



INTEGRATIVE TREATMENTS FOR CHRONIC DISEASE

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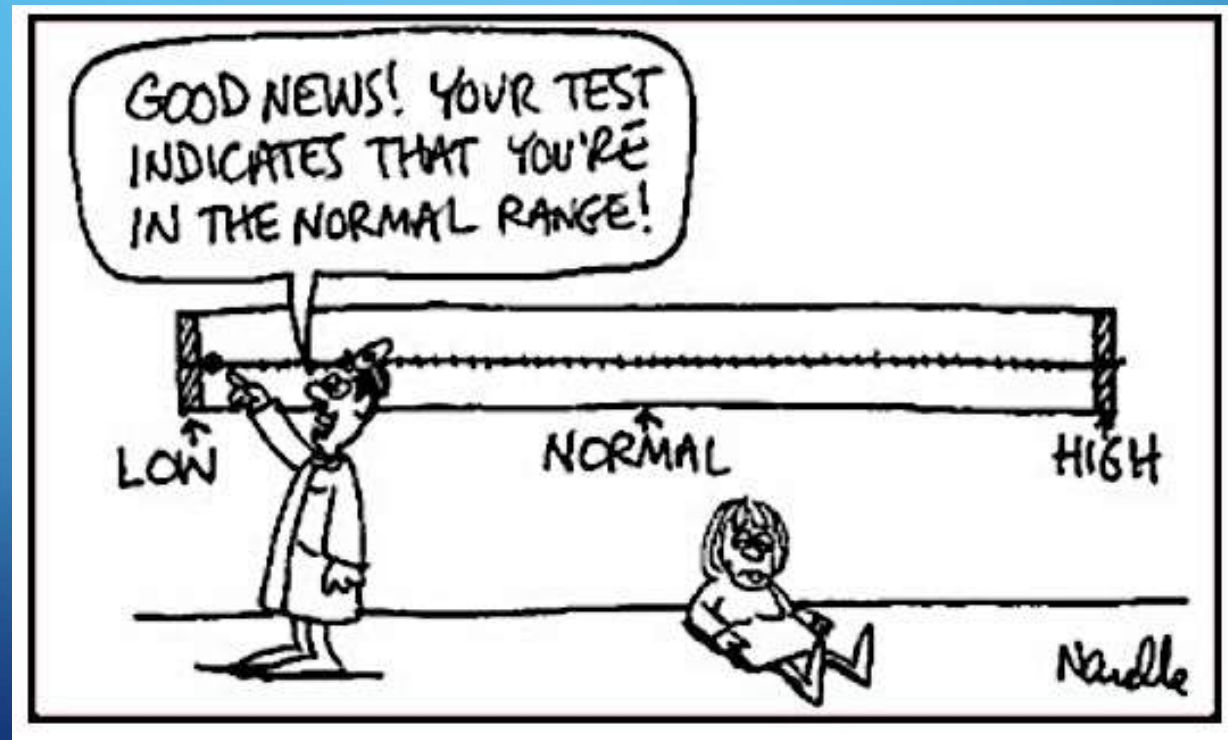
OBJECTIVES

By the end of this presentation, attendees should be able to:

1. Review the utilization of integrative therapies by adults in the US.
2. Summarize the pathophysiology that leads to common chronic diseases.
3. Describe integrative approaches that address the underlying pathophysiology, their mechanisms of action and their efficacy/effectiveness data., and create sample integrative plans for selected patient scenarios.

TYPICAL INTEGRATIVE MEDICINE PATIENT

You are there next stop in a line of frustration after insufficient help has been received...



INTEGRATIVE MEDICINE (RAKEL & WEIL, 2012)

“Healing-oriented medicine that takes account of the whole person (body, mind, and spirit), including all aspects of lifestyle. It emphasizes the therapeutic relationship and makes use of all appropriate therapies, both conventional and alternative.”

CHRONIC DISEASE (CDC, 2019)

“Conditions that last 1 year or more and require ongoing medical attention or limit activities of daily living or both.”

INTEGRATIVE MEDICINE UTILIZATION -ADULTS, 2012 (FALCI, SHI, & GREENLEE, 2016)

- 56% of US adults have at least 1 chronic disease
- Approximately 16% of US adults have 4 chronic diseases
- Individuals with chronic conditions are more likely to use integrative therapies than individuals without chronic conditions.
- Utilization of integrative therapies increases as the number of chronic diseases increases.

MOST COMMON INTEGRATIVE THERAPIES-ADULTS, 2012 (FALCI, SHI, & GREENLEE, 2016)

1. Multivitamins (52.7%)
2. Vitamins (34.8%)
3. Minerals (28.4%)
4. Non-vitamin or herbal therapies (17.9%)

INTEGRATIVE THERAPIES EXCLUDING VITAMINS & MINERALS-ADULTS, 2012

(DOSSETT, DAVIS, KAPTCHUK, & YEH, 2016)

- Homeopathy
- Herbs & Supplements
- Chiropractic or Osteopathic
- Massage
- Meditation, Imagery, or Progressive Relaxation
- Naturopathy
- Acupuncture
- Energy Healing
- Special Diets
- Movement Therapy
- Hypnosis
- Craniosacral Therapy
- Ayurveda
- Traditional Healers
- Biofeedback

MOST COMMON CONDITIONS FOR WHICH INTEGRATIVE THERAPIES WERE USED-ADULTS, 2012

(DOSSETT, DAVIS, KAPTCHUK, & YEH, 2016)

1. Respiratory or ENT
2. Musculoskeletal
3. Fatigue, Stress, or
Chronic pain
4. Gastrointestinal
5. Neurological
6. Mental Health
7. Cardiac and Vascular
8. Endocrine and
Metabolic

PATHOPHYSIOLOGIC BASIS OF CHRONIC DISEASES

- Genetics & Epigenetics
- Microbiome Disruption
- Inflammation
- Altered Immunity
- Stress & Associated Responses
- Aging

GENETICS & EPIGENETICS (BURTON ET AL., 2014; KHOURY & MENSAH, 2005)

- Genetics and genomics (e.g. BRCA)
- Epigenetics (e.g. cardiovascular disease)

MICROBIOME DISRUPTION

- Microorganism colonization
- Microbiome protects against pathogenic microorganisms
- Disruptions from
 - Sleep disruption (Bowers et al, 2019)
 - (Over)use of medications (Imhann et al., 2015; Johanesen et al., 2015)
 - Diet and nutrition (Zmora et al., 2018)
 - Environmental pollutants (Hoffman et al., 2019)

INFLAMMATION

- “Metaflammation” (Egger, 2012)
 - Low grade, causing small rise in immune markers
 - Persistent, chronic
 - Systemic effects
 - Antigens acting as inducers
 - Perpetuates chronic disease
 - Reduces metabolic rates

ALTERED IMMUNITY (BAGATINI ET AL., 2017)

- Altered immune cell phenotype & functions in addition to inflammation
- Failure to recognize non-self cells → cancer
- Failure to recognize self cells → autoimmune disease

STRESS & ASSOCIATED RESPONSES (MCCANCE, K. L. & HUETHER, S. E., 2019)

- Cortisol & Oxidative Stress
- Autonomic nervous system
- Catecholamine response
- Cell signaling

AGING

- Oxidative Stress
- Apoptosis (McCance, K. L. & Huether, S. E., 2019)
- Necroptosis? (Khoury et al., 2020)
- Senescence (McCance, K. L. & Huether, S. E., 2019)

HOMEOPATHY (AMERICAN INSTITUTE OF HOMEOPATHY, 2016)

Homeopathy, or Homeopathic Medicine:

- The word Homeopathy comes from the Greek, through Latin into English, literally means “like disease.”
- This means that the medicine given is like the disease that the person is expressing, in his totality, not like a specific disease category or medical diagnosis.

HOMEOPATHY CONTINUED (AMERICAN INSTITUTE OF HOMEOPATHY, 2016)

Homeopathy, or Homeopathic Medicine:

- Embraces a holistic, natural approach to the treatment of the sick
- Holistic: Treats the person as a whole, rather than focusing on a diseased part or a labeled sickness
- Natural because its remedies are produced, according to the U.S. FDA-recognized *Homeopathic Pharmacopoeia of the United States*, from natural sources, whether vegetable, mineral, or animal in nature

HOMEOPATHY CONTINUED (AMERICAN INSTITUTE OF HOMEOPATHY, 2016)

Homeopathy, or Homeopathic Medicine:

- The guiding principle of Homeopathy is stated as “let likes cure likes,” *similia similibus curentur*
- The concept of “like curing like” dates back to the Greek Father of Medicine, Hippocrates (460-377 B.C.)
- German physician Dr. C. F. Samuel Hahnemann (1755-1843) first codified this principle into a system of medicine

HOMEOPATHY – IN THE US (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2018)

- How much do we know about homeopathic products?
 - Many studies have evaluated homeopathic products for a variety of conditions, but there's less research on their safety.
- What do we know about the effectiveness of homeopathy?
 - There's little evidence to support homeopathy as an effective treatment for any specific health condition.
- What do we know about the safety of homeopathic products?
 - Some products labeled as homeopathic may contain substantial amounts of active ingredients and could cause side effects and drug interactions.

HOMEOPATHY – IN EUROPE (SAYBURN, 2019)

- Doctors, politicians & lawyers increasingly open to homeopathy.
 - UK's update of Australian review of evidence prompted by a legal challenge to NHS England's advice to CCGs to stop funding homeopathy – a challenge dismissed by High Court.
- Effect of belt-tightening by health services & statutory insurers. Per French National Academy of Medicine, "The reimbursement of these products ... appears absurd at a time when, for economic reasons, many standard drugs with better evidence" are struggling to be funded.

Considering Evidence/Efficacy in Integrative Medicine		Is therapy Effective?	
		Yes	No
Is therapy Safe?	Yes	Evidence supports BOTH safety and efficacy	Evidence supports safety but efficacy unproven
	No	Evidence supports efficacy but safety unproven	Evidence supports NEITHER safety or efficacy

HERBS & SUPPLEMENTS (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020A)

Federal law defines dietary supplements as products that:

- Are taken by mouth (such as a tablet, capsule, powder, or liquid).
- Are made to supplement one's diet.
- Have 1+ dietary ingredients, including vitamins, minerals, herbs or other botanicals, amino acids, enzymes, tissues from organs or glands, or extracts of these.
- Are labeled as dietary supplements.
- Herbal supplements (aka botanicals) are a type of dietary supplement containing one or more herbs.

HERBS & SUPPLEMENTS CONTINUED (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020A)

- Scientific evidence varies widely.
- OTC Supplements likely differ from products tested in research
- Dietary supplements may interact with medications → potential risk
- Most not tested in pregnant women, nursing mothers, or children
- Content on the label may not be what's in the product.
- Some products (e.g. weight loss, sexual enhancement, bodybuilding) may contain prescription drugs or other ingredients not listed on the label → may pose risk.

HERBS & SUPPLEMENTS CONTINUED (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020A)

- Manufacturing/distributing guidelines less strict for supplements than prescription or OTC drugs
- FDA requires submission of safety data for ingredients not sold in US prior to 1994
- FDA not authorized to review supplements for safety & effectiveness prior to being marketed

CHIROPRACTIC & OSTEOPATHIC

- Chiropractic emphasizes body's ability to heal itself; usually includes manual therapy, spinal manipulation; may include exercise, nutritional counseling.
- Osteopathic assists patient's innate capacity to heal via interrelationship between nerves, muscles, bones, & organs

MASSAGE (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020B)

- Swedish or classical → most common form in Western countries
- Sports massage
- Clinical massage to accomplish specific goals (e.g. control of lymphedema)
- Massage traditions derived from Eastern cultures (e.g. Shiatsu, Tuina)

MASSAGE CONTINUED (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020B)

- Studied for several types of pain (e.g. low-back, neck & shoulder, osteoarthritis of the knee, headaches).
- With appropriate precautions, can be part of supportive care for cancer patients
- May be helpful for some fibromyalgia symptoms if continued for long enough

MEDITATION, IMAGERY OR PROGRESSIVE RELAXATION

(NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020C)

- Focuses on interaction between brain, mind, body, & behaviors.
- Increases calmness, physical relaxation, psychological balance, & coping.
- May be a therapeutic for
 - HTN
 - Anxiety
 - Depression
 - Irritable bowel syndrome
 - Ulcerative colitis
 - Insomnia

NATUROPATHY (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020D)

Includes combinations of

- Dietary & lifestyle changes
- Stress reduction
- Herbs & other dietary supplements
- Homeopathy
- Manipulative therapies
- Exercise therapy
- Practitioner-guided detoxification
- Psychotherapy & counseling

ACUPUNCTURE (KAWAKITA & OKADA, 2014)

- Associated with oriental Medicine
- Flow of qi (energy)
- Disunity between body & soul
- Insertion of fine needles into specific meridians
- Produces analgesic effect via endogenous opioid peptides

ENERGY HEALING (KREBS, 2007)

- Practitioner as conduit for healing energy into patient's body with or without physical contact
- Includes Reiki, Healing/therapeutic touch

SPECIAL DIETS

- No one “diet” is right for everyone
- American Institute for Cancer Research
- DASH
- State of Slim
- Adkins
- Mediterranean diet

MOVEMENT THERAPY

- Tai chi
- Yoga
- Aerobic
- Anerobic
- Exercise is Medicine® (EIM) has specific fact sheets for specific chronic diseases

HYPNOSIS (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020E)

- Defined as an altered state of consciousness with increased responsiveness to suggestion.
- May treat ulcers, chronic pain, respiratory ailments, stress, headaches.

CRANIAL SACRAL THERAPY (INSTITUTE FOR INTEGRATIVE HEALTH, 2016)

- Relieves compression in the bones of the head, sacrum, spinal column through application of gentle pressure
- Gentle manipulation of skull, spine, pelvis to improve flow of CSF

AYURVEDA (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020E)

- Integration of the body, mind, & spirit via cleansing body of harmful substances that cause disease

TRADITIONAL HEALERS

(NATIONAL CENTER FOR COMPLEMENTARY &
INTEGRATIVE HEALTH, 2020E)

- Practitioners who use indigenous theories, beliefs, & experiences

BIOFEEDBACK (NATIONAL CENTER FOR COMPLEMENTARY & INTEGRATIVE HEALTH, 2020E)

- Using electronic devices to help patients regulate body functions (e.g. breathing, heart rate, blood pressure)

ADDRESSING THE MOST COMMON UNDERLYING PATHOPHYSIOLOGY

- Genetics & Epigenetics
- Microbiome Disruption
- Inflammation
- Altered Immunity
- Stress & Associated Responses
- Aging

GENETICS & EPIGENETICS

- Testing: Genetic, Genomic, & now Epigenetic testing can be done
- How do we use the information?
- Requires additional training!
- Can be expensive & not often covered

MICROBIOME DISRUPTION

- Testing & correcting imbalances
- Probiotics & prebiotics
- Food allergies, intolerances & sensitivities
- Nutrition, diet & other supportive supplements
- Other microbiomes (oral, skin...)

INFLAMMATION & OXIDATIVE STRESS

- Testing & reducing oxidative stress & inflammation
- Common inflammatory markers: CRP, ESR, Ferritin, Homocysteine
- Anti-inflammatory diets, foods, herbs, & supplements
- Supporting cellular health & biochemical pathways

ALTERED IMMUNITY

- Testing & correcting imbalances & deficiencies
- Gut health imparative for immune health
- Vitamins & micronutrients
- Antibodies for good & not so good
- Toxic exposures & build up

STRESS & ASSOCIATED RESPONSES

- Testing & correcting, cortisol, HPA axis, neurotransmitters, etc
- Mind-body techniques
- Reducing cellular stress (oxidative stress) by supporting cellular health & biochemical pathways

AGING

- Reduced enzyme functions
- Mitochondrial dysfunction
- Impaired glucose metabolism
- Diminished sirtuin activity
- Impaired apoptosis
- Toxic exposure build up
- Telomere Shortening

INTEGRATIVE MEDICINE METHODOLOGY

- Adopt a partnering approach, & highlight therapies that can complement care & improve outcomes in several core areas while being congruent with patients' ethos
- Find the root cause(s) & treat it (them), not just the symptoms
- Focus on patient goals & desired outcomes, not yours
- Use gentle therapies that are as naturally based as possible
- Educate, encourage & empower your patients, your staff, & yourself
- Build a collaborative community

REIMBURSEMENT

Billing, Coding and Reimbursement

- It is like everything else we do
- If you code correctly you can get paid
- If you don't, you won't
- However, you still will not get paid for non-covered services

CASE SCENARIO 1

ABC is an 53 year old female with persistent fatigue, hypothyroidism, insulin resistance, inability to lose weight. She presents today for a follow-up & lab review.

VS: T 97.7 P 74, RR 18, PaO₂ 93%RA, BP 138/80

Pain level: 2

Current meds: Levothyroxine 90 + 15 po q am, had been taking a prenatal vitamin but stopped, currently on a special protein shake diet & was told that “diet supplied everything she needs.”

What labs would you do? Why? IDA, Thyroid, Sugar Metab - all connected

CASE SCENARIO 2

XYZ is a 33 year old female with breast cancer undergoing chemotherapy. C/O persistent nausea/vomiting uncontrolled with available Rxs, tingling to hands & feet, intolerance to hot or cold, complete hair loss, constipation & pain from her mouth down through her esophagus.

VS: T 96.8 P 78, R 16, PaO₂ 96%RA, BP 98/64

Pain: 2-8 depending on when last Neulasta (pegfilgrastim) shot was given

Current meds: 7.5 mcg Synthroid (levothyroxine), Zofran (ondansetron ODT), Compazine (prochlorperazine maleate), Phenergan (promethazine), Chemotherapy Regimen: Adriamycin (Doxorubicin) & Cytoxan (cyclophosphamide).

CASE SCENARIO 3

AM is an 86 year old female with osteoarthritis, high blood pressure, depression, diabetes, & chronic pain. She presents today for a follow-up & medication renewal.

VS: 97.0 F-48-18-170/70

Pain level: 6

Current meds: metoprolol succinate ER 300 mg po q hs, acetaminophen 1000 mg po TID, simvastatin 40 mg po q hs, sertraline 200 mg po q am, metformin 1000 mg po BID, multivitamin 1 po QD, tramadol 50 mg po q 6 hrs prn pain

HELPFUL RESOURCES

Exercise is Medicine ® (EIM), American College of Sports
Medicine: <https://exerciseismedicine.org/>

National Center for Complementary & Integrative Health:
<https://nccih.nih.gov/>

American Board of Physician Specialties, Integrative Medicine
Fellowships: <https://www.abpsus.org/integrative-medicine-fellowships>

REFERENCES

- American Institute of Homeopathy (2016). Homeopathy. <https://homeopathyusa.org/homeopathic-medicine.html>
- Bagatini, M. D., Cardoso, A. M., Reschke, Cr. R., & Carvalho, F. B. (2018). Immune system & chronic diseases 2018. *Journal of Immunological Research*. ncbi.nlm.nih.gov/pmc/articles/PMC6220381
- Bowers, S. J., Vargas, F., Gonzalez, A., He, S., Jiang, P., Dorrestein, P. C., Knight, R. et al. (2020). Repeated sleep disruption in mice leads to persistent shifts in the fecal microbiome & metabolome. *PLOS One*, 15 (2). E0229001.
- Burton, H., Jackson, C., & Abubakar, I. (2014). The impact of genomics on public health practice. *British Medical Bulletin*, 112 (1), 37-46. doi: 10.1093/bmb/ldu032
- CDC (2019). About chronic diseases. <https://www.cdc.gov/chronicdisease/about/index.htm>
- DeMatteo, Leslie, What Exactly Is Cranial Sacral Therapy?, 2016, <https://www.integrativehealthcare.org/mt/what-exactly-is-cranial-sacral-therapy/>
- Dossett, M, L., Davis, R. B., Kaptchuk, T. J., & Yeh, G. Y. (2016). Homeopathy use by US adults: Results of a national survey. *American Journal of Public Health*, 106, 743-745. doi: 10.2105/AJPH.2015.303025
- Falci, L., Shi, Z., & Greenlee, H. (2016). Multiple chronic conditions & use of complementary & alternative medicine among US adults: Results from the 2012 National Health Interview Survey. *Preventing Chronic Disease*, 13. https://www.cdc.gov/pcd/issues/2016/15_0501.htm#table1_down
DOI: <http://dx.doi.org/10.5888/pcd13.150501>
- Hoffman, J. B., Flythe, M. D., & Hennig, B. (2019). Environmental pollutant-mediated disruption of gut microbial metabolism of the prebiotic inulin. *Anerobe*, 55, 96-102. doi: 10.1016/j.anerobe.2018.11.008

REFERENCES CONTINUED

- Imhann, F., Bonder, M. J., Vila, A. V., Fu, J., Mujagic, Z., Vork, L., Tigchelaar E. F. et al. (2016). Proton pump inhibitors affect the gut microbiome. *Gut*, 65, 740-748. doi: 10.1136/gutnl-2015-310376
- Johanesen, P. A., Mackin, K. E., Hutton, M. L., Awad, M. M., Larcombe, S., Amy, J. M., & Lyras, D. (2015). Disruption of the gut microbiome: *Clostridium difficile* infection & the treat of antibiotic resistance, *Genes*, 6 (4), 1347-1360. doi:10.3390/genes6041347
- Kawakita, K. & Okada, K. (2014). Acupuncture therapy: Mechanism of action, efficacy, & safety: A potential intervention for psychogenic disorders? *BioPsychoSocial Medicine*, 8, 4. doi: 10.1186/1751-0759-8-4
- Khoury, M. J. & Mensah, G. A. (2005). Genomics & the prevention & control of common chronic diseases: Emerging priorities for public health action. *Preventing Chronic Disease*, 2 (2), A05.
- Khoury, M. K., Gupta, K., Franco, S. R., & Liu, B. (2020). Necroptosis in the pathophysiology of disease. *The American Journal of Pathology*, 190 (2). Doi:10.1016/j.ajpath.2019.10.012
- Krebs, K. (2007). Energy healing. [Sciencedirect.com/topics/medicine-and-dentistry/energy-healingdpf](https://www.sciencedirect.com/topics/medicine-and-dentistry/energy-healingdpf)
- McCance, K. L. & Huether, S. E. (2019). *Pathophysiology: The Biologic Basis of Disease & Adults & Children, 8th Edition*. Elsevier.
- National Center for Complementary & Integrative Health (2018). Homeopathy. <https://www.nccih.nih.gov/health/homeopathy>
- National Center for Complementary & Integrative Health (2020a). Dietary & herbal supplements. <https://www.nccih.nih.gov/health/dietary-and-herbal-supplements>

REFERENCES CONTINUED

- National Center for Complementary & Integrative Health (2020b). Massage therapy: What you need to know. <https://www.nccih.nih.gov/health/massage-therapy-what-you-need-to-know>
- National Center for Complementary & Integrative Health (2020c). Meditation in depth. <https://www.nccih.nih.gov/health/meditation-in-depth>
- National Center for Complementary & Integrative Health (2020d). Naturopathy. <https://www.nccih.nih.gov/health/naturopathy>
- National Center for Complementary & Integrative Health (2020e). Terms related to complementary & integrative health. <https://www.nccih.nih.gov/health/providers/terms-related-to-complementary-and-integrative-health>
- Rakel, D. & Weil, A. (2012). Philosophy of integrative medicine. In Rakel, D. (ed.), *Integrative Medicine, 3rd Edition*. Elsevier.
- Sayburn, A. (2019). Homeopathy in Europe: Is the tide starting to turn? *Medscape*, July 29.
- Zmora, N., Suez, J., & Elinav, E. (2018). You are what you eat: Diet, health, & the gut microbiota. *Nature Reviews Gastroenterology & Hepatology*, 16, 35-56. [nature.com/articles/s41575-018-0061-2](https://www.nature.com/articles/s41575-018-0061-2)

THANK YOU!

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