 May;122(5):363-8.



Li B, et al. The microbiome and autoimmunity: a paradigm from the gut–liver axis. Cell Mol Immunol. 2018 Jun;15(6):595-609.

Diagnostic Workup

Standard testing

- CBC, CMP, Thyroid panel (TSH, FT3, FT4, TPO, TG, TSI)

Inflammatory

- CRP, hs-CRP, ESR, HCY, IL-6, IL-17, TNF-α

Hormones

- DHEA-S, Pregnenolone, Testosterone, Progesterone, Estrogen

Nutrients

- Vitamin D, MMA, B12, B6, RBC Folate, Magnesium, RBC Zinc, iron panel w/ ferritin, etc.

ICD-10: Z00.00, Z11.9 E34.9, E63.9, R53.83, M79.10, M25.50…

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Diagnostic Workup

Advanced

- Tick-borne Infections (Borrelia, Anaplasma, Ehrlichia, Mycoplasma, Rickettsia, Babesia, etc.)
  - ICD-10: Z11.2 & Z11.59
- Stool micro
- SIBO
- Heavy Metals
  - Z13.88
- Mycotoxins

Genetics

- HLA-B27
  - Ankylosing spondylitis
  - Juvenile arthritis
  - Reactive arthritis
  - Psoriatic arthritis
  - Irritable bowel disease

Di Lorenzo A, et al. HLA-B27 Syndromes. Medscape. Oct 2018. (https://emedicine.medscape.com/article/1201027-overview)

Diagnostic Workup

Genetics

- HLA DQ2/DQ8
  - Celiac Disease
  - DMI
  - Hashimoto's
  - Crohn's Disease
  - Ulcerative Colitis

DiGiacomo D, et al. Human leukocyte antigen *DQ2/8* prevalence in non-celiac patients with gastrointestinal diseases. World J Gastroenterol. 2013 Apr 28; 19(16): 2507–2513.

Di Lorenzo A, et al. HLA-B27 Syndromes. Medscape. Oct 2018. (https://emedicine.medscape.com/article/1201027-overview)

- HLA DR3
  - Celiac
  - Graves' Disease

McDermott MT & McNally PR. A Possible Association Between Graves' Disease and Gluten-Sensitive Enteropathy. Thyroid. 1999 Dec;9(12):1281.

Specific Diseases Diagnostic Workup

Rheumatoid arthritis

RF 26-90% sensitive (~69% overall)—in adults

85% specific—in adults

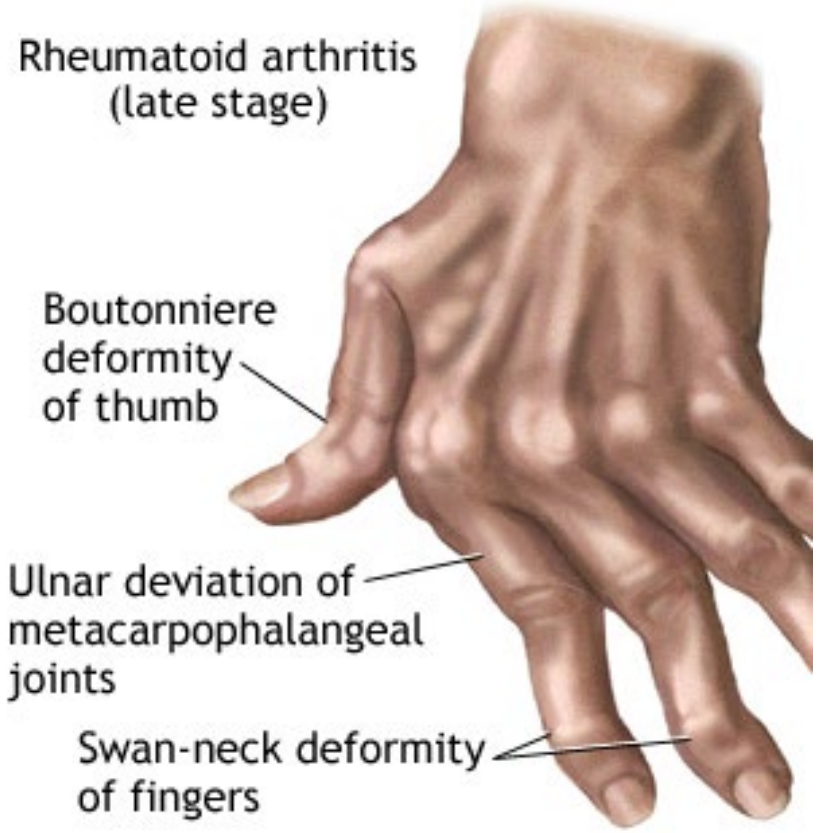
- Nishimura K, et al. Meta-analysis: diagnostic accuracy of anti-cyclic citrullinated peptide antibody and rheumatoid factor for rheumatoid arthritis. Ann Intern Med. 2007;146(11):797.

Anti-cyclic citrullinated peptide (anti-CCP IgA/IgG)

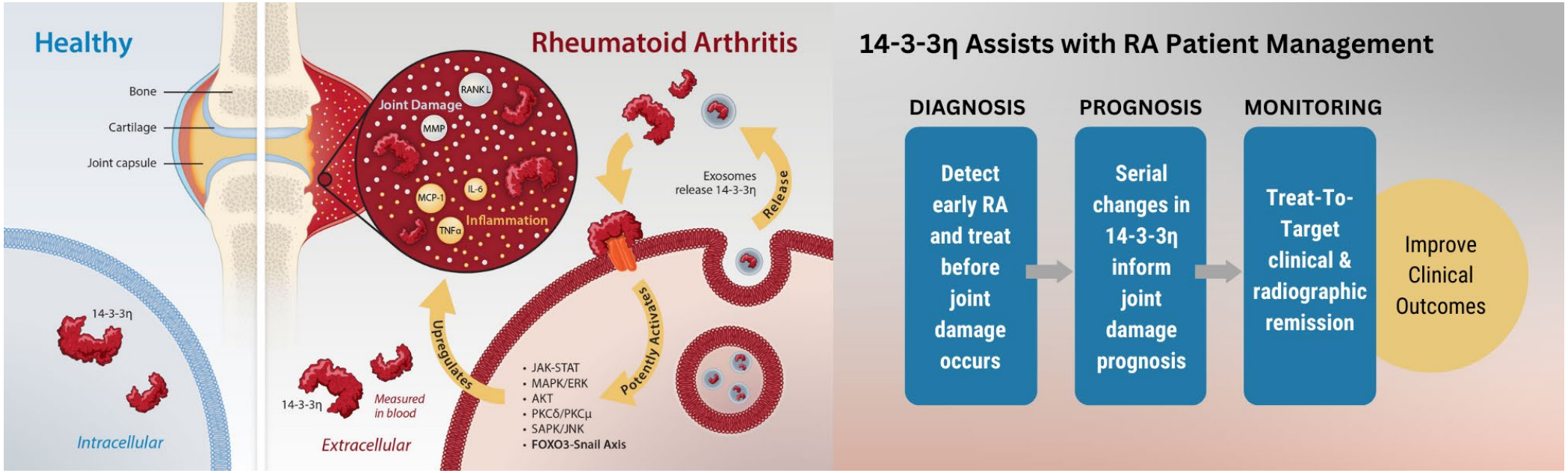
70% sensitive & ~98% specific

- Niewold TB, et al. Anti-CCP antibody testing as a diagnostic and prognostic tool in rheumatoid arthritis. QJM. 2007 Apr;100(4):193-201.
- Braschi E. Anti-CCP: a truly helpful rheumatoid arthritis test? Can Fam Physician. 2016 Mar; 62(3): 234.

Need to test Total IgA and IgG as well



14-3-3η in RA



14-3-3η is a joint-specific mechanistic biomarker that predicts RA development in patients with arthralgia and assists in early diagnosis and more accurate diagnosis in established RA. Changing levels of 14-3-3η provide time sensitive and valuable information on disease progression during a treatment course and informs if changes are necessary.

https://augurex.com/prevent-permanent-joint-damage-1/

Maksymowych W, et al. A. Rheumatoid Arthritis Assessment: It's Time to Test Better and Earlier. Pract Pain Manag. 2022 November/December;22(6). Published ahead of issue October 6, 2022.

Hyperthyroidism/Grave's Disease

TSI/TBI/TBII/TRAb

- Thyroid Stimulating Immunoglobulin
- Thyrotropin-binding inhibiting immunoglobulin
- Thyrotropin-binding inhibitory immunoglobulin
- Thyrotropin receptor antibodies
    - Barbesino G & Tomer Y. Clinical review: Clinical utility of TSH receptor antibodies. J Clin Endocrinol Metab. 2013 Jun;98(6):2247-55. Epub 2013 Mar 28.

Picture from https://www.scientificanimations.com/hyperthyroidism-causes-symptoms-treatment/uncategorized/

Diagnostic Workup

Differentiating type of IBD

LAB TEST	SENSITIVITY	SPECIFICITY	TYPE IBD
+ pANCA	50-65%	85-92%	UC
+ASCA	55-61%	88-95%	CROHN'S
+pANCA & ASCA -	44-57%	81-97%	UC
-pANCA & ASCA+	38-56%	94-97%	CROHN'S

Sandborn WJ et al, Inflamm Bowel Dis 2001;7:192-201
Peeters M et al, Am J Gastroenterology 2001; 96:730-4

Hashimoto's Thyroiditis

- TPO & TG Ab
  - Mariotti S, et al. Antithyroid peroxidase autoantibodies in thyroid diseases. J Clin Endocrinol Metab. 1990;71(3):661.

Crohn's & UC IBD Panel (>90 sensitivity)

- Saccharomyces cerevisiae IgA/IgG (ASCA), Atypical pANCA (perinuclear antineutrophil cytoplasmic antibodies)
  - ✓ ASCA+/pANCA− Suggestive of Crohn's disease
  - ✓ ASCA−/pANCA+ Suggestive of Ulcerative colitis
    - Dubinsky MC, et al. Clinical utility of serodiagnostic testing in suspected pediatric inflammatory bowel disease. Am J Gastroenterol. 2001;96(3):758.
    - Quinton JF, et al. Anti-Saccharomyces cerevisiae mannan antibodies combined with antineutrophil cytoplasmic autoantibodies in inflammatory bowel disease: prevalence and diagnostic role.

Goals

PALLIATION

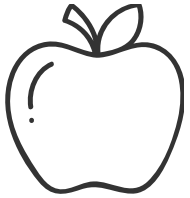
IDENTIFY TRIGGERS

STOP FLARES

PREVENT DESTRUCTION

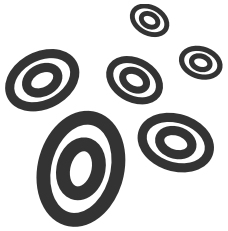
REMISSION

Strategic Interventions



Dietary

- Darlington LG. Placebo-controlled, blind study of dietary manipulation therapy in rheumatoid arthritis. Lancet. 1986 Feb 1;1(8475):236-8.



Immunomodulation

Bluestone JA & Bour-Jordan H. Current and Future Immunomodulation Strategies to Restore Tolerance in Autoimmune Diseases. Cold Spring Harb Perspect Biol. 2012 Nov; 4(11): a007542.

Gastrointestinal

- Bjarnason I, et al. Intestinal permeability and inflammation in rheumatoid arthritis: effects of non-steroidal anti-inflammatory drugs. Lancet. 1984 Nov 24;2(8413):1171-4.
- Scher JU, Abramson SB. The microbiome and rheumatoid arthritis. Nat Rev Rheumatol. 2011 Aug 23;7(10):569-78.
- Verwoerd A, et al. The human microbiome and juvenile idiopathic arthritis. Pediatr Rheumatol Online J. 2016 Sep 20;14(1):55.

Strategic Interventions

Condition Specific

Mind Body

- Song H, et al. Association of Stress-Related Disorders With Subsequent Autoimmune Disease. JAMA. 2018 Jun 19;319(23):2388-2400.

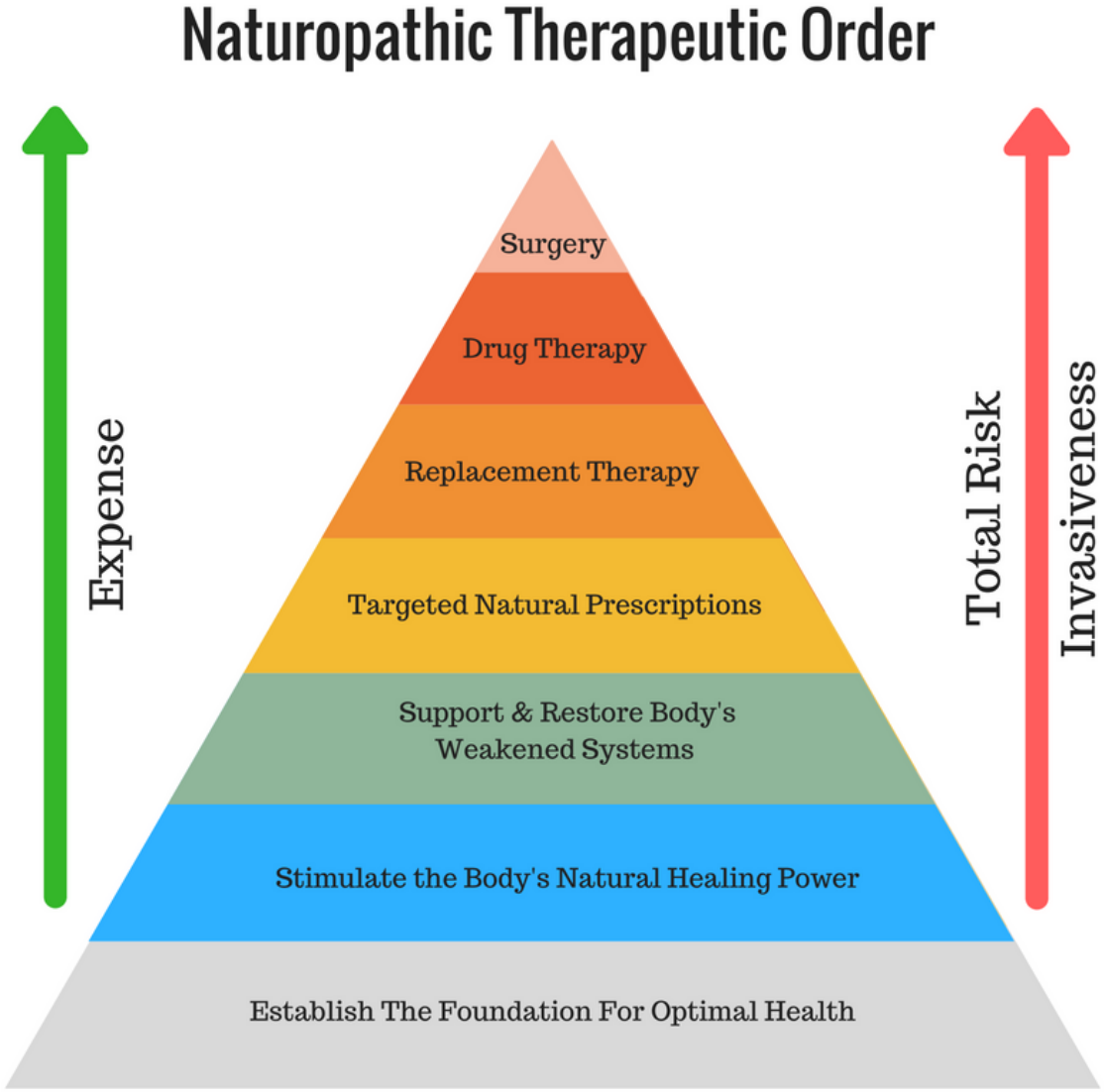
Naturopathic

Pharmacotherapy

The Integrative Team

- Specialists, PT/OT, Acupuncture, Chiropractic, Therapist, etc.
  - Scascighini L, et al. Multidisciplinary treatment for chronic pain: a systematic review of interventions and outcomes. Rheumatology (Oxford). 2008;47(5):670.

Where Do I Even Start?!



What to do? Diet.

Gluten/Casein (dairy) Free

- Krysiak R, et al. The Effect of Gluten-Free Diet on Thyroid Autoimmunity in Drug-Naïve Women with Hashimoto's Thyroiditis: A Pilot Study. Exp Clin Endocrinol Diabetes. 2018 Jul 30.
- McDermott MT & McNally PR. A possible association between Graves' disease and Gluten-sensitive enteropathy. Thyroid. 1999 Dec;9(12):1281.
- Hogg-Kollars S, et al. Type 1 diabetes mellitus and gluten induced disorders. Gastroenterol Hepatol Bed Bench. 2014 Autumn; 7(4): 189–197.

Anti-inflammatory

- Seaman DR. The diet-induced proinflammatory state: a cause of chronic pain and other degenerative diseases? J Manipulative Physiol Ther. 2002 Mar-Apr;25(3):168-79.

Allergy-elimination

- Shen H. Should You Switch to an Elimination Diet to Fight Chronic Pain? Cleveland Clinic. April 2016.

Swank

- http://www.swankmsdiet.org/the-diet/
- Swank RL & Dugan BB. Effect of low saturated fat diet in early and late cases of multiple sclerosis. Lancet. 1990 Jul 7;336(8706):37-9.

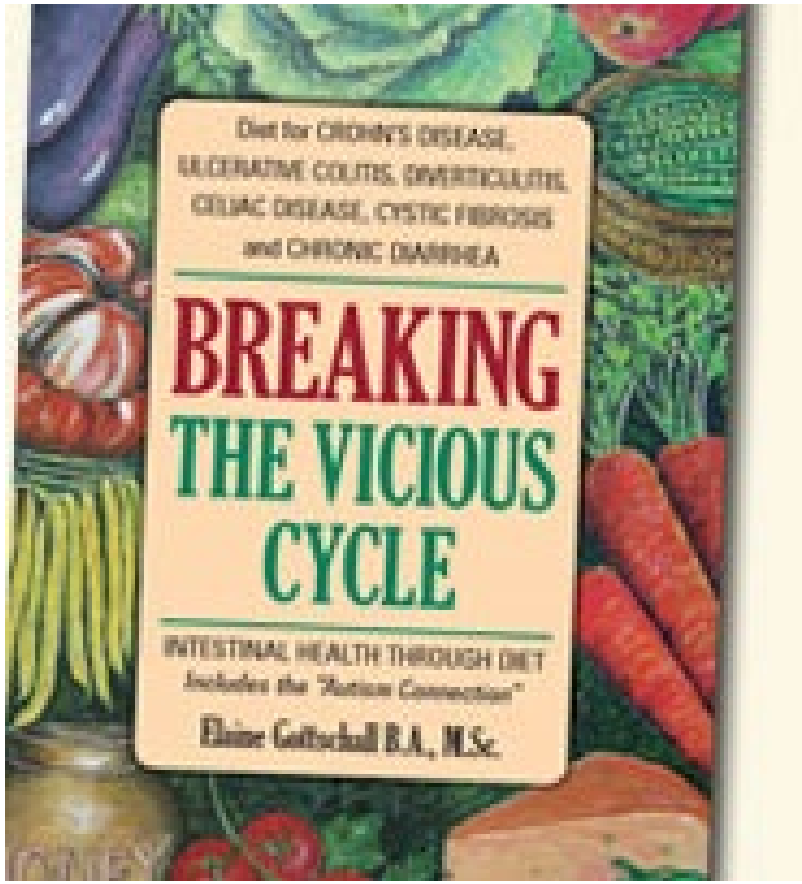
Wahls

- http://terrywahls.com/about-the-wahls-protocol/
- Wahls TL. The Seventy Percent Solution. J Gen Intern Med. 2011 Oct; 26(10): 1215–1216.

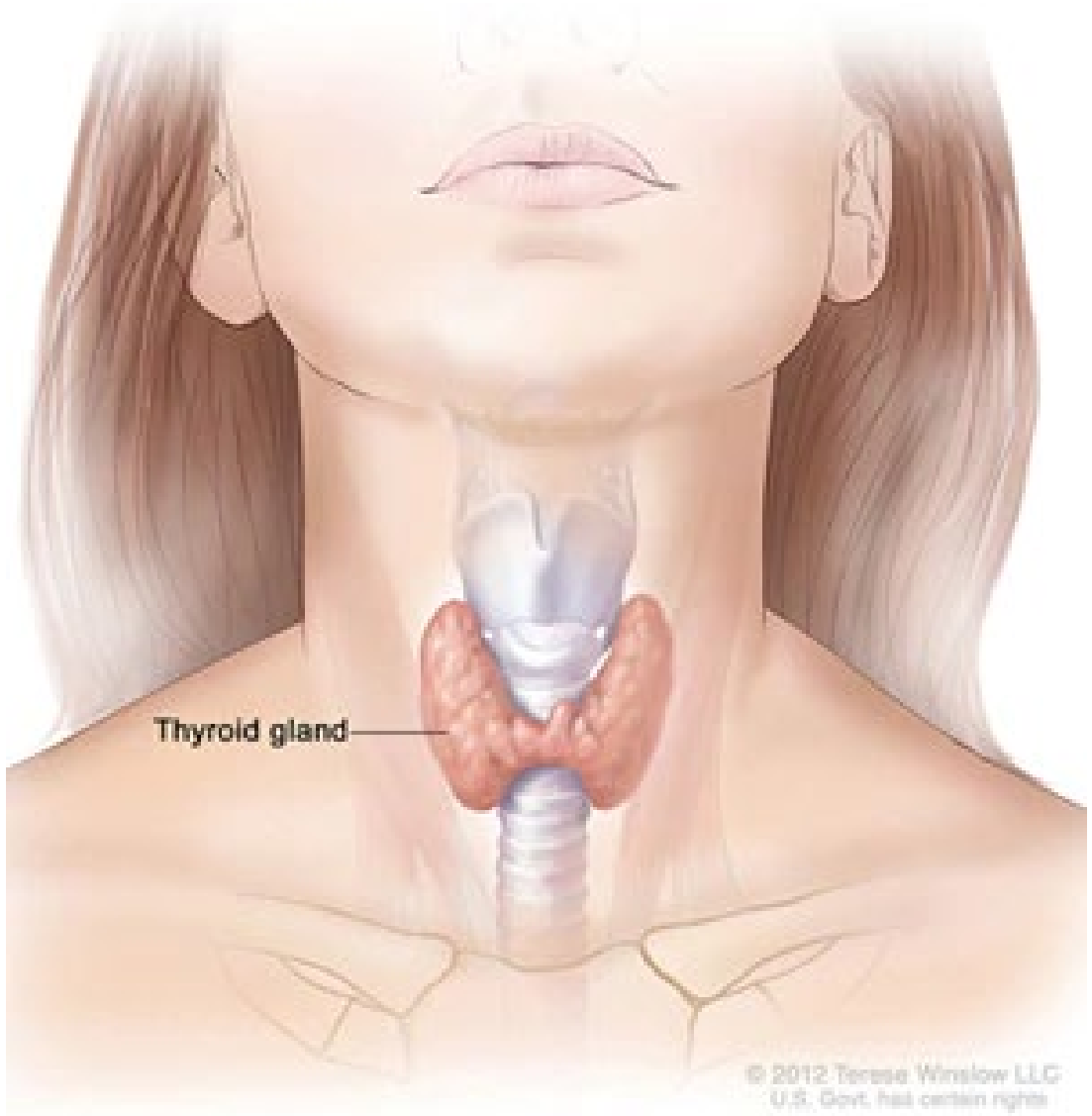
What to do? Diet.

SCD

- The "SCD" excludes all grains (including wheat, oats, barley, rye, corn, rice, millet, buckwheat, spelt and triticale), milk and other lactose-containing foods, potatoes, soybeans and certain other beans, corn syrup, foods that contain sucrose.
  - Cohen S, et al. Clinical and Mucosal Improvement With Specific Carbohydrate Diet in Pediatric Crohn Disease. J Pediatr Gastroenterol Nutr. 2014 Oct;59(4):516-21.
  - Obih C, et al. Specific carbohydrate diet for pediatric inflammatory bowel disease in clinical practice within an academic IBD center. Nutrition. 2016 Apr;32(4):418-25.



No Iodine, Yes Iodine?



https://www.niddk.nih.gov/health-information/diagnostic-tests/thyroid

What to Do?

Homeopathy

- Linde K, et al. Are the clinical effects of homoeopathy placebo effects? A meta-analysis of placebo-controlled trials. Lancet. 1997 Sep 20;350(9081):834-43.
    - “The results of our meta-analysis are not compatible with the hypothesis that the clinical effects of homeopathy are completely due to placebo.”

Is Homeopathic *Arnica* Effective for Postoperative Recovery? A Meta-analysis of Placebo-Controlled and Active Comparator Trials

Katharina Gaertner[1], Stephan Baumgartner[1,2,3] and Harald Walach[4]*

[1] Institute for Integrative Medicine, University of Witten/Herdecke, Herdecke, Germany, [2] Institute of Complementary and Integrative Medicine, University of Bern, Bern, Switzerland, [3] Society for Cancer Research, Arlesheim, Switzerland, [4] Change Health Science Institute, Berlin, Germany

Background: Homeopathic *Arnica montana* is used in surgery as prevention or treatment for the reduction of pain and other sequelae of surgery. Our aim was to perform a metaanalysis of clinical trials to assess efficacy of *Arnica montana* to reduce the inflammatory response after surgery.

Method: We conducted a systematic review and metaanalysis, following a predefined protocol, of all studies on the use of homeopathic *Arnica montana* in surgery. We included all randomized and nonrandomized studies comparing homeopathic *Arnica* to a placebo or to another active comparator and calculated two quantitative metaanalyses and appropriate sensitivity analyses. We used "Hegde's g," an effect size estimator which is equivalent to a standardized mean difference corrected for small sample bias. The PROSPERO registration number is CRD42020131300.

Results: Twenty-three publications reported on 29 different comparisons. One study had to be excluded because no data could be extracted, leaving 28 comparisons. Eighteen comparisons used placebo, nine comparisons an active control, and in one case *Arnica* was compared to no treatment. The metaanalysis of the placebo-controlled trials yielded an overall effect size of Hedge's g = 0.18 (95% confidence interval −0.007/0.373; $p = 0.059$). Active comparator trials yielded a highly heterogeneous significant effect size of g = 0.26. This is mainly due to the large effect size of nonrandomized studies, which converges against zero in the randomized trials.

Conclusion: Homeopathic *Arnica* has a small effect size over and against placebo in preventing excessive hematoma and other sequelae of surgeries. The effect is comparable to that of anti-inflammatory substances.

Gaertner K, et al. **Is Homeopathic *Arnica* Effective for Postoperative Recovery? A Meta-analysis of Placebo-Controlled and Active Comparator Trials. Front Surg . 2021 Dec 17;8:680930.**

Best Placebo, Ever!

The New England Journal of Medicine

VOLUME 347 JULY 11, 2002 NUMBER 2

A CONTROLLED TRIAL OF ARTHROSCOPIC SURGERY FOR OSTEOARTHRITIS OF THE KNEE

J. BRUCE MOSELEY, M.D., KIMBERLY O'MALLEY, PH.D., NANCY J. PETERSEN, PH.D., TERRI J. MENKE, PH.D., BARUCH A. BRODY, PH.D., DAVID H. KUYKENDALL, PH.D., JOHN C. HOLLINGSWORTH, DR.P.H., CAROL M. ASHTON, M.D., M.P.H., AND NELDA P. WRAY, M.D., M.P.H.

Abstract

Background Many patients report symptomatic relief after undergoing arthroscopy of the knee for osteoarthritis, but it is unclear how the procedure achieves this result. We conducted a randomized, placebo-controlled trial to evaluate the efficacy of arthroscopy for osteoarthritis of the knee.

Methods A total of 180 patients with osteoarthritis of the knee were randomly assigned to receive arthroscopic débridement, arthroscopic lavage, or placebo surgery. Patients in the placebo group received skin incisions and underwent a simulated débridement without insertion of the arthroscope. Patients and assessors of outcome were blinded to the treatment-group assignment. Outcomes were assessed at multiple points over a 24-month period with the use of five self-reported scores — three on scales for pain and two on scales for function — and one objective test of walking and stair climbing. A total of 165 patients completed the trial.

Results At no point did either of the intervention groups report less pain or better function than the placebo group. For example, mean (±SD) scores on the Knee-Specific Pain Scale (range, 0 to 100, with higher scores indicating more severe pain) were similar in the placebo, lavage, and débridement groups: 48.9±21.9, 54.8±19.8, and 51.7±22.4, respectively, at one year ($P=0.14$ for the comparison between placebo and lavage; $P=0.51$ for the comparison between placebo and débridement) and 51.6±23.7, 53.7±23.7, and 51.4±23.2, respectively, at two years ($P=0.64$ and $P=0.96$, respectively). Furthermore, the 95 percent confidence intervals for the differences between the placebo group and the intervention groups exclude any clinically meaningful difference.

Conclusions In this controlled trial involving patients with osteoarthritis of the knee, the outcomes after arthroscopic lavage or arthroscopic débridement were no better than those after a placebo procedure.

What to do? Botanicals

Immunomodulators

- *Cordyceps sinensis*
- All mushrooms & adaptogens

Anti-inflammatories/anti-arthritic

- *Curcuma longa (500-4000 mg)*
  - Standardized to % curcuminoids

Jäger R, et al. Comparative absorption of curcumin formulations. Nutr J. 2014 Jan 24;13:11.

Daily JW, et al. Efficacy of Turmeric Extracts and Curcumin for Alleviating the Symptoms of Joint Arthritis: A Systematic Review and Meta-Analysis of Randomized Clinical Trials. J Med Food. 2016 Aug 1; 19(8): 717–729.

- *Boswellia serrata (300-1500 mg)*
  - *Standardized to % boswellic acids*

Maroon JC, et al. Natural anti-inflammatory agents for pain relief. Surg Neurol Int. 2010; 1: 80.

What to do? Botanicals

Harpagophytum procumbens (600-2400 mg)

- Providing 30-100 mg harpagosides

- Gagnier JJ, et al. Harpgophytum procumbens for osteoarthritis and low back pain: a systematic review. BMC Complement Altern Med. 2004 Sep 15;4:13.

Uncaria tomentosa (100-3600 mg)

- Standardized to total alkaloids

- Mur E., et al. Randomized double blind trial of an extract from the pentacyclic alkaloid-chemotype of uncaria tomentosa for the treatment of rheumatoid arthritis. The Journal of Rheumatology April 2002, 29 (4) 678-681.
- Rodriguez JP, et al. Efficacy and safety of freeze-dried cat's claw in osteoarthritis of the knee: mechanisms of action of the species *Uncaria guianensis*. Inflammation Research. September 2001, Volume 50, Issue 9, pp 442–448.

Zingiber officinale (500-1000 mg)

- Standardized to gingerols

- Haghighi M, et al. Comparing the effects of ginger (Zingiber officinale) extract and ibuprofen on patients with osteoarthritis. Arch Iran Med 2005;8:267-71.

What to do? Botanicals

Analgesics/Anodynes

- *Salix alba*
- *Valeriana officinalis*
- *Piscidia erythrina*
- *Piper methysticum*
- *Corydalis bulbosa*

Anti-spasmodics

- *Cimicifuga (Actea) racemosa*
- *Dioscorea villosa*
- *Matricaria spp*
- *Piscidia piscipula*
- *Viburnum sp*

What to do? Botanicals

Adaptogens

- Ginsengs
- *Withania somnifera*
- *Rhodiola rosea*
- *Ocimum sanctum/tenuiflorum*
- *Glycyrrhiza glabra*

Nervines

- *Eschscholzia californica*
- *Matricaria recutita*
- *Melissa officinalis*
- *Avena sativa*

What to do? EFA'S

Omega-3 1000 mg-10 grams

- Suppression of NFkappaB, COX-2, tumor necrosis factor (TNF)-alpha, and interleukin (IL)-1beta.
- Lipid mediators: resolvins, protectins

Maroon JC & Bost JW. Omega-3 fatty acids (fish oil) as an anti-inflammatory: an alternative to nonsteroidal anti-inflammatory drugs for discogenic pain. Surg Neurol. 2006 Apr;65(4):326-31.

Kang JX & Weylandt KH. Modulation of inflammatory cytokines by omega-3 fatty acids. Subcell Biochem. 2008;49:133-43.

Omega-6 (Gamma Linolenic Acid) 300-600 mg

- Inhibits IL-1-beta & NF-kB

Chang CS, et al. Gamma-linolenic acid inhibits inflammatory responses by regulating NF-kappaB and AP-1 activation in lipopolysaccharide-induced RAW 264.7 macrophages. Inflammation. 2010 Feb;33(1):46-57.

Zurier RB, Furse RK, Rosetti RG. Gamma-linolenic acid (GLA) prevents amplification of interleukin-1-beta (IL-1-beta). Altern Ther 2001;7:112.

Omega-9 (Oleic acid) 50-500 mg

- Modulates signal transduction, cell activation and cytokine production; ↓AA & improves oxidant status.

Carrillo C, et al. Role of oleic acid in immune system; mechanism of action; a review. Nutr Hosp. 2012 Jul-Aug;27(4):978-90

What to do? Vitamin D

Vitamin D 1000-5000 IU

- "Optimal" blood levels 40-50 ng/mL
- Suppresses PG action, inhibition of p38 stress kinase signaling, tumor angiogenesis, invasion, and metastasis and inhibition of NF-κB signaling
  - Krishnan AV & Feldman D. Mechanisms of the anti-cancer and anti-inflammatory actions of vitamin D. Annu Rev Pharmacol Toxicol. 2011;51:311-36.
  - Moyad MA. Vitamin D: a rapid review. Urol Nurs. 2008 Oct;28(5):343-9, 384; quiz 350.
  - Carrol A. Why Take Vitamin D Supplements if They Don't Improve Health? JAMA Forum. March 2016.
  - Szabo L. The Man Who Sold America On Vitamin D --And Profited in the Process. Medscape Aug 24, 2018.

What to Do? GI Dysbiosis + Rebuild

Address stool micro, H. pylori, SIBO, etc.

Topical castor oil, prebiotics, probiotics and Saccharomyces boulardii

- Born T. Topical use of castor oil-What does the science say? NDNR. 2015. https://ndnr.com/dermatology/topical-use-of-castor-oil/
- Galland L. The Gut Microbiome and the Brain. J Med Food. 2014 Dec 1; 17(12): 1261–1272.
- Mathis D. A gut feeling about arthritis. Elife. 2013 Nov 5;2:e01608.
- Vaghef-Mehrabany E, et al. Probiotic supplementation improves inflammatory status in patients with rheumatoid arthritis. Nutrition. 2014 Apr;30(4):430-5.
- Andrew C. Dukowicz, et al. Small Intestinal Bacterial Overgrowth A Comprehensive Review. Gastroenterol Hepatol (N Y). 2007 Feb; 3(2): 112–122.
- Pothoulakis E. Review article: Anti-inflammatory mechanisms of action of *Saccharomyces boulardii*. Aliment Pharmacol Ther. 2009 Oct 15; 30(8): 826–833.

Dysbiosis: 3-4 months

Rebuild: 3-4 months

- Qinghui Mu, et al. Leaky Gut As a Danger Signal for Autoimmune Diseases. Front Immunol. 2017; 8: 598.
- Fasano A. Leaky gut and autoimmune diseases. Clin Rev Allergy Immunol. 2012 Feb;42(1):71-8.

What to Do?
GI Dysbiosis

Month 1 (2 BID CC)

Supplement Facts
Serving Size: 1 capsule
Servings Per Container: 90

Ingredients:	Amt. Per Serving	%DV
Azadirachta indica	300 mg	*
Emblica officinalis (AMLAOXY®) Terminalia chebula Terminalia belerica Tinospora cordifolia Rubia cordifolia	Proprietary blend totaling 200 mg	*

***Daily value not established**

Other ingredients: Vegetarian Capsules (Caramel Opaque Color), †Magnesium Stearate, and Silicon Dioxide.

Free from Milk, Soy, Egg and Wheat.

†Magnesium stearate from vegetarian source

What to Do? GI Dysbiosis

Month 2 (strip QD CC)

Supplement Facts
Serving Size 1 Tablet

Amount per serving		%DV
Garlic (*Allium sativum*) Bulb (providing 10 mg thiosulfinates and 4.5 mg allicin)	500 mg	†

† % Daily Value (DV) not established

Other ingredients: Hypromellose, dibasic calcium phosphate dihydrate, cellulose, magnesium stearate, silica, titanium dioxide, glycerin

Supplement Facts
Serving Size 1 Capsule

Amount per serving		%DV
Garlic (*Allium sativum*) Bulb (providing 10 mg thiosulfinates and 4.5 mg allicin)	500 mg	†
Cinnamon (*Cinnamomum verum*) Bark Oil (providing 40 mg cinnamaldehyde)	66 mg	†
Cinnamon (*Cinnamomum verum*) Bark	30 mg	†

† % Daily Value (DV) not established

Other ingredients: Hypromellose, silica, magnesium stearate

4 caps QD CC

Supplement Facts
Serving Size 1 Capsule

Amount per serving		%DV
Garlic (*Allium sativum*) Bulb (providing 4 mg thiosulfinates and 1.8 mg allicin)	200 mg	†
Cinnamon (*Cinnamomum verum*) Bark Oil (providing 20 mg cinnamaldehyde)	33 mg	†
Magnesium caprylate	200 mg	†
Calcium caprylate	100 mg	†

† % Daily Value (DV) not established

Other ingredients: Hypromellose, silica, magnesium stearate

Lactobacillus acidophilus (CUL-60 & CUL-21) *Bifidobacterium animalis* subsp. *lactis* (CUL-34) & *Bifidobacterium bifidum* (CUL-20)		
L-Glutamine	400 mg	†
N-Acetyl Glucosamine (from exoskeleton of shrimp / crab)	200 mg	†
Beta-carotene	2 mg	†

† % Daily Value (DV) not established

Other ingredients: Hypromellose, silica, magnesium stearate
Contains: Crustacean shellfish (exoskeleton of shrimp / crab)

Supplement Facts
Serving Size 1 capsule

Amount per capsule		%DV**
Vitamin A (as natural beta carotene with mixed carotenoids)	500 IU	10%
Calcium (as calcium undecylanate, phosphate, and caprylate)	65 mg	6%
Zinc (as zinc caprylate)	0.3 mg	2%
Pau D'Arco (*Tabebuia impetiginosa*) Bark	100 mg	**
Undecylenic Acid (as calcium undecylenate)	100 mg	**
Caprylic Acid (as calcium caprylate, and zinc caprylate)	100 mg	**
L-Glutamic Acid HCl	50 mg	**
Rosemary (*Rosmarinus officinalis*) Aerial Parts Oil Extract	12.5 mg	**
Thyme (*Thymus zygis*) Aerial Parts Oil Extract	12.5 mg	**

**Daily Value (DV) not established.

Other ingredients: vegetable capsule (modified cellulose), cellulose, stearic acid, and silicon dioxide.

What to Do? GI Dysbiosis

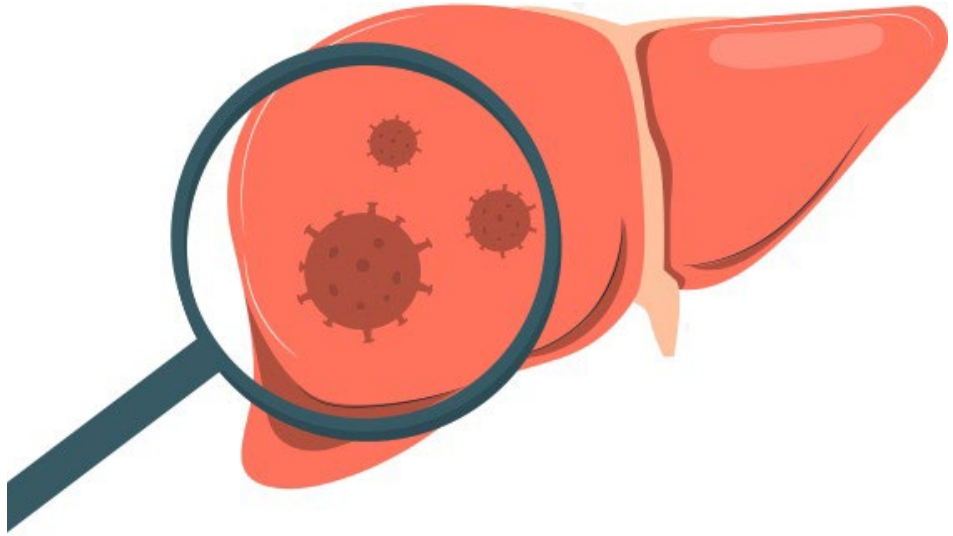
Months 3-4 (4 BID-TID, w/ liver support)

Supplement Facts
Serving Size: 3 Capsules
Servings Per Container 30

	Amount Per Serving	% Daily Value
Sweet Wormwood (*Artemisia annua*) (aerial extract)	200 mg	*
Olive (*Olea europaea*) (leaf extract) (18% oleuropein)	300 mg	*
Berberine (from berberine sulfate)	200 mg	*
Organic Neem (*Azadirachta indica*) (leaf)	300 mg	*
Oregano (*Origanum vulgare*) (leaf extract) (4:1)	200 mg	*
Thyme (*Thymus vulgaris*) (leaf extract) (10:1)	200 mg	*
Barberry (*Berberis vulgaris*) (root)	100 mg	*
Black Walnut (*Juglans nigra*) (hull)	100 mg	*
Uva Ursi (*Arctostaphylos uva-ursi*) (leaf extract) (10% arbutin)	100 mg	*

* Daily Value not established.

Other Ingredients: Vegetable cellulose capsule, maltodextrin, cellulose, rice bran extract, silica.



What to do? GI Rebuild

Months 1-2 (1 heaping scoop BID)

Recommended Use: As a dietary supplement, mix 8 grams (approx. one tablespoon) in water or other liquid per day, or as directed by your health care practitioner.

Supplement Facts

Serving Size 8 grams (approx. one tablespoon)
Servings Per Container 28

Amount Per Serving		% Daily Value	Amount Per Serving		% Daily Value
L-Glutamine	1.5 g	*	Okra Extract (*Abelmoschus esculentus*)(fruit)	100 mg	
N-Acetyl Glucosamine	1.0 g	*	Cat's Claw (*Uncaria tomentosa*)(bark)	100 mg	
Citrus Pectin	1.0 g	*	Methylsulfonylmethane (MSM)	100 mg	
Deglycyrrhizinated Licorice (DGL) (*Glycyrrhiza glabra*)(root)	400 mg	*	Quercetin	100 mg	
Aloe Vera Extract (*Aloe barbadensis*)(leaf)	300 mg	*	Prune Powder	100 mg	
Slippery Elm (*Ulmus fulva*)(bark)	200 mg	*	Zinc Carnosine	75 mg	
Mucin	200 mg	*			
Marshmallow (*Althaea officinalis*)(root)	100 mg	*			
Chamomile (*Matricaria chamomilla*)(flower)	100 mg	*			

*Daily Value not established.

Other Ingredients: Tapioca dextrin, natural peach flavor, certified organic stevia leaf extract powder, citric acid, vegetable cellulose, natural flavor, silicon dioxide, decaffeinated black tea (*Camellia sinensis*)(leaf).

10 drops BID

Supplement Facts

Serving Size 10 Drops (0.28 ml)
Servings per Container about 53

Each Serving Contains

Black Alder (*Alnus glutinosa*)
Bud Extract (1:20) 0.09 ml *
4.7 mg Dried Equivalent

Fig (*Ficus carica*)
Bud Extract (1:20) 0.09 ml *
4.7 mg Dried Equivalent

English Walnut (*Juglans regia*)
Bud Extract (1:20) 0.09 ml *
4.7 mg Dried Equivalent

* Daily Value not established

Other ingredients: Purified water, ethanol (grain), glycerin

What to do? GI Rebuild

Months 3-4 (10 drops BID)

Supplement Facts
Serving Size 10 Drops (0.28 ml)
Servings per Container about 53

Each Serving Contains	% DV
English Walnut (*Juglans regia*)	
Bud Extract (1:20) 0.09 ml *	
4.7 mg Dried Equivalent	
Rosemary (*Rosmarinus officinalis*)	
Young Shoot Extract (1:20) 0.09 ml *	
4.7 mg Dried Equivalent	
Lingonberry (*Vaccinium vitis-idaea*)	
Young Shoot Extract (1:20) 0.09 ml *	
4.7 mg Dried Equivalent	

* Daily Value (DV) not established

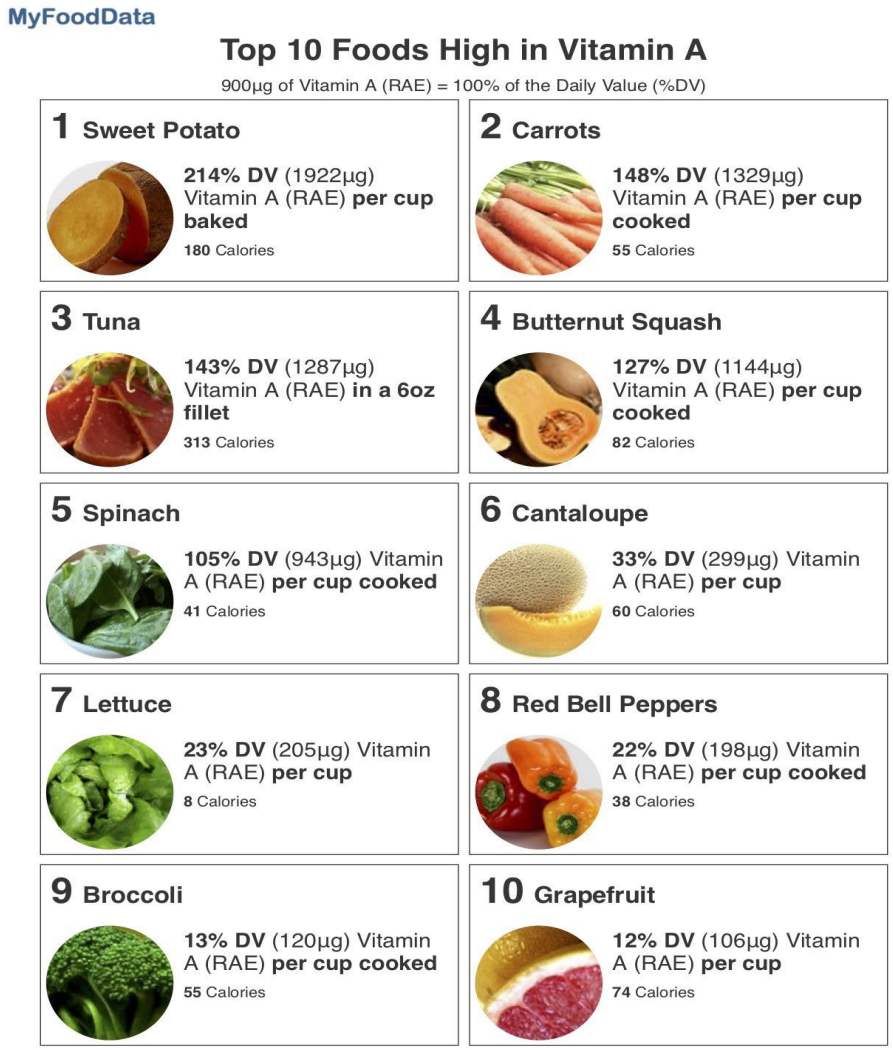
Other ingredients: Purified water, ethanol (grain), glycerin

2-4 caps BID

Dysbiosis/Rebuild

- Fermented foods
- Stewed apples
  - https://www.clinicaleducation.org/documents/apple_tolergenic_food.pdf
- Pre & Probiotics
- *Saccharomyces boulardii*
- MVM
- Topical castor oil
- EFA's
- Vitamin A (5,000 IU-10,000 IU or 1500 µg-3000 µg)
  - Important for normal functioning immune system & cellular differentiation.
    - Huang Z, et al. Role of Vitamin A in the Immune System. J Clin Med. 2018 Sep; 7(9): 258.

Note: One mcg of vitamin A equals 3.33 IU of vitamin A



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- Wyatt J, et al. Intestinal permeability and the prediction of relapse in Crohn's disease. Lancet. 1993;341(8858):1437.
- Galland L. The Gut Microbiome and the Brain. J Med Food. 2014 Dec 1; 17(12): 1261–1272.
- Snapper SB, et al. Immune and microbial mechanisms in the pathogenesis of inflammatory bowel disease. UptoDate. Feb 5, 2019.
- Guiraud P, et al. Comparison of antibacterial and antifungal activities of lapachol and beta-lapachone. Planta Med. 1994;60(4):373-4.
- Shi D, et al. Antifungal effects of undecylenic acid on the biofilm formation of Candida albicans. Int J Clin Pharmacol Ther. 2016 May;54(5):343-53.
- Neuhauser I. Successful treatment of intestinal moniliasis with fatty acid-resin complex. AMA Arch Intern Med 1954;93(1):53-60.
- Santoyo, S, et al. Chemical composition and antimicrobial activity of Rosmarinus officinalis L. essential oil obtained via supercritical fluid extraction. J Food Prot. 2005;68(4):790-795.
- Pina-Vaz C, et al. Antifungal activity of Thymus oils and their major compounds. J Eur Acad Dermatol Venereol 2004;18:73-8.

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- Amin AH, Subbaiah TV, Abbasi KM. Berberine sulfate: antimicrobial activity, bioassay, and mode of action. Can J Microbiol 1969;15:1067-76.
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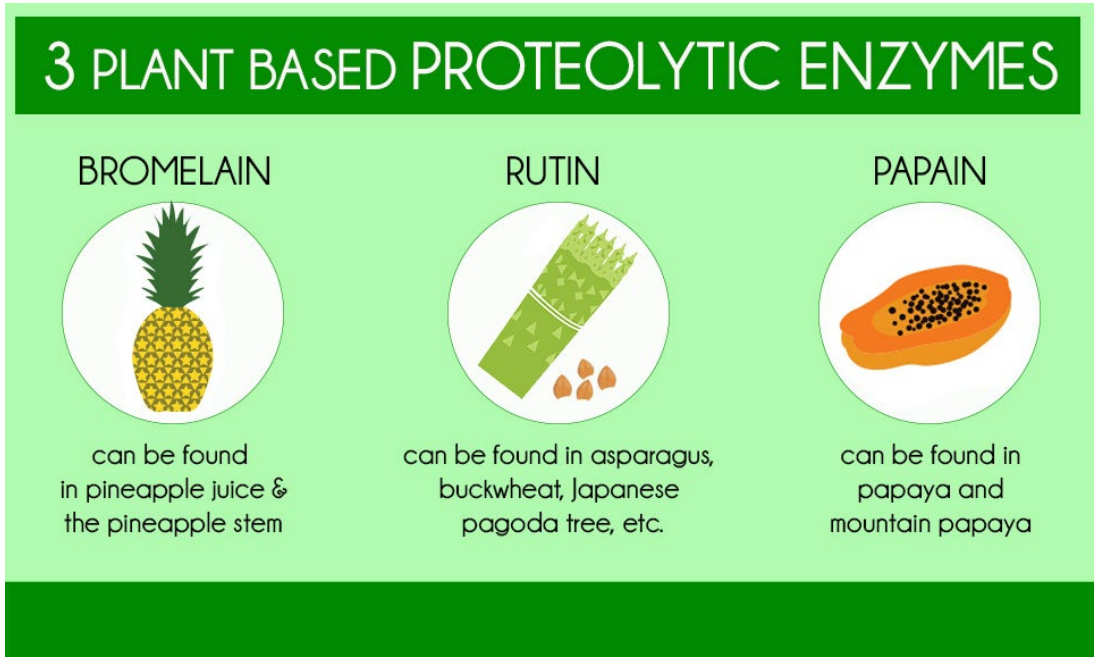
- Cvetnić Z & Vladimir-Knezević S. Antimicrobial activity of grapefruit seed and pulp ethanolic extract. Acta Pharm. 2004 Sep;54(3):243-50.
- Noyer CM, et al. A double-blind placebo-controlled pilot study of glutamine therapy for abnormal intestinal permeability in patients with AIDS. Am J Gastroenterol 1998;93(6):972-5.
- Withee ED, et al. Effects of methylsulfonylmethane (MSM) on exercise-induced oxidative stress, muscle damage, and pain following a half-marathon: a double-blind, randomized, placebo-controlled trial. J Int Soc Sports Nutr. 2017 Jul 21;14:24.
- Gruenwald J, et al. PDR for Herbal Medicines. 1st ed. Montvale, NJ: Medical Economics Company, Inc., 1998.
- Mahmood A & FitzGerald AJ. Zinc carnosine, a health food supplement that stabilizes small bowel integrity and stimulates gut repair processes. Gut. 2007 Feb;56(2):168-75. Epub 2006 Jun 15.
- Ivatore S, et al. A pilot study of N-acetyl glucosamine, a nutritional substrate for glycosaminoglycan synthesis, in paediatric chronic inflammatory bowel disease. Aliment Pharmacol Ther 2000;14:1567-79..
- Leonel AJ & Alvarez-Leite JI. Butyrate: implications for intestinal function. Curr Opin Clin Nutr Metab Care. 2012 Sep;15(5):474-9.

What to Do with Resistant Cases?

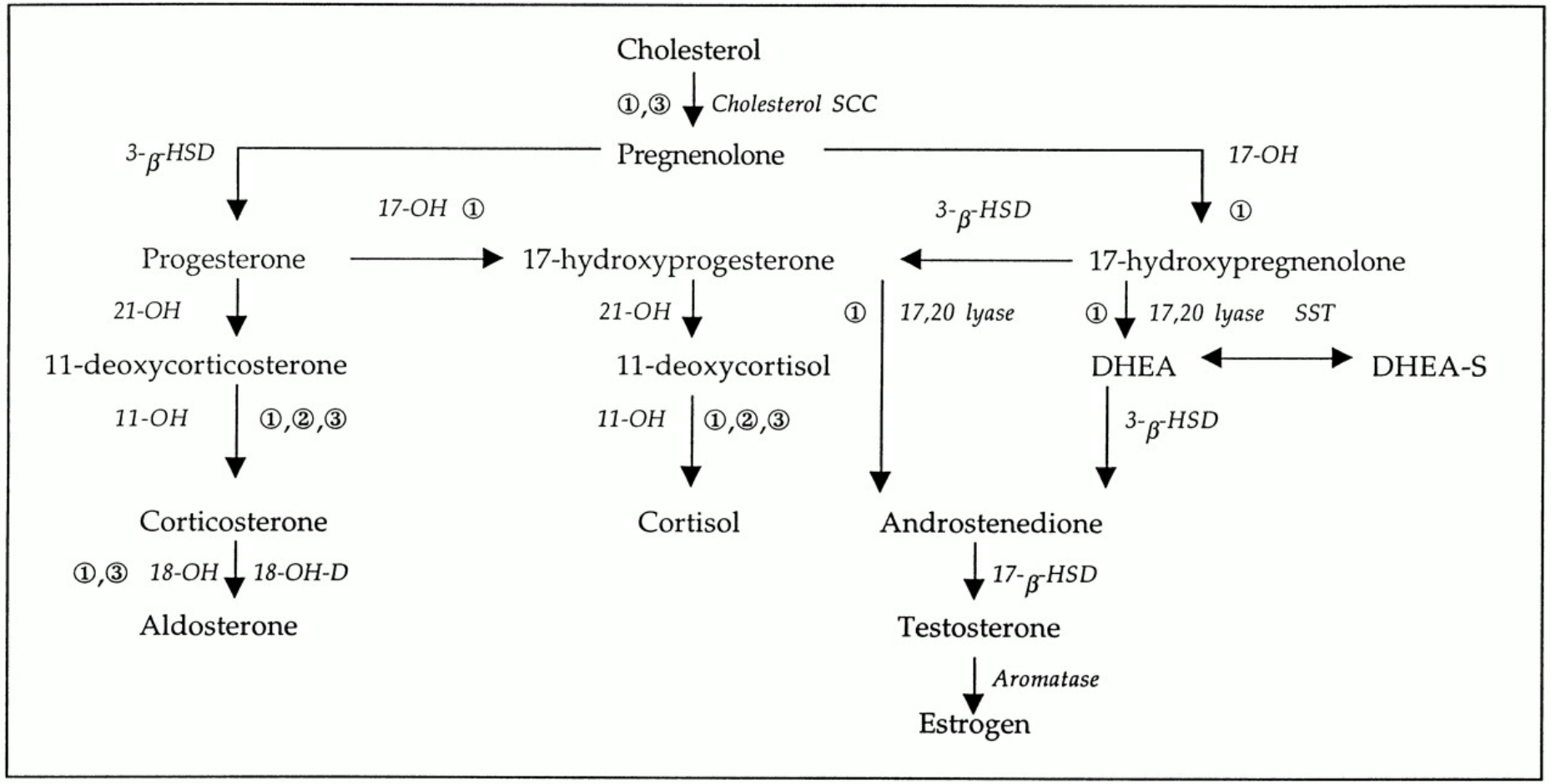
Proteolytic Enzymes

- Kahlenberg JM, et al. Advances in the medical treatment of rheumatoid arthritis. Hand Clin. 2011 Feb;27(1):11-20.
- Lendard L, et al. Controlling Inflammation with Proteolytic Enzymes. Nut Rev. 4/24/2013. http://nutritionreview.org/2013/04/controlling-inflammation-proteolytic-enzymes/.
- Biziulevicius GA. Where do the immunostimulatory effects of oral proteolytic enzymes ('systemic enzyme therapy') come from? Microbial proteolysis as a possible starting point. Med Hypotheses. 2006;67(6):1386-8. Epub 2006 Jul 25.
- Miller PC, et al. The effects of protease supplementation on skeletal muscle function and DOMS following downhill running. J Sports Sci. 2004 Apr;22(4):365-72.
- Bolten WW, et al. The safety and efficacy of an enzyme combination in managing knee osteoarthritis pain in adults: a randomized, double-blind, placebo-controlled trial. Arthritis. 2015;2015:251521.
- Desser L, et al. Oral therapy with proteolytic enzymes decreases excessive TGF-beta levels in human blood. Cancer Chemother Pharmacol. 2001 Jul;47 Suppl:S10-5.
- Leipner J, et al. Therapy with proteolytic enzymes in rheumatic disorders. BioDrugs. 2001;15(12):779-89.
- Wolfgang BW, et al. The Safety and Efficacy of an Enzyme Combination in Managing Knee Osteoarthritis Pain in Adults: A Randomized, Double-Blind, Placebo-Controlled Trial. Arthritis. 2015; 2015: 251521.
- Paradis ME, et al. Impact of systemic enzyme supplementation on low-grade inflammation in humans. PharmaNutrition. Volume 3, Issue 3, July 2015, Pages 83-88.



Slide courtesy of choosenaturesguide.wordpress.com

Tough Cases: Hormones



Tough Cases: Hormones

Dose based upon test results

DHEA (25-50 mg)

7-Keto DHEA (100 mg qd-bid)

Pregnenolone (100 mg hs)

Estrogen, Progesterone, Testosterone

- Kalimi M, et al. Anti-glucocorticoid effects of dehydroepiandrosterone (DHEA). Mol Cell Biochem. 1994 Feb 23;131(2):99-104.
- Robinzon B & Cutolo M. Should dehydroepiandrosterone replacement therapy be provided with glucocorticoids? Rheumatology (Oxford). 1999 Jun;38(6):488-95.
- Lapchak PA, Araujo DM. Preclinical development of neurosteroids as neuroprotective agents for the treatment of neurodegenerative diseases. Int Rev Neurobiol. 2001;46:379-97.
- Baulieu EE. Neurosteroids: of the nervous system, by the nervous system, for the nervous system. Recent Prog Horm Res. 1997;5:21-32.
- Gold SM, Voskuhl RR. Testosterone replacement therapy for the treatment of neurological and neuropsychiatric disorders. Curr Opin Investig Drugs. 2006 Jul;7(7):625-30.
- Gandy S. Estrogen and neurodegeneration. Neurochem Res. 2003 Jul;28(7):1003-8.

Tough Cases Cannabidiol (CBD)

Phytocannabinoids (5-1000+mg)

- MOA: depends on receptor target
  - "The endocannabinoid system parallels and interacts at many points with the other major endogenous pain control systems: endorphin/enkephalin, vanilloid/transient receptor potential (TRPV), and inflammatory."

- Russo EB. Cannabinoids in the management of difficult to treat pain. Ther Clin Risk Manag. 2008 Feb;4(1):245-59.
- Fernández-Ruiz J, et al. Cannabidiol for neurodegenerative disorders: important new clinical applications for this phytocannabinoid? Br J Clin Pharmacol. 2013 Feb;75(2):323-33.

Tough Cases: Pharmaceuticals

- Prednisone
- Carisoprodol
- Metaxalone
- Cyclobenzaprine
- Tizanadine
- Diclofenac patch
- Anti-nauseas
  - Prochlorperazine
  - Promethazine
  - Ondansetron
- NSAIDs
- Low-Dose Naltrexone (0.5-4.5 mg hs)
  - Inhibit microglial activation, suppresses activation of NMDA receptors by decreasing the release of glutamate.
  - Increases endorphins
  - ❖ Caveat: not to be used with opiates or synthetic narcotics. Naltrexone blocks opioid receptors.
    - https://ldnresearchtrust.org/content/low-dose-naltrexone-and-chronic-pain-pradeep-chopra-md
    - https://ldnresearchtrust.org/ldn-clinical-trials
    - https://ldnresearchtrust.org/sites/default/files/LDN-2018-Fact-Sheet-USA.pdf

My Approach to the Autoimmune Patient (Layers)

- ✓Thorough eval, w/ comprehensive HPI and PE
- ✓Assess psychosocial factors
- ✓What have they tried?
- ✓What's worked, what's not worked. Why?
- ✓Eventually will receive constitutional homeopathic, dietary intervention(s) and gut dysbiosis/rebuild.
- ✓Find triggers to flares and remove
- ✓Address flares

My Approach to the Patient

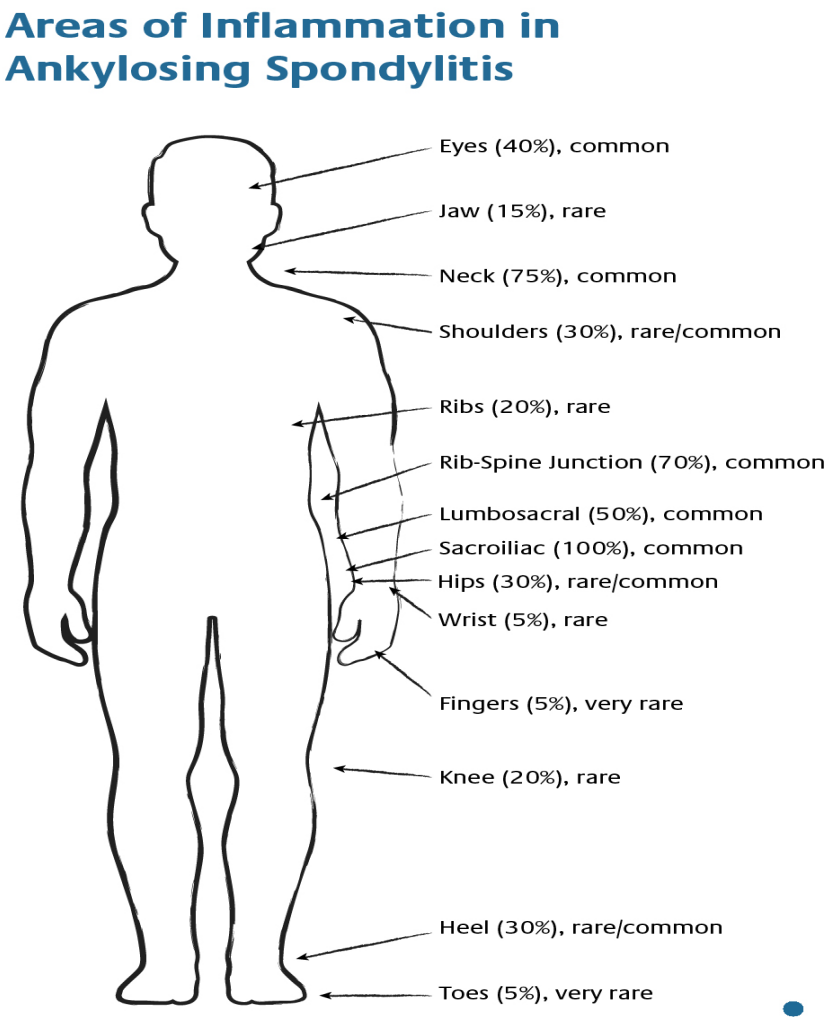
First Visit 60-75 min	H&P, DDX, Necessary Tests, Discuss what I think is going on, Constitutional Homeopathic, Return in 3 weeks. Request outside medical records. Patient to finish up all supplements.
Second Visit 45 min	Review what homeopathic did and did not do; review lab results with patient. Address lab abnormals (and stool, if run). Discuss options and next steps. Return in 4 weeks. Discuss diet.
Third Visit and subsequent visits 30-40 min	What has worked and what hasn't. Discuss options and next steps. Give them expectations and timeframes for improvement and hopeful remission. Implement dietary strategies and interventions, if haven't already. Constant fine tuning

Where the Rubber Meets the Road

Where the rubber meets the road: Case Studies

Ankylosing spondylitis	Crohn's	Dermatographism
Grave's	Hashimoto's	Multiple Sclerosis
Psoriasis/PSA	Rheumatoid arthritis	Ulcerative Colitis

Ankylosing Spondylitis



https://www.spondylitis.org/Possible-Complications

Ankylosing spondylitis

- 39 y/o female w/ 25+ year hx of diffuse, sporadic, migrating pains
- Misdiagnosed with chronic HA, chronic sinusitis, OA
- AS dx at age 32
- Past 5 years, bouts of uveitis, keratitis, angina and lots of MSK itises.
- Entanercept, along with naturopathic interventions provided remission from ages 33-35. Pregnancy at 35, restarted Entanercept, but no relief after 9 months, switched to Adalimumab, ADR, switched to Certolizumab. Took for 3 years, with little relief, so switched to Golimumab x 1 year, with little relief.

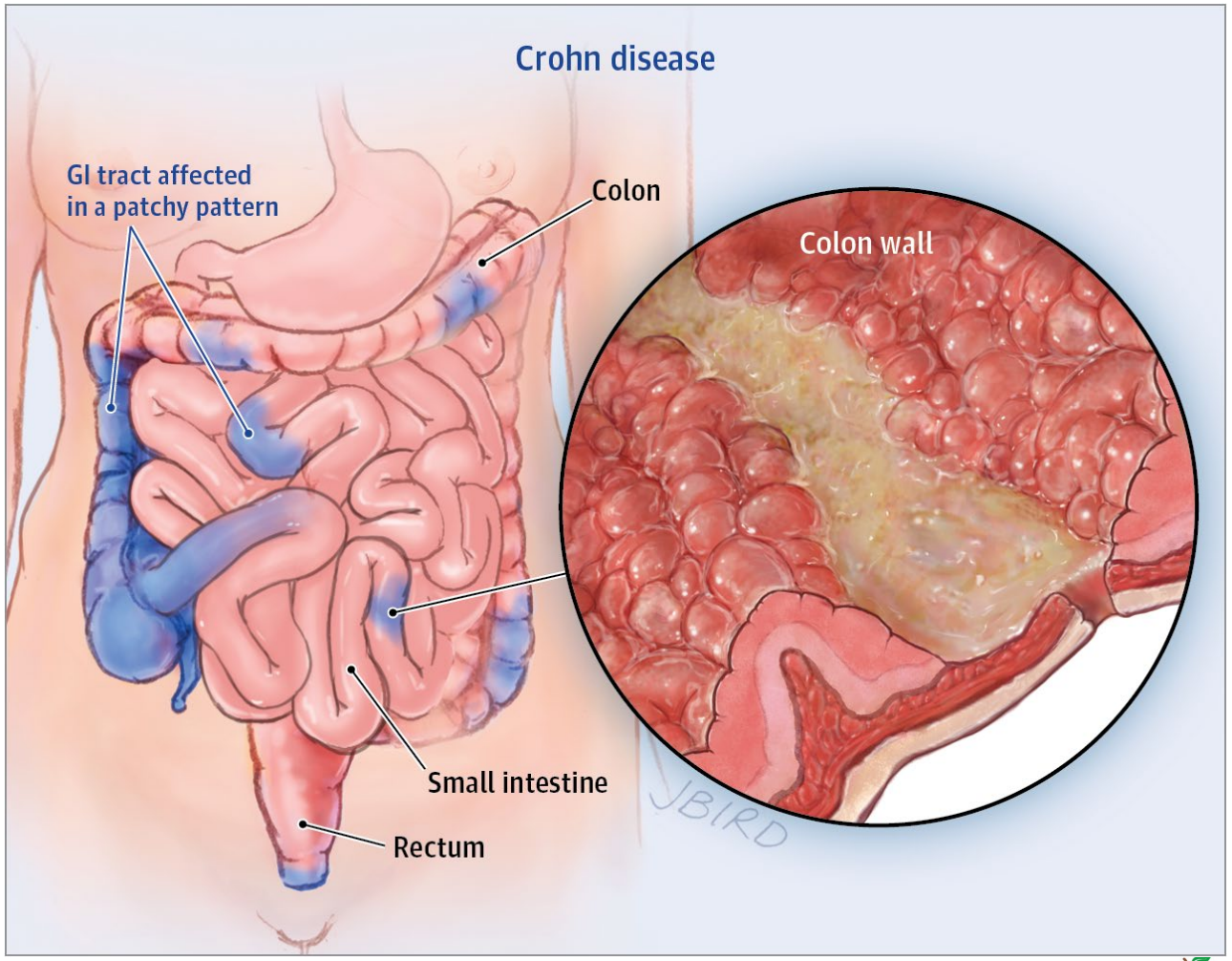
Ankylosing Spondylitis

- Flares progressed in intensity and duration, so long-term prednisone initiated.
- Switched to Tofacitinib
- 12 Months of Naturopathic Tx
  - Magnesium phosphorica 1M for flares, 12C daily
  - Gut dysbiosis/rebuild
  - Adrenal & Mitochondrial support
  - Grain free, raw, vegan diet (self-Rx)
  - High doses of herbal anti-inflammatories
  - Women's Multi, Iron, Omega 3.6.9
  - 40 mg BID CBD
  - Vitamin A, D, E, K2
  - Proteolytic enzymes
  - 7-Keto DHEA + Pregnenolone
  - Biotherapeutic drainage

Ankylosing Spondylitis

- Current Tx
  - MVM
  - Adaptogens
  - GI Support
  - Herbal anti-inflammatories + Proteolytic Enzymes
  - Glandulars
  - Immune support
  - Secukinumab (initiated 4 m/a)
- Mild to moderate flares now only around menses, but much less severity and duration; manageable with NSAIDs and Cyclobenzaprine and with Mag phos 1M, no flare.

Crohn's Disease



https://jamanetwork.com/journals/jama/article-abstract/2627982

Crohn's

- 30 y/o male presents w/ 10 year hx of abdominal issues
- 2010, Navy misdiagnosed him with UC and after 2 years of Rx and no resolution, had complete colectomy. No improvement, new VA specialists thinks he actually has Crohn's and always did.
- 2012-2016: massive weight loss, digestive problems, rectal pain and abscesses, rectal fissures and fistulas, insomnia, fatigue anxiety, PTSD, diffuse arthralgias and myalgias
- Only things that have helped in past are LDN 4.5 mg and GAPS diet

Crohn's

- Started him on Saccharomyces boulardii, topical castor oil, fermented foods, stewed apples and ACV ac. B12/MIC/B-complex/L-carnitine IM
- Returned in 3 weeks. Fatigue and digestion w/ slight improvement. Abscesses are 75% reduced.
  - Causticum 200C, digestive enzymes, hydrolyzed collagen, MVM.
- Returned in 3 weeks: fistulas and fissures healed, except one small fistula left. Abdominal and rectal pain 90% resolved.
  - Causticum 1M, whole food iron, continue with other supplements. Discussed SCD again, but feels too cumbersome and worried about current weight.
- Returned in 4 weeks: fistulas, fissures 100% resolved, one small abscess left. Abdominal pain resolved. To meet with GI specialists to discuss putting pieces of intestines back in place.

Dermatographism

Dermatographism

31 y/o female presents with 8-year hx of dermatographism and GI concerns

Presents as large, diffuse, painful and pruritic “huge welts, from head to toe”

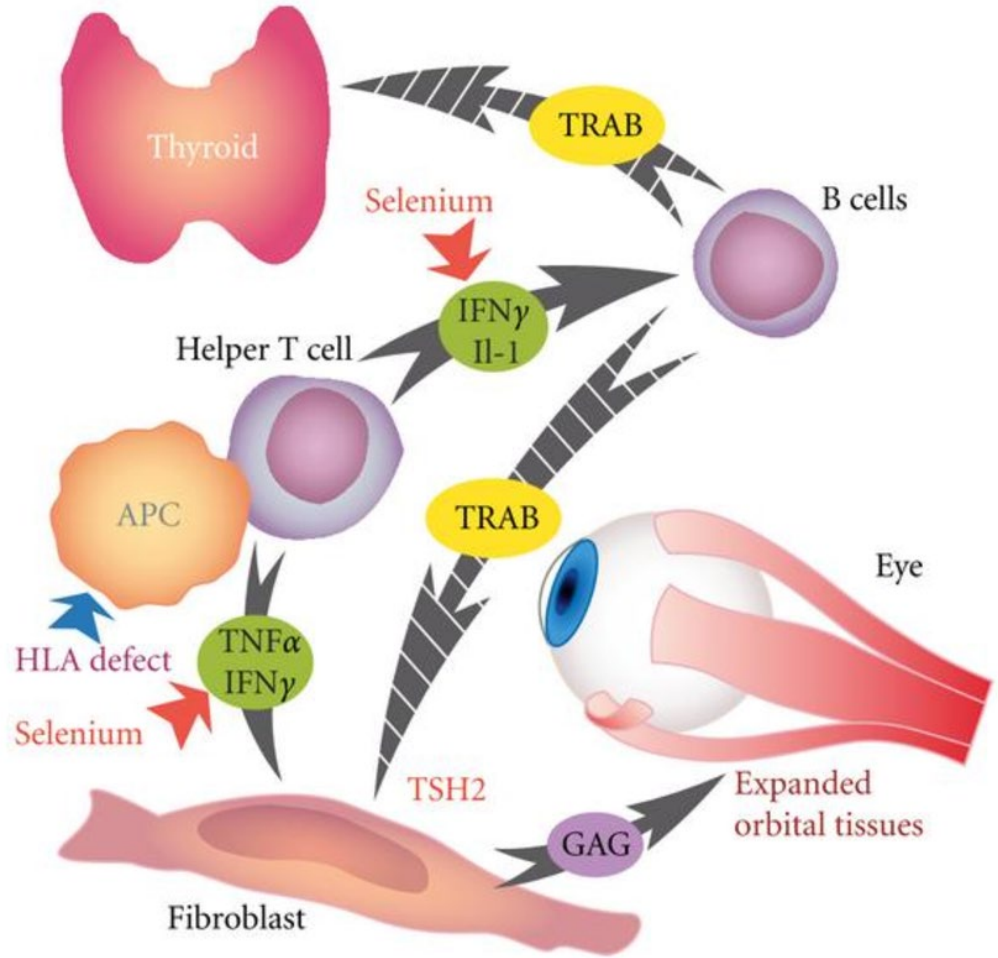
Lesions appear even from clothes touching skin

Dermatology said only treatments are anti-histamines for life and steroids for flares. Basic allergy testing showed + IgE to some fruit and nuts

Dermatographism

- Requested outside medical records, probiotic (slowly increase until taking 40B), Omega-3 (slowly increase until taking 2400 mg), supplement with vitamin C, Boswellia, Luteolin & L. acid L-92 (slowly increase to 2 BID).
- Labs: IgE inhalant panel, Vitamin D, CBC, CMP, inflammatory markers
- Return in 3 weeks:
  - Noticing improvement. Start SLIT and MVM, continue supps.
- Return in 6 weeks: substantial improvement and has weaned off anti-histamines for first time in 7 years.
- Over next 8 months: dysbiosis/rebuild program, finish SLIT and same supps. Notices anxiety triggers flares. Carcinosin 30C when anxiety presents.
- Spoke with patient last month: completely asx, but will occasionally experience sx, but resolve very quickly. Now only on MVM, probiotic and omega-3's.

Graves' Disease



Duntas LH. The evolving role of selenium in the treatment of graves' disease and ophthalmopathy.
J Thyroid Res. 2012;2012:736161.

Graves'

65 y/o female presents w/ Dx of hyperthyroid via radioiodine uptake, hyperlipidemia, IFG and Macular degeneration, Sporadic tachycardia

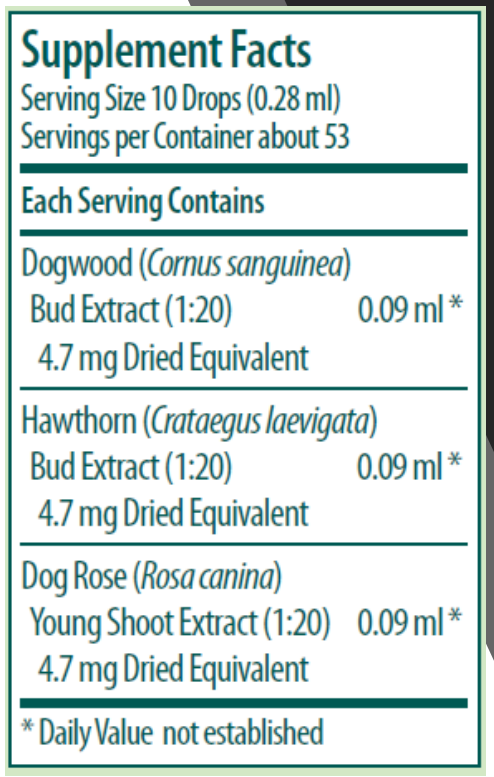
Used to be hypothyroid, got a herpes outbreak, then became hyperthyroid for past year. Didn't tolerate Propylthiouracil, nor Methimazole. Only treatment is radioactive iodine or thyroidectomy.

Graves' causing HTN, so on Lisinopril

Pt already gluten free and says it has made her feel better in some aspects.

Requested GP to run TSI, TPO, TG. Avoid iodine salt and supplements. Thyroidinum 9CH (3 TID SL).

Graves' Disease



Supplement Facts
Serving Size 10 Drops (0.28 ml)
Servings per Container about 53

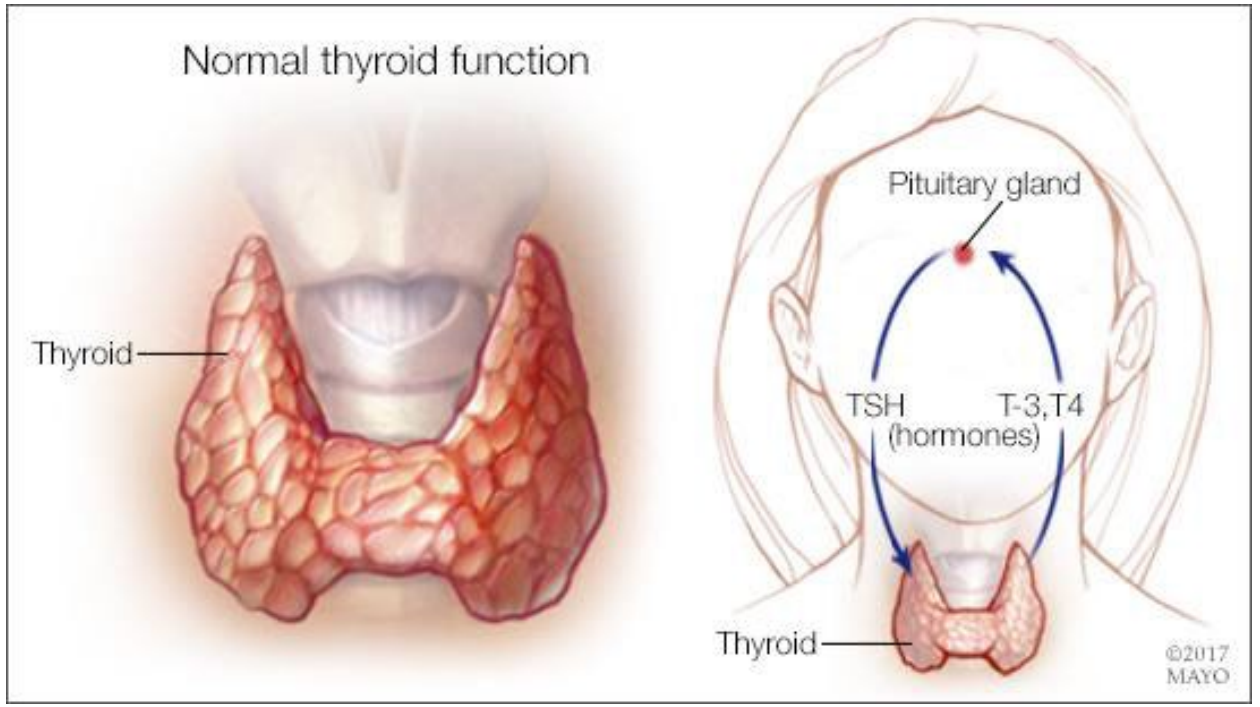
Each Serving Contains

Dogwood (*Cornus sanguinea*)	
Bud Extract (1:20)	0.09 ml *
4.7 mg Dried Equivalent	
Hawthorn (*Crataegus laevigata*)	
Bud Extract (1:20)	0.09 ml *
4.7 mg Dried Equivalent	
Dog Rose (*Rosa canina*)	
Young Shoot Extract (1:20)	0.09 ml *
4.7 mg Dried Equivalent	

* Daily Value not established

- Return in 3 weeks: No change, still feels irritable and short with people, along with heat intolerant.
  - Increased Thyroidinum 9CH to 5 TID, 10 drops BID,
  - MVM w/o iron and iodine, avoid tyrosine supps and 200 mg CoQ10 and Crataegus oxycantha gemmo
  - Reviewed labs: TSI WNL, TPO >1000
- Return in 8 weeks: completely asx and endo says no need to ablate thyroid. Labs normal.
- Continue with MVM, CoQ10, Omega-3, 1 tsp cinnamon.

Hashimoto's Disease



https://newsnetwork.mayoclinic.org/discussion/what-is-hashimotos-disease/

Hashimoto's

66 y/o female presents with Hashimoto's, muscle spasms, binge eating, hyperlipidemia, GERD, osteopenia, food sensitivities and fatigue.

GF/CF anti-inflammatory diet, basic labs, TPO ab, CTX, NTX, DHEA-S and pregnenolone, 24-hour urine iodine, DEXA.

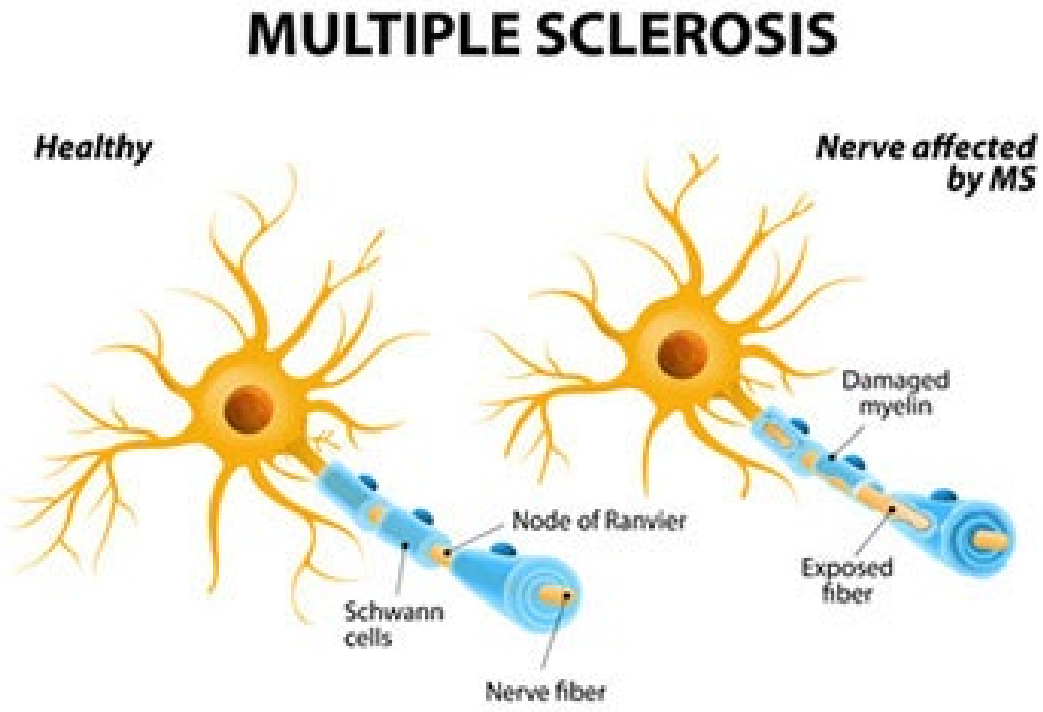
Return in 4 weeks to discuss labs and imaging.

Feels much better on diet.	Instituted exercise routine, better sleep hygiene, Thyroidinum 4CH (5 TID) and bone building supplement.

Hashimoto's

- Return in 12 weeks: still feeling a lot better, all labs improved but lipids, CTX and NTX. Pt reports fatigue.
  - Added in 1 grain thyroid, patented *Humulus lupulus* extract, pregnenolone Staph 30C, and red yeast rice.
- Return in 4 months: all labs normal, patient "thrilled." Stop Thyroidinum 4CH and take 200K, twice a week for 6 months.
- Currently only takes
  - Bone builder, red yeast rice, omega-3, 1 grain thyroid, Staph 30C prn, pregnenolone

Multiple Sclerosis



https://nutritionstudies.org/multiple-sclerosis-and-plant-based-nutrition/

Multiple Sclerosis

41 y/o female (now 48) presents with concerns of MS, Dysthymia w/ Anxiety, Fatigue, Spasticity, Mood swings, Stenosing Tenosynovitis…

Has tried most, if not all MS meds, all with ADR. For flares→500 mg prednisone x 3 days

Mood d/o well controlled with constitutional homeopathy

- Past 7 years: Aconite, Ars album, Nat mur, Carcinosin, Syphilinum, Mancinella

MS remission for 5 years with naturopathic tx, but relapse after Lyme infection

Spasticity well controlled with 40-80 mg CBD and 4.5 mg hs LDN

Current supps vary depending on visit and finances

Psoriasis

Sept
2016

Psoriasis

52 y/o female (54 now) presents with b/l palmoplantar psoriasis, left wrist pain, lumbago and b/l knee pain.

Placed self on elimination diet from internet.

Has tried numerous topical steroids + calcipotriene, most of which don't help, or helped, but then stop d/t tolerance.

Rx: Naproxen 440 mg BID, Calcipotriene/betamethasone

Supps (self): MVM, Cal/mag/Zn, Vitamin D, Stress B and Probiotics

PMHX: ER/PR+ breast cancer (2001) & Total Hysterectomy (2015)

Psoriasis

- First appointment: topical aloe 99%, Instructions on how to challenge foods. Formula for pain (start after food reintroduction is complete). Referral to orthopedist to help determine if PSA and will confer w/ rheum.
- E-mail communication b/w: switch topical EVCO
- Return 12 weeks: removed problematic foods for 3 weeks prior to visit and noticed 25% improvement in skin. Rheum wants her on methotrexate, but she doesn't. Sulphur 200C.
- Return 8 weeks: W/u neg for PSA. Hands 98% resolution, feet 50%, but skin dry and hyperkeratotic. Cortisone injection to wrist. Basic labs requested + HLA-B27.

Psoriasis

Return in 6 months: Doing well, but ate foods shouldn't have and flared, along with pain returning. Hasn't needed any pain meds, nor topicals Rx.

Redose Sulphur 200C + high dose CLO, high bioavailable turmeric, probiotics

Return in 4 months: 95% resolution in all parameters

Why not 100% cure?

Jan 2018

"May 2018 when I started to flare up again after the Oct/Nov remedy

Jan 2019

Psoriatic Arthritis

35 y/o female presents with 25 years of psoriasis, ~10 PSA. Failed all conventional therapies. Also CC: insomnia, gas/bloating, fatigue, dysmenorrhea, PMS and menorrhagia.

PMHX: Thyroid cancer. Complete thyroidectomy & parathyroidectomy.

95% of body covered with plaques. Pain is b/l wrists and knees.

Psoriatic Arthritis

- Over next 4 years
  - Allergy elimination diet
  - IgG food testing
  - GI Dysbiosis Rebuild
  - Topicals
    - Aloe 99%
    - EVCO
    - Calcipotriene
    - UV Therapy
  - Constitutional homeopathy
  - Biotherapeutic drainage

Psoriatic Arthritis

- Over next 4 years cont.
  - Seed/oil cycling
  - Ayurveda & Panchakarma
  - CLO
  - 3.6.9 blend
  - Pain formulas
  - Proteolytic enzymes
  - CBD
  - LDN
- Referral to derm clinic for UV light and I Rx topical calcipotriene

Psoriatic Arthritis

- Where we are now
  - 90% resolution in psoriasis
  - Pain well controlled with high doses of curcumin and proteolytic enzymes
  - PMS and menstrual irregularities resolved w/ homeopathy
  - Fatigue resolved with improved sleep hygiene, iron repletion and homeopathy
  - Referral to rheumatology and will try Apremilast

Rheumatoid Arthritis

Rheumatoid Arthritis

40 y/o female (now 42) presents with RA (Dx at 25), hypothyroidism (10 years), Dysthymia w/ anxiety, panic attacks and fatigue.

Tried Hydroxychloroquine sulfate, Celecoxib, Methotrexate and Prednisone

Did well in 30's on GF diet, until pregnant with first child. Hydroxychloroquine tolerated during pregnancy, but then didn't. Didn't tolerate Celecoxib and prednisone.

Has been on 20 mg methotrexate weekly for 6 years and uses Naproxen during flares.

Also currently taking Sertraline 50 mg, Levo 75 mcg and Lorazepam prn

Wishes to stop methotrexate b/c flaring more often, greater severity and duration.

Rheumatoid Arthritis

- First visit: Nat mur 1M, stool micro, review outside medical records, co-management letter to PCP and other tests PCP wouldn't run. Patient already knows food and stress triggers.
- Return 6 weeks (needed labs):
  - Discussed outside records, stool test results and current labs
  - Anxiety resolved and tapered off Zoloft, but no change in RA or Hypothyroid sx.
  - MVM w/ iron, increase D3, 7-Keto 100 mg BID, start GI dysbiosis program + pain formula
  - Referral to new rheumatologist

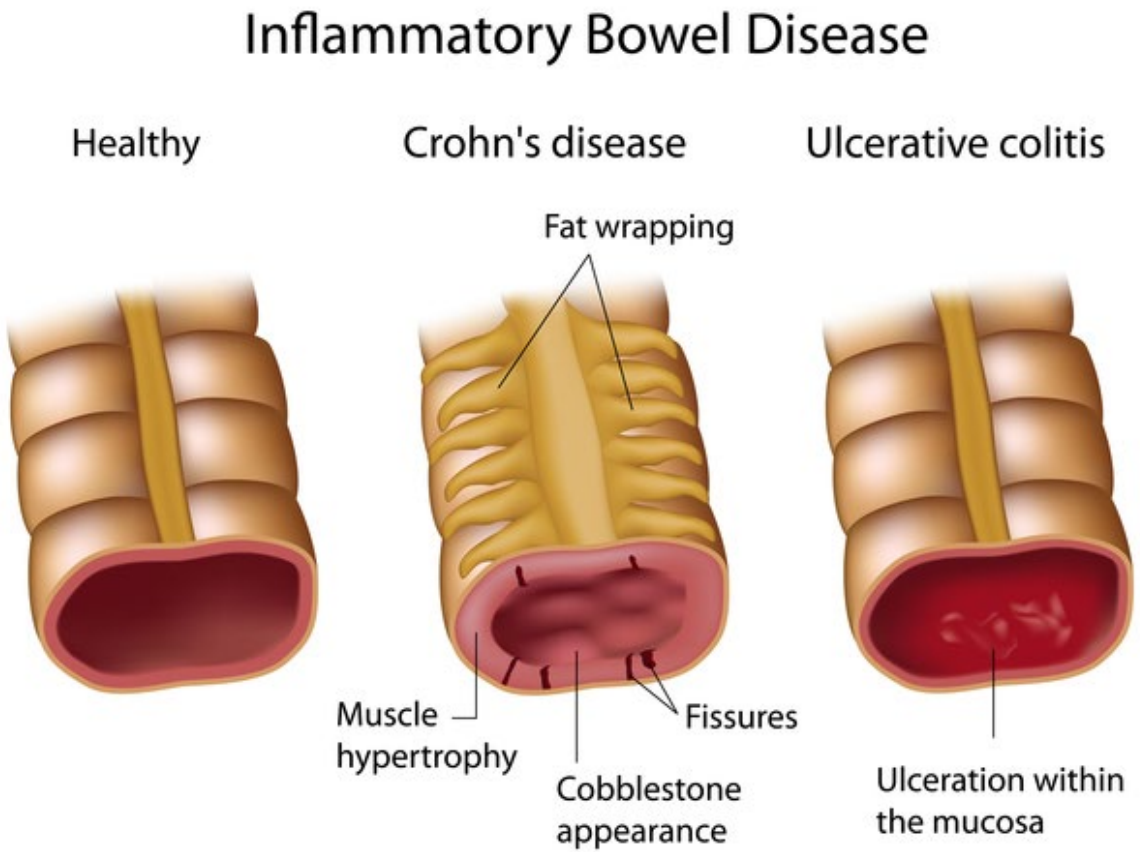
Rheumatoid Arthritis

- Return 8 weeks
  - Fatigue resolved, "no longer needs caffeine."
  - Inflammatory markers WNL
  - Pain much better and hasn't had to use any naproxen or ibuprofen
  - Tapering methotrexate w/ Rheum. Rheum wants her to discuss adding in omega's and more turmeric.
  - Added in 3.6.9 blend (no anxiety or panic attacks, but feels depressed) and continue with next phase of GI dysbiosis
- Return 12 weeks
  - Moved across country, so mood d/o returned. Started Ativan prn and Sertraline.
  - Still tapering methotrexate and tolerating well.
  - Redose Nat mur 1M; continue GI dysbiosis

Rheumatoid Arthritis

- Return 8 weeks (5.5 months from 1st visit)
  - Homeopathic did nothing ☹
  - Anxiety, Panic attacks and Hypothyroid currently controlled with meds, but reports not feeling *well* controlled.
  - RA: completely off methotrexate. Reports topical and po CBD have helped (self-prescribed)
  - Carcinosin 200C, move on to GI rebuild phases
- Return 8 weeks
  - Was doing well until the cold weather started and has 3 hour roundtrip commute to work. Not sure if homeopathic helped or worsened RA.
  - Mood d/o better w/ new homeopathic
- E-mail communication 3 weeks ago
  - Doing much better since increasing the turmeric and CBD+EFA's

Ulcerative Colitis



https://ghr.nlm.nih.gov/condition/ulcerative-colitis

Ulcerative Colitis

- 37 y/o male (now 40) presents with UC (mild-to-moderate) x 5 years and arthralgias of the elbows, fingers and right knee, fatigue, weight loss and severe acne.
- Has tried steroids, mesalamine enemas + PO
- Knows food triggers already
- Has 2-3 BM qd with blood and mucus
- First Visit: Labs, stool micro, discussion of SCD (handout given), Lycopodium 1M, high dose CLO

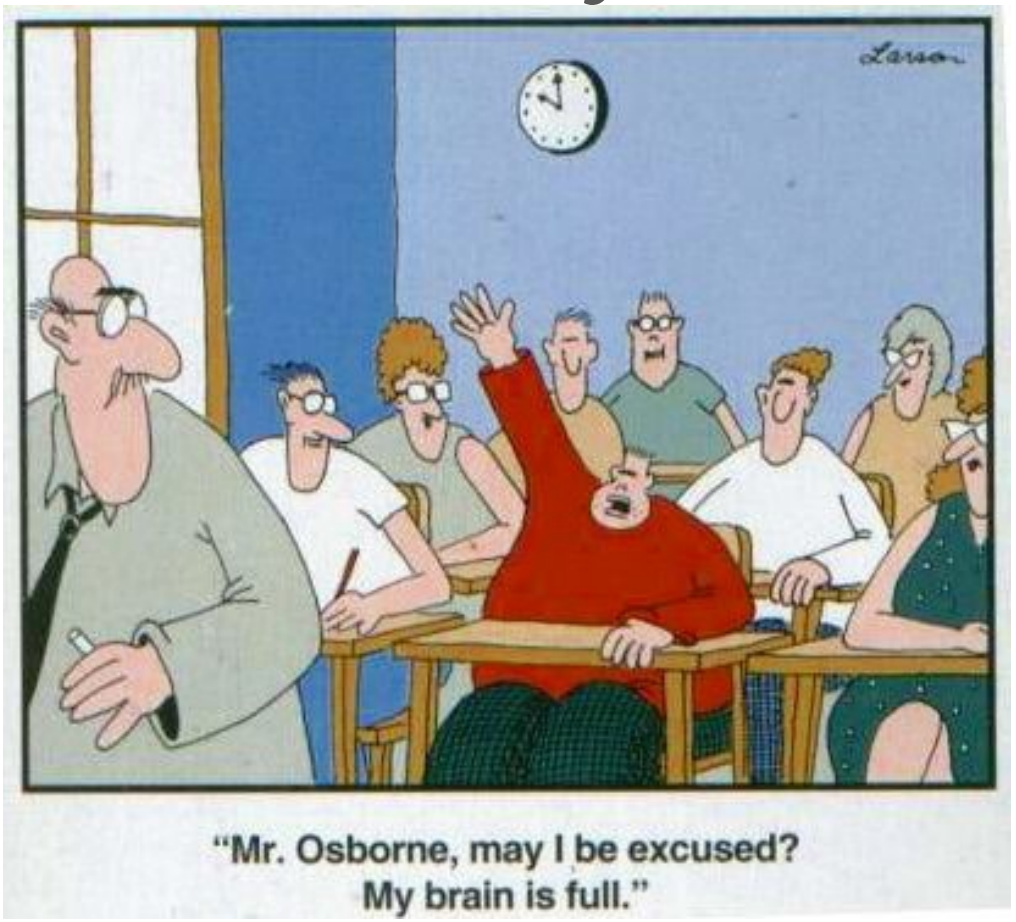
Ulcerative Colitis

- Return 4 weeks
  - 7 days after homeopathic, flared and had to use mesalamine PO and enema
  - No change in anything else
  - Continue w/ CLO, Prenatal MVM, start GI dysbiosis, 50 mg DHEA + 100% SCD. Nat mur 1M
- Return 4 weeks
  - **UC:** very little abdominal pain now, hematochezia resolved
  - **Arthralgias:** asx
  - **Fatigue:** only a small energy dip mid-afternoon
  - **Acne:** barely noticeable, but ended up w/ folliculitis

Ulcerative Colitis

- Return 6 weeks (3.5 months from initial visit):
  - **Folliculitis** worsened with mupirocin, much better with gentle soap + lavender essential oil and topical tea tree oil and ACV.
  - **UC** almost no pain, BM normalized, no blood, rare mucus, only uses mesalamine PO and enema prn
  - **Fatigue** resolved
  - 90% SCD
  - Finish gut dysbiosis and rebuild program
- Return in 10 months
  - UC complete remission for past 3 months.
  - 50% SCD
  - Supps: vitamin D, Fish oil, Methylcobalamin
  - New sx of tremendous b/l pedal paresthesias: Redose Nat Mur 1M
- Return 2 weeks
  - Paresthesias 90% resolved

Thank you!



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