



Mentoring the Mentor

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Eternal Truth

He who does not use his endeavors to heal himself is brother to him who commits suicide.

Proverbs 18:96

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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 Wednesday 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

According to your DNA, from all recorded learning and adaptation, the number one cause of death is infection.

All effort shall be to survive that.

Hypothesis -

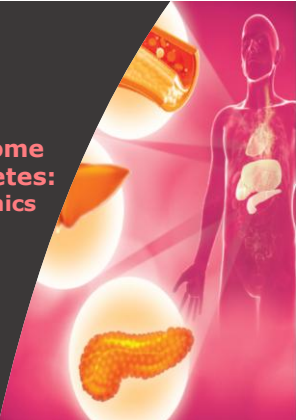
The only reason why anything that ever was working, stops working is because of infection

The greatest use of your time

Think New Thoughts


Metabolic Syndrome and Type 2 Diabetes: Solving the Epidemics of the Modern Age

Kerry Bone
Adjunct Professor
New York Chiropractic College



Our Topics: MetS

- Defining metabolic syndrome (MetS) and its comorbidities
- What causes insulin resistance (IR)?
- Cellular and systemic targets in MetS
- Managing MetS with diet, lifestyle and herbs



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Our Topics: T2D

- The rising incidence of type 2 diabetes (T2D)
- Behind the complications of T2D
- The incretin effect and how we can use it
- Cellular and systemic targets in T2D
- Managing T2D and its complications
- Key herbs for better glycemic control

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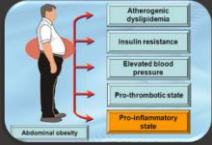
Defining Metabolic Syndrome



Defining MetS

Various definitions exist, but the commonality is:

1. **Obesity**, especially abdominal obesity as an indicator of visceral organ fat
2. Impaired glucose metabolism (**IR**)
3. **Hypertension**
4. Atherogenic **dyslipidemia**



Samson SL, Garber AJ. *Endocrinol Metab Clin North Am* 2014 Mar; **43**(1): 1-23. doi: 10.1016/j.ecl.2013.09.009. PMID: 24582089

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Defining MetS

In 2009 five key groups arrived at a **harmonized definition**, which was 3 or more of:

1. Abdominal obesity (≥ 102 cm male (M); 88 cm female (F) for USA/Canada, but varying with ethnicity)
2. Dyslipidemia: HDL-C (< 40 mg/dL M; < 50 mg/dL F); triglycerides (≥ 150 mg/dL) or treated
3. Hyperglycemia: fasting plasma glucose ≥ 100 mg/dL or treated
4. Hypertension: systolic blood pressure (BP) ≥ 130 mm Hg; diastolic BP ≥ 85 mm Hg or treated

Samson SL, Garber AJ. *Endocrinol Metab Clin North Am* 2014 Mar; **43**(1): 1-23. doi: 10.1016/j.ecl.2013.09.009. PMID: 24582089

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Diseases Linked to MetS

- Twice the risk of large artery/cardiovascular disease (CVD)¹
- Five times the risk of type 2 diabetes (T2D)¹
- Non-alcoholic fatty liver disease (NAFLD)²
- Gout³




1. Samson SL, Garber AJ. *Endocrinol Metab Clin North Am* 2014; **43**(1): 1-23. PMID: 24582089
 2. Tarantino G, Finelli C. *World J Gastroenterol* 2012; **18**(22): 2372-2384. PMID: 22801829
 3. Thottam GE, Krasnokubsky S, Pillinger MH. *Curr Rheumatol Rep* 2017 Aug 26; **19**(10): 60. PMID: 28844079

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Diseases Linked to MetS

- Polycystic ovary syndrome (PCOS)¹
- Microalbuminuria and chronic kidney disease²
- Cancer³
- Dementia⁴
- Aging male disorders⁵



1. Sirmans SM, Pate KA. *Clin Epidemiol* 2013; **6**: 1-13. PMID: 24379699
 2. Masada R, Wilhelmy-Grimel A. *Met Care* 2003; **37**(1): 21-33. PMID: 23416840
 3. Hursting SD. *Cancer Treat Res* 2014; **159**: 21-33. PMID: 24114472
 4. Miskin B, Leitzke J, Koppa A. *Brain Res Bull* 2013; **99**(3-4): 144-149. PMID: 22921044
 5. Sebastianelli A, Gacci M. *Eur Urol Focus*. 2018 Mar 27; pii:S2405-4569(18)30085-3. doi: 10.1016/j.euf.2018.03.001 [Epub ahead of print]. PMID: 29602736

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What Causes Insulin Resistance?



What Causes MetS/IR?

Some key theories/contributing factors:

- Intermittent hypoxia (obstructive sleep apnea)¹
- The portal theory (visceral fat acting as an endocrine gland)²
- Microcirculatory dysfunction
- Unregulated nutrient flux, especially fructose
- Toxins: dietary, environmental and internal
- Dysbiosis or lack of "old friends"

1. Dräger LF, Topelina SM, Polotsky VY, Gonzalez-Fillio G. *J Am Coll Cardiol* 2013; **62**(7): 569-76
 2. Helm F, Konrad D. *Obes Rev* 2012; **13** Suppl 2: 30-39

Adipokines

- These are adipose tissue hormones
- Leptin and adiponectin promote insulin sensitivity
- Tumour necrosis factor α (TNF- α), resistin, interleukin-6 (IL-6) are examples of adipokines that promote insulin resistance
- In central obesity, leptin levels rise and adiponectin levels fall but leptin resistance develops

Beale EG. Insulin signalling and insulin resistance. *J Invest Med* 2013 Jan; **61**(1): 11-14. PMID: 23111650

Chicken or Egg?

- Type 2 diabetes (T2D) causes microvascular disease
- But a growing school of thought: microvascular dysfunction is the fundamental CAUSE of insulin resistance¹
- "Prediabetes, T2DM, and measures of hyperglycemia are independently associated with impaired microvascular function in the retina and skin. These findings support the concept that microvascular dysfunction precedes and thus may contribute to ... cardiovascular disease and other complications, which may in part have a microvascular origin such as impaired cognition and heart failure."²



1. ...
 2. ...

Unregulated Nutrient Flux

- Our liver is the primary metabolic clearing house for four specific nutrients that are:
 - not insulin-regulated
 - lack an appropriate turn off mechanism for excessive substrate
- Results in enhanced lipogenesis and ectopic adipose storage

Bremer AA, Mietus-Snyder M, Lustig RH. *Pediatrics* 2012; **129**(3):557-570. PMID: 22351884

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Unregulated Nutrient Flux

- The four nutrients are:
 - trans-unsaturated fatty acids (trans-fats)
 - branched-chain amino acids (BCAAs: valine, leucine and isoleucine)
 - ethanol
 - fructose



Bremer AA, Mietus-Snyder M, Lustig RH. *Pediatrics* 2012; **129**(3):557-570. PMID: 22351884

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Disease as a mosaic pattern

- Most imbalances and diseases are not a single event distortion
- There are multiple factors coming to create an outcome, which also helps describe the resistance to getting sick and to getting well
- Idiopathic Hypertension is a good example of this mosaic pattern
- Proper clinical management can reveal the underlying events contributing to this physiological modulation, and reinforces why the practitioner is essential in the investigative process of finding these
- The following is a suggested sequential consideration of factors contributing to hypertension

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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

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Learning wisdom -

Anything can cause anything!

Anything can effect anything!

Everything relates to everything!

Introducing Metabol Complex



Metabol Complex

Fenugreek seed 100:1 extract 100 mg
from *Trigonella foenum-graecum* seed 10 g
Containing 4-Hydroxyisoleucine 20 mg

Nigella seed 5:1 extract 100 mg
from *Nigella sativa* seed 500 mg

Bitter Melon fruit 6:5:1 extract 92.3 mg
from *Momordica charantia* fruit 600 mg

Cinnamon stem bark 12:1 extract 83.3 mg
from *Cinnamomum verum* stem bark 1 g

Suggested Use: 1 tablet 3 times daily

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Metabol Complex

- Traditionally used in Ayurvedic herbal preparations to support the metabolism of fats and sugars
- Traditionally used in Ayurvedic herbal preparations to help support pancreatic and liver function
- Traditionally used in herbal preparations to help relieve occasional indigestion symptoms of the gastrointestinal tract, including bloating and flatulence
- Supports antioxidant activity against free radicals that are formed in the body during normal metabolism and exposure to environmental factors

These statements have not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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Metabol Complex

- Contains Fenugreek seed extract standardised to 4-hydroxyisoleucine which is a unique amino acid compound only found in some plants. Research suggests 4-hydroxyisoleucine has beneficial properties on glucose and lipid metabolism
- Promotes general well-being and vitality

These statements have not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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Safety Issues for Metabol Cx

- Contraindicated in pregnancy, those with allergy to Fenugreek, Cinnamon, Peruvian balsam or peanuts due to cross reactivity (immunological similarities)
- Best avoided in couples wanting to conceive (Bitter Melon – animal models had infertility effects)
- Monitor patients with low thyroid function (Fenugreek – however this product has low levels of saponins)

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Metabol Complex: Launch Details

- Launch Date: 24 Sept
- SLP: \$71.00
- Bottle Size: 90 tablets (1 month supply)
- Suggested use: 1 tablet 3 times daily

Education:

- Sept: Kerry Bone & Lee Carroll seminars
- Sept 11: Webinar Kerry Bone (MetS & T2D)
- Oct 8: Webinar Lee Carroll (Co-Morbidities)

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Research + Experience

You Will



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