Using Body Intelligence to Treat Chronic Disease

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I have no financial relationships or commercial interests regarding this CME activity to disclose.
Why BodyWise and Why now?

- **80-90%** of the diseases in developed societies are caused by our **21st-century lifestyle**, including heart disease, high cholesterol, diabetes, asthma and allergy, and many cancers.

- Patients' culture and choices drive success or failure with these conditions.

- Integrative Medicine is particularly poised to address complex chronic disease and lifestyle interventions.
Respecting Body Intelligence

• An ability to listen to the body’s sensations and signals, interpret those signals, and use them to guide healthy decision-making.

• Great clinicians use this ability for diagnosis and treatment.

• Patients can use this to diagnose the cause of illness.
The Necessity of Body Intelligence

- Survival of the Species
- Useful even today in avoiding danger
- Essential to evaluating the effectiveness of a treatment
- Necessary to help understand the individual responses due to varying genetics, epigenetics, environment and culture
Our Sensory Perception
Our hearts and minds are wired to *perceive* and *protect* us, even giving us information *before* the danger occurs.

What has happened to our Body Intelligence?

- René Descartes and the mind-body split
- Medical/Professional training
- The necessities of modernity
- Rewards for ignoring the body in favor of productivity or serving others
Tools in your Tool belt
Beware the Algorithm.
4 Steps of Body Intelligence

1. Measure
2. Sense
3. Feel
4. Discern
Listening to Your Body’s Yes & No
Carmel, a 53 year old woman with abdominal pain

- Began having intermittent epigastric abdominal pain 18 months prior
- Normal Labs (CBC, LFT’s, amylase, lipase), Ultrasound shows gallstones, but otherwise normal gallbladder, common duct, pancreas and liver
- She doesn’t want to have surgery

Key questions:
+ What is the character of your pain?
+ What is happening just prior to the pain?
+ What do you think is causing your pain?
How do we help our patients access their own body intelligence?

• Describe your symptoms in detail, including context.

• How did this issue initially happen—what was going on in your life?

• What do you think is causing your symptoms?

• If you really listen to yourself, what do you think/know is the best way to heal?

• What keeps you from doing what you know to do?
33 year old nurse with severe rashes, allergic rhinitis and asthma

- Has severe, bleeding eczematous rashes on all four extremities
- I ask the question, what was happening in your life when this started?
  - 18 mo’s prior: Pregnancy, betrayal, miscarriage, move to California, reuniting with adulterous boyfriend and supporting him financially
  - 15 mo’s prior: development of severe allergic rhinitis/conjunctivitis (with corneal abrasion) and asthma (both for the first time ever), and eczematous skin rashes
    - Began oral antihistamines, fluticasone nasal spray, fluticasone/salmeterol asthma inhaler
• 12 months prior Megan developed pelvic pain and was diagnosed with pelvic inflammatory disease, from STD’s from her partner, as well as a kidney infection and took three rounds of antibiotics for all of these. She kicked her boyfriend out and moved to a different location.

• Serum IgE Allergy testing showed allergy to dust mites, dogs, cats, and beef—with all other allergenic foods negative

• She did dust mite prevention in her new apartment, with reduced allergic rhinitis and asthma symptoms once she moved there.

• Skin rashes intensified after taking the antibiotics for PID and pyelonephritis

• The eczematous rashes and intense pruritis, led to three episodes of cellulitis and fever, necessitating three more rounds of antibiotics, 2 courses of oral prednisone, and three shots of IM prednisone
Our first visit

- What is your body trying to tell you?
- Counseling and support in learning to make better boundaries
- Stop all topical ointments/creams other than coconut or olive oil
- We started some natural anti-inflammatory:
  - Omega 3’s
  - Anti-inflammatory diet
  - Avoiding beef, to which she is allergic
- Test for food allergy and sensitivity, and gut health.
Environmental factors
  • Food
    • Gluten, Casein etc.
  • Toxins
  • Stress
  • Dysbiotic Organisms

Increased Intestinal Permeability

Inflammatory Cytokines

Inflammation

Leakage of LPS and other inflammatory factors

Allergic, Autoimmune, and other systemic pathology
100 Trillion Friends you didn't know you had
“The mammalian gut microbiota interact extensively with the host through metabolic exchange and co-metabolism of substrates. Appropriate consideration of individual human gut microbial activities will be a necessary part of future personalized health-care paradigms.”

# Microbiome Analysis

## Gastrointestinal Microbiome

<table>
<thead>
<tr>
<th>Metabolic</th>
<th>Value</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td>Short-Chain Fatty Acids (SCFA) (Total*) (Acetate, n-Butyrate, Propionate)</td>
<td>41.0</td>
<td>&gt;=23.3 micromol/g</td>
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<tr>
<td>n-Butyrate Concentration</td>
<td>16.2</td>
<td>&gt;=3.6 micromol/g</td>
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<tr>
<td>n-Butyrate %</td>
<td>39.5</td>
<td>11.8-33.3 %</td>
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<tr>
<td>Acetate %</td>
<td>35.9</td>
<td>48.1-69.2 %</td>
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<tr>
<td>Propionate %</td>
<td>24.7</td>
<td>&lt;=29.3 %</td>
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<tr>
<td>Beta-glucuronidase</td>
<td>13,979</td>
<td>368-6,266 U/g</td>
</tr>
<tr>
<td>Bacteroides Phylum</td>
<td>Result CFU/g stool</td>
<td>Quintile Distribution</td>
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<tr>
<td>------------------------------------------------</td>
<td>-------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Bacteroides-Prevotella group</td>
<td>1.4E8</td>
<td></td>
</tr>
<tr>
<td>Bacteroides vulgatus</td>
<td>1.8E8</td>
<td></td>
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<tr>
<td>Banesiella spp.</td>
<td>2.4E8 H</td>
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<tr>
<td>Odoribacter spp.</td>
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<tr>
<td>Prevotella spp.</td>
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<tr>
<td>Firmicutes Phylum</td>
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<tr>
<td>Anaerotrichus colihominis</td>
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<tr>
<td>Butyrvibrio crosstotus</td>
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<tr>
<td>Clostridium spp.</td>
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<td>Coprococcus eutactus</td>
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<td>Faecalibacterium prausnitzii</td>
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<td>Lactobacillus spp.</td>
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<td>Pseudoflavonifactor spp.</td>
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<td>Roseburia spp.</td>
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<td>Ruminococcus spp.</td>
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<td>Veillonella spp.</td>
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<tr>
<td>Phylum</td>
<td>Genus</td>
<td>Count</td>
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<td>Actinobacteria Phylum</td>
<td>Bifidobacterium</td>
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<td></td>
<td>Collinsella</td>
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<td>Desulfovibrio</td>
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<td></td>
<td>Piger</td>
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<td>Escherichia</td>
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<td></td>
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<td>Euryarchaeota Phylum</td>
<td>Methanobrevibacter</td>
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<td>Fusobacteria Phylum</td>
<td>Fusobacterium</td>
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<td>Verrucomicrobia Phylum</td>
<td>Akkermansia</td>
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<tr>
<td></td>
<td>muciniphila</td>
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<tr>
<td>Firmicutes/Bacteroidetes Ratio</td>
<td>Firmicutes</td>
<td>8</td>
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<tr>
<td></td>
<td>Bacteroidetes</td>
<td>L</td>
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<tr>
<td></td>
<td>(F/B Ratio)</td>
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</tbody>
</table>
Bacteriology (Culture)

* Lactobacillus spp.
  - 4+ NP

* Escherichia coli
  - 4+ NP

* Bifidobacterium
  - 2+ NP

Additional Bacteria

* alpha haemolytic Streptococcus
  - 2+ NP

Mycology (Culture)

  - NG
Gut testing:
- Low level of lactobacillus and bifidobacter organisms
- Bacterial Overgrowth

Food allergy testing (IgE) positive for beef and dairy; Food sensitivity (IgG) high reactions to egg and citrus

PLAN:
- Herbs to reduce bacterial overgrowth, followed by high dose probiotics, prebiotic foods and fermented foods
- Reduce gut inflammation
  - Remove beef, dairy, eggs and citrus for 2 months
  - Glutamine at 3 grams twice daily, with DGL and Aloe

Second Visit
Third Visit

• Almost complete resolution of allergy and asthma symptoms (occasionally takes cetirizine for allergic rhinitis during her allergy season)

• Complete resolution of rashes with the exception of a small patch of eczema on one arm

• Better boundary setting in all relationships, with successful dating and career

• No ongoing medications required
Five Fundamentals of Health

Eat
Sleep
Move
Love
Find Purpose
High alertness at 10:00

Highest testosterone secretion at 09:00

Bowel movement likely at 08:30

Melatonin secretion stops at 07:30

Sharpest rise in blood pressure at 06:45

Light-Dark cycle

Lowest body temperature at 04:30

Deepest sleep at 02:00

00:00 Midnight

22:30 Bowel movements suppressed

21:00 Melatonin secretion starts

18:00

19:00 Highest body temperature

18:30 Highest blood pressure

17:00 Greatest cardiovascular efficiency and muscle strength

15:30 Fastest reaction time

14:30 Best coordination

Noon 12:00

06:00
What we know.....

- Eat a lot of fruits and vegetables
- Eat protein from vegetable sources (nuts and legumes)
- Eat the whole grains your body likes
- Eat high quality, preferably organic and toxin-free, animal products in limited quantities, including eggs, dairy, fowl, and fish, and limiting red meat
- Avoid sugar, hydrogenated oils and fried foods
- Avoid simple carbohydrates (white rice, white flour, white potatoes)
- Avoid heavily processed foods and fast foods
Why BodyWise eating matters

- Each of us is genetically and epigenetically unique

- This study monitored glucose levels throughout the day in an 800-person cohort, measured responses to 46,898 meals, and found high variability in the response to identical meals, suggesting that universal dietary recommendations may have limited utility.

Sleep

• According the National Sleep Foundation, adults need **7-9 hours of sleep** to be rested, and teens need **8-10 hours**.

• The average U.S. resident gets **6.5 hours**.

• **1 in 3** adults has some insomnia (Sleep Health Foundation) and **10% of adults have severe insomnia**.
Sleep Deprivation Causes

« Drowsiness
« Depression, irritability, loss of sense of humor
« Stress, anxiety and loss of coping skills
« Lack of interest in socializing with others
« Weight gain
« Feelings of being chilled
« Reduced immunity
« Fatigue and loss of motivation

Move

- BodyWise Exercise
- Injury is the biggest barrier to a new exercise program
- Exercising outside or with others\(^1\)
- Incorporating movement into daily life
- Doing something that you enjoy

Aerobic Exercise

- Reduces depression and anxiety
- Improves sexual ability and libido
- Reduces insomnia
- Reduces pain response for most illnesses and injuries (including arthritis!)
- Improves respiratory conditions (including asthma)
- Assists in weight loss by burning calories and boosting metabolic rate
“I am not aware of any other factor—not diet, not smoking, not exercise, not stress, not genetics, not drugs, not surgery—that has a greater impact on our quality of life, incidence of illness, and premature death from all causes.”

Loneliness and isolation increase the likelihood of disease and premature death from all causes by 200 to 500 percent, independent of our behavior.

—Dr. Dean Ornish

Love and Survival
Lack of Social Connection Increases Health Risks

- Cardiovascular disease
- Recurrent heart attack
- Atherosclerosis
- Autonomic dysregulation
- High blood pressure
- Cancer and delayed cancer recovery
- Slow wound healing
- Increased inflammatory biomarkers
- Impaired immune function
- Depression

Purpose

• It matters that I’m here.

• A sense of purpose is associated with a 23% reduction in all cause mortality.

• Volunteering decreases mortality risk by 44% in those 55 and older, and lowers rates of obesity and high cholesterol in adolescents.

• Elders with a sense of direction and purpose are 2.5x less likely to develop Alzheimer’s disease.

Meta-analysis at Mt. Sinai School of Medicine, presented at the 2015 American Heart Association Scientific Sessions, and see resources at the end.
Fundamentals for treating chronic disease with Body Intelligence

- Connect with your patient. Ask for details about their symptoms, the onset of illness or the exacerbation of underlying illness, and what the patient feels the cause is.

- Trust your patients’ instincts about what does and doesn’t work for them

- Assist your patient in removing any barriers to health that can be removed

- Help your patient create strong fundamentals of health:
  - Eat, Sleep, Move, Love and Community and Purpose

- Use your own Body Intelligence. Use Your tools.
THANK YOU!

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Resources

- CDC, Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion, September 21, 2015.