Mentoring the Mentor

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Mentor goals:

- To declare what is possible and establish a commitment to that possibility
- Address personal and professional barriers limiting the ability to serve
- Evolution of vision/mission/ethics that drive success
- Create immediate action steps to apply learning and growth
- Construct the round table of applied trophologists
Mentoring the mentor:

- Who are the mentors? – Practitioners
- Who are we mentoring? – Patients and GAP
- What’s the purpose? – Optimized life
- How does it work? – Whatever you learn you teach someone else (anyone else)
- Who’s is included? – Self selection, you pick yourself

Mentoring the mentor:

- Each participant attends monthly teleconferences (1 hour in duration, 4th Thursday of every 2nd month) creating a round table discussion/exploration of the dynamics and details of a nutrition-based holistic practice
- Each participant chooses how to convey the notes and information to their world and community – no information squandering
Review - Distinguish yourself

• It is more apparent why people are choosing alternative health care professionals who specialize in a functional approach
• No matter you specialty or technique you must distinguish yourself as an expert – people are just seeking to understand and they need you to do so
• Typically in the healthcare industry people are receiving shallow answers that leave them puzzled with the mystery of “Why is this happening to me?” and “What can I do about it?”
• Trends research over 10 years ago identified a number of factors essential to being successful in the nutritional field – one of those was establishing yourself as an expert

Review - Explanation as hope

• The practitioner’s ability to explain health issues and therapeutic outcomes creates an inflation of understanding in the patient which feels like hope
• Today in the professional world there is so much avoidance of ‘giving false hope’ that often we end up offering little hope at all
• I propose another model that bolsters hope and expectation and subsequently practices accountability as to whether the therapeutic endeavors are achieved or not
• As long as the hope that has been instilled is revisited and acknowledged as being accomplished or not the betrayal of false hope can be avoided
• So as an example, if a practitioner was describing the potential for nutritional intervention through supplements and diet modification to improve the lipid profile, then s/he would need to revisit to success or failure of the experiment within a reasonable period of time
• Our community is starving for legitimate hope, as a starting place, as empowerment to begin, as an idea to act upon
• There is genius in hope
Mentor Considerations

Micro Circulation concepts as a primary health issue
Infection as the primary microvascular burden

Enabling Strategies – Kerry Bone

1 – Micro Circulation
2 – Mitochondrial Function
3 – Dysbiosis
4 – Detox
5 – Stealth pathogens & Persistent Virus
   (6 – Nrf2 activation)
Seven Pillars
Unified Mechanisms
of Health

Promoting Physiology

7 Pillars of Healing
7 Unified Mechanisms of Health

- Endocrine/Hormonal
- Glycemic Management
- pH Bioterrain
- Immuno-Inflammatory
- Circulatory Status
- Digestive Potency
- Cellular Vitality
Methylation

Control of Genetic expression
MTHFR Gene -

• The MTHFR gene encodes the production of a protein that helps to convert folic acid into its biological active form methyltetrahydrofolate.
• In sequencing the gene researchers discovered that some individuals had a cytosine (C) at base pair position 677 (most commonly) and others had Thymidine (T) at that position.
• This is referred to as MTHFR C677T and causes an alanine to valine change in the protein sequence at position 222 of the protein – this small change results in less efficient synthesis of active folate compounds.
• Most Americans are homozygous for the normal variant of 677CC, but up to 10% of the population may be homozygous for the other variant 677TT, which means noticeably less efficient methylation accounting for higher risks for certain diseases.
• These individuals need more dietary folate/folic acid consumption.

The MTHFR polymorphism as example

Figure 7.4 MTHFR SNP.
Function of methylenetetrahydrofolate reductase (MTHFR). MTHFR is required for reduction of 5,10-methylenetetrahydrofolate (5,10-CH2-THF) to 5-methyltetrahydrofolate (5-CH3-THF) which serves as a methyl donor for the remethylation of homocysteine to methionine through methylation of cobalamin (vitamin B12) to methylcobalamin (CH3-B12). The most common SNP in this pathway is in the MTHFR, which results in a decreased activity of the MTHFR enzyme, thus influencing the balance of the homocysteine cycle.
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The MTHFR polymorphism as example

Variable pathways -

Yasko Methylation Pathway
Dr. Stuart White  Mentoring the Mentors  Nov. 20, 2014

Nutrient Influence -

Downstream Effects -

When the Methylation Cycle does its job, it supports a wide range of bodily functions. But when SNPs are present at key places in the cycle, they can cause too much or too little of certain biochemicals to be produced, undermining the task of methylation. This diagram highlights just a few of the SNPs to show how they affect health and balance. Please find more detailed information on the cycle and its SNPs both in our information products and in the Methylation Pathway Analysis that accompanies each genotypic test.

Proper functioning of the Methylation Cycle helps reduce the risk of:

- Infections
- Cell damage
- Infertility
- Inflamed gut
- Lack of new brain cells
- Stress

- Neural tube defects
- Difficulties conceiving
- Lack of B12
- Lack of energy
- Cancer
- Parasitic anemia
- Difficulties with anesthesia
- Decreased energy
- Decreased muscle tone

- Heart disease
- Neural tube defects
- Difficulties conceiving
- Cancer

- Heart disease
- Glaucoma
- Alzheimer’s
- Diabetes
- High levels of ammonia
- Brain fog
- Down’s syndrome
- Higher levels of sulfites
- Sensitivity to sulfites
- Nausea
- Migraines
Predicting SNP Effects -

Genomics & Cardiovascular Risk: MTHFR
5,10-methylenetetrahydrofolate reductase (MTHFR) is a key enzyme in folate metabolism, facilitating the formation of methylenetetrahydrofolate, a required cofactor in the remethylation of homocysteine (Hcy) to methionine. Variants of the MTHFR polymorphisms, 677CT and 1298AT, result in reduced MTHFR enzyme activity, impaired methylation, and increased risk of various disorders, including cardiovascular. Of the two SNPs, 677CT is more clinically significant.

Predicting SNP Effects -

**SLIDE 7**
*L-methylfolate Mechanism of Action*

Blood | CNS
--- | ---

L-methylfolate → Tryptophan Hydroxylase → Serotonin

L-methylfolate + BH₄ → Tyrosine Hydroxylase → Dopamine → Norepinephrine
Predicting SNP Effects -

Methylation Community

Waste Facility

MTHFR

Urea Cycle

Citril Acid Cycle

Power & Electric

SAM's Corporation

Methionine Cycle

Wheels within wheels -

THF

methionine

MTHFR

homocysteine

5 Methyl THF
SNP means outcome -

<table>
<thead>
<tr>
<th>MTHFR C677T (A222V, rs1801133)</th>
<th>MTHFR A1298C (E429A, rs1801131)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cardiovascular</td>
<td>• Neurological</td>
</tr>
<tr>
<td>• Homocysteine</td>
<td>• Neurotransmitters</td>
</tr>
<tr>
<td>• DNA Regulation</td>
<td>• Nitric Oxide</td>
</tr>
<tr>
<td>• Glutathione Production</td>
<td>• Controversial</td>
</tr>
<tr>
<td>• Low Methylfolate levels</td>
<td>• Low BH4 levels</td>
</tr>
<tr>
<td>• 1 copy = 40% loss of function</td>
<td>• Normal Methylfolate levels?</td>
</tr>
<tr>
<td>• 2 copies = 70% loss of function</td>
<td>• % Loss of Function?</td>
</tr>
</tbody>
</table>

Cytosine switched to Thymine
Wildtype = 677CC

Adenine switched to Cytosine
Wildtype = 1298AA

Beginning to understand -

Imagination is everything.
It is the preview of life’s coming attractions.

Albert Einstein
Phase I & II detoxification occur principally in the liver, while Phase I, II, & III occur in every cell – the liver determines the foundational capacity to cleanse.

The secret formula for encouraging a healthy 2 to 16 ratio

Brussel Sprouts

Cruciferous Complete
Detox – Phase I & II

**Needs**
- Homocysteine support, B2, B3, B6, Glutathione, AA, Flavonoids, Phospholipids

**Homocysteine support**
- Glycine, Taurine, Glutamine, NAC, Cysteine, Methionine

**Learning wisdom -**

It is highly dishonorable for a reasonable soul to live in so divinely built a mansion as the body she resides in – altogether unacquainted with the exquisite structure of it.

Robert Boyle (1627-1691)
MTHFR Influence -

• Because the MTHFR genetic defect is so common, supplementing around/bypassing the defect with L-5-MTHF has almost miraculous panacea like qualities in resolving a whole host of diseases and ailments.
• Methylation is the key to human life and optimal well being. It does the following:
  Turn on and off genes (Epigenetics – gene regulation)
  Process chemicals and toxins (biotransformation)
  Build neurotransmitters (dopamine, serotonin, epinephrine)
  Process hormones (estrogen)
  Build immune cells (T cells, NK cells)
  DNA and RNA synthesis (Thymine aka 5-methyluracil)
  Produce energy (CoQ10, carnitine, ATP)
  Produce protective coating on nerves (myelination)
• Under methylation is now known to be of the primary root causes of the following conditions:
  Autism, Cancer, Fibromyalgia, Chronic Fatigue Syndrome, Diabetes, Pulmonary Embolisms, Cleft Palette, Spina Bifida, Parkinson's, Neural Tube Defects
  Atherosclerosis, Immune Deficiency, ADD/ADHD, Multiple Sclerosis, Alzheimer's, Dementia, Chemical Sensitivity, Congenital Heart Defects, Depression, Alcoholism, Addictive Behaviors, Insomnia, Down's Syndrome, Chronic Viral Infection, Thyroid Dysfunction, Neuropathy, Recurrent Miscarriages, Infertility, Anxiety, Schizophrenia, Bipolar, Allergies

Over or Under Methylation

• We must become familiar with the signs of over and under methylation
• Undermethylation - Elevated histamine and/or elevated basophils indicate undermethylation
  • Review of symptoms and medical history can bolster the diagnosis
  • Most undermethylated persons exhibit seasonal allergies, perfectionism, strong wills, slenderness, OCD tendencies, high libido, depression
• Overmethylation –
  • Overmethylated persons generally exhibit anxiety, absence of seasonal allergies, presence of food/chemical sensitivities, dry eyes, low perspiration, artistic/music interests/abilities, intolerance to Prozac and other SSRI's
More than MTHFR -

• Now there is a lot more to the methylation cycle than just the MTHFR gene that has a real verifiable impact on health.
  • COMT and MAO A: processes neurotransmitter catabolism and estrogens
  • CBS: processes homocysteine and if upregulated, depletes methyl groups, increases taurine
  • MTR/MTRR: recycles B12 and processes B12 for methionine production GSTM1 and SOD: major detoxification enzymes
  • GAD: transforms glutamate to GABA
  • HNMT: processes histamine (secondary enzyme for histamine; primary is DAO)
  • QDPR: recycles BH4
  • NOS: processes ammonia, forms nitric oxide from arginine
  • SUOX: process sulfites/sulfur and this mutation is made worse from CBS upregulation
Pauline Gee, PhD
Chief Scientific Officer/Co-Founding Investor, BodySync, Inc., is a genetic Health and Wellness company that provides a personal approach to wellness to empower healthcare professionals to tailor their care specifically for each individual patient. Pauline oversees BodySync’s CLIA-certified laboratory including related information technology activities and is responsible for the Company’s quality assurance and regulatory affairs. She comes to BodySync with over fifteen years of commercial experience in genomics and its healthcare applications. Pauline earned a doctorate in the Faculty of Interdisciplinary Studies specializing in neurochemistry and a Bachelor of Science degree in Kinesiology and Biology from Simon Fraser University, in British Columbia, Canada. As a Medical Research Council Fellow, she studied oxidized DNA bases and patented DNA base-specific Ames strains at the University of California Berkeley. Her postdoctoral work at Stanford University focused on DNA repair in differentiated neurons.
What is NutriSync™?

- Measures 45 genetic variations in each patient.
- Variations were chosen because nutrition choices can be made to address them.
- Analyzes each patient’s nutrition and lifestyle status from self-reporting survey.

NutriSync™ Provides –

- To Healthcare Professional Summary
  - Standard Process recommendations for to meet the difference in Daily Goals
  - Standard Process recommendations for lifelong fundamental health
  - Genetic results
- Patient’s NutriSync™ Action Plan
  - >20 page full report
NutriSync™ establishes new behaviors that work:

- Genetically guided group were about 5 times more likely to maintain their BMI
- Twice as many people in the genetically guided group lowered fasting glucose levels after 90 days
- Evidence that compliance is maintained longer in light of one’s own genetics

Me versus Everyone Else
Vitamin B genes in NutriSync

Nutritional Intervention Works

- 75% of people with “TT” surveyed reported dietary folate levels <<DRI
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Genomic Tools

Nutrisync Practitioner report

| Name | Dr. Stuart White | Date: Nov. 20, 2014 |

| Name | Dr. Stuart White | Date: Nov. 20, 2014 |
Principles at work

- Sufficient clinical observation allows mechanisms to be revealed that will remove the idiopathic mystery of hypertension and return it to a simple physiological modulation and resultant augmentation in function, balance, tissue fortification and promotes healthy genetic expression
- This allows the symptom resolution to occur as a result of system ‘mosaic’ change, and then of course the downstream events occur
- The longing in the public is for this sort of detective work to find the cause and make the correction – increasingly food is seen as medicine and people are asking more and more for what foods will change their health patterns

Sequential Intervention

- By giving hope through discussion of therapeutic rationale and then accountably determine if the therapy had efficacy it is possible to initiate activity that may assist a person to make the changes that result in healing
- Sequential intervention and accountable follow-up can show what has worked and what may still need to be employed
- Promote an understanding of intervention that creates evolutions in individual physiology and show the effect of that intervention
- See the concept of micro circulation dynamics as a unified mechanism of disease and a source to health
- Allow every condition to become a strategic consideration of possible etiology and therapeutic rationale – people are in search of experts – reveal yourself
- The comprehensive nature of nutritional therapy means there is always more physiology to optimize and support leaving an individual constantly refining as long as they wish to further improve their status
- If the practitioner is accountable s/he will be allowed to experiment with reasonable ideas
Change the world

It wants to