

Entry Level Clinical Nutrition Update – Part 1
With Dr. Jeff Moss

The Entry Level Clinical Nutrition Algorithm:
Up Close

September 2013 Update

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With Entry Level Clinical Nutrition financial concerns are just as important as research and clinical concerns!!

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First, Do No (Financial) Harm

These observations are well established in the medical profession but have largely been overlooked in an era of unsustainable health care spending. Most efforts to reduce costs have focused on the patient and provider side of the equation. The goal of this commentary is to encourage other stakeholders to consider the financial impact of their actions on the health care system. While the financial impact of health care is a complex issue, it is one that we must address if we are to achieve the goal of sustainable health care. This commentary is intended to be a starting point for discussion and not a final word on the subject. The authors are grateful to the many individuals and organizations that have supported this effort.

Morlatte C et al. First, do no (financial) harm, *JAMA*, Vol. 310, No. 6, pp. 577-578, August 14, 2013.

"First, do no harm" is a well-established mantra of the medical profession, but it may need to be reconceptualized in an era of unsustainable health care spending."

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- “Medical bills are now a leading cause of financial harm and physicians decide what goes on the bill. The possible consequential harm is substantial, often leading to lost homes and depleted savings.”
- “Some physicians may be resigned to a reality that financial adverse effects are a known and unavoidable harm of medical care.”
- “First, physicians can help patients avoid financial harm by screening each patient to determine financial risk and preferences.”

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- “Many studies demonstrate that physicians are unaware of the cost of routinely ordered tests, let alone the potential financial risks for patients seeking care.”
- “To explain potential options and their fiscal implications to patients, physicians will need to take responsibility for knowing the financial ramifications of the care they are providing.”

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- “Physicians also should learn how to optimize personalized health care decisions for patients’ financial health.”
- “Too often physicians choose less than ideal options for their particular patients not due to a lack of caring, but rather than a lack of knowing.”
- “To provide truly patient-centered care, physicians can live up to the mantra of ‘First do no harm’ by not only caring for their patients’ health, but also for their financial well-being.”

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Will Physicians Lead on Controlling Health Care Costs?

Emanuel EJ & Steinmetz A. Will physicians lead on controlling health care costs? JAMA, Vol. 310, No. 4, pp. 374-375, July 24/31, 2013.

"The next decade requires 'all hands on deck' to create meaningful, lasting change in health care. The study by Tilbert et al indicates that the medical profession is not there yet – that many physicians would prefer to sit on the sidelines while other actors in the health care system do the real work of reform."

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Overdiagnosis and Overtreatment in Cancer: An Opportunity for Improvement

Esserman LJ et al. Overdiagnosis and overtreatment in cancer: An opportunity for improvement, JAMA, Vol. 310, No. 8, pp. 797-798, August 28, 2013

"Screening for breast cancer and prostate cancer appears to detect more cancers and prostate cancers that are potentially clinically insignificant."

"An ideal screening intervention focuses on detection of disease that will ultimately cause harm..."

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Can you really find a job in retirement?

Age bias, health issues can be major obstacles

Rodney Brooks
USA TODAY

USA Today, August 27, 2013

"The other huge issue for retirees wanting and hoping to continue working is health. A recent study of Boomers by MetLife Market Institute found that health issues were the reason 17% of older Boomers retired..."

"Many fall into the category of discouraged workers. Some just give up. For those who do find re-employment, it's often for far less money than they were making."

The other huge issue for retirees wanting and hoping to continue working is health. A recent study of

STORY CONTINUES ON >>>

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Quality of life issues are the major concerns more than ever now.

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Summer of Work Exposes Medical Students to System's Ills, *The New York Times*

September 9, 2009

By **NYT** — This summer, medical students from the University of Washington took a long look under the hood of the health care system they are about to inherit, and many returned to campus last week with their eyes wide open and their thoughts reeling.

Summer of work exposes medical students to system's ills, *The New York Times*, September 9, 2009

The students learned not only to deliver better and safer care, but also to order necessary tests as patients against lawsuits, to better speculate on when **Medicaid** patients, to watch patients with **prolonged** or **Ward** that's **in**, and they are **forced** when **Dr. Chiquita** called "a tidal wave of chronic illness" — diabetes, hypertension, obesity, depression — that left many questioning how much any one physician could really accomplish.

"I often wondered what we were actually doing to help people," Dr. Chiquita said.

"...a tidal wave of chronic illness..."

For 21 years, the University of Washington School of Medicine has dispatched its rising second-year students across the Pacific to provide primary care in rural or underserved areas. The monthlong program is elective, but a record number of students took part this year — 107 from a class of 120.

The school has a cooperative agreement to receive medical students from Alaska, Idaho, Montana and Wyoming, one of which has a medical college of its own. The summer program is one of several efforts, along with long-term placements, designed to lure students back to their home states to practice in areas with a shortage of primary care doctors.

This year, the students set out as negotiations were intensifying in Washington over schedule changes to the health care system they will work in coming. Whether there will be improvements to the system relative to the way how the students managed finding them was little to do.

http://www.nytimes.com/2009/09/09/health/policy/09medschool.html?_r=1&id=Health&name=09L... 9/9/2009

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Nestlé Nutrition Workshop Series
Clinical & Performance Program, Vol. 8

Nutrition and Critical Care

Luc Cynober
Frederick A. Moore

KARGER

Nestlé NUTRITION

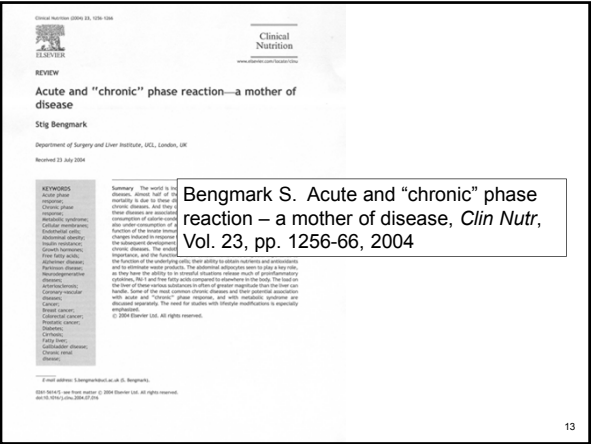
Baracos VE. Overview on metabolic adaptation to stress, pp. 1-13.

"An understanding of the nature of stress is fundamental to the rational design of nutrient mixtures to feed patients whose homeostasis has been altered by one or more stressors."

"All stresses may be presumed to be associated with characteristic modifications in the metabolism of lipids, carbohydrates, amino acids, and micronutrients."

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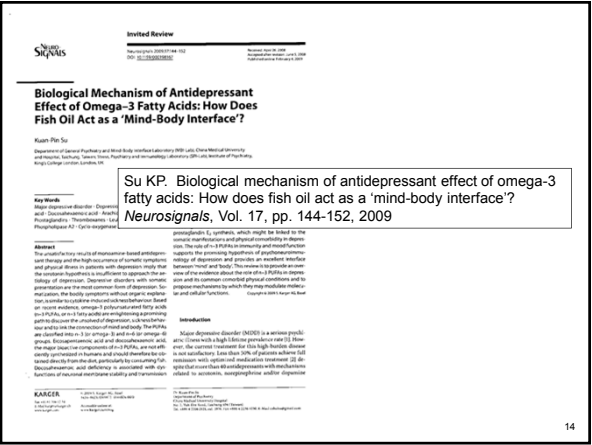


Table 1. Overlapping of symptoms of acute sickness behaviour associated with IFN- α therapy and the somatic symptoms in MDD

Symptoms	Prevalence in IFN- α therapy ^a , %	Prevalence in MDD ^b , %
Fatigue/asthenia	39–90	73
Headache	27–67	33 ^c
Gastrointestinal symptoms	50 ^{c, 1}	34–47 ^f
Psychomotor slowing	40 ^c	59–65 ^f
Insomnia	20–39 ^d	63
Irritability	35 ^d	50
Arthralgia	9–36	31 ^e
Musculoskeletal pain	26–32	62–80 ^{b, 2}
Abdominal pain	15–20	21 ^e
Anorexia	13–19	40
Anxiety	13–18 ^d	57
Poor concentration	14 ^d	51

^a [46], unless otherwise specified; ^b [99], unless otherwise specified; ^c [100]; ^d [101]; ^e [102]; ^f [103]; ^g [104].
¹ Nausea, vomiting, bowel problems.
² Result from depressed inpatient population.

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Underlying hypotheses of
Entry Level Clinical Nutrition:

- Chief complaints in chronically ill patients are not diseases but responses that have gone on too long (Allostatic load).
- The metabolic imbalances that combine to form this response have been well defined by critical care nutritionists.

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Entry Level Clinical Nutrition:

A new model of functional
medicine that incorporates
allostatic load and the “chronic”
acute phase response

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***This is a relatively easy,
inexpensive way to help
most patients feel better
early on during the course
of therapy no matter what
their “disease” or chief
complaint.***

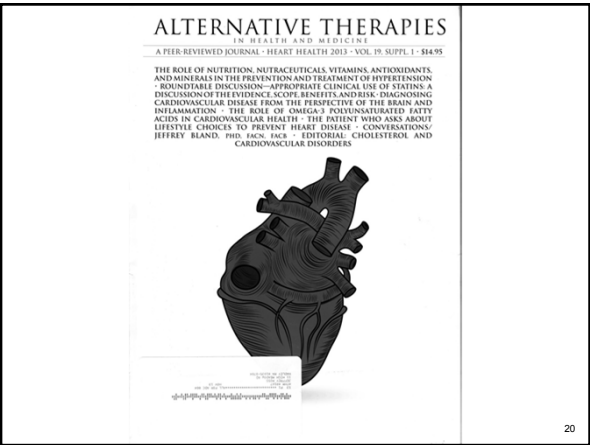
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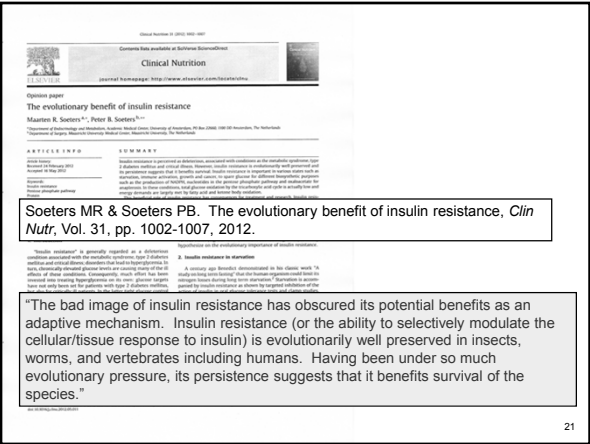
A simplified approach to helping
patients feel better

- Understanding the true nature of chronic illness: Excessive allostatic load
- Simple, cost effective diagnostic tools
- A simplified, cost effective menu to improve patient quality of life

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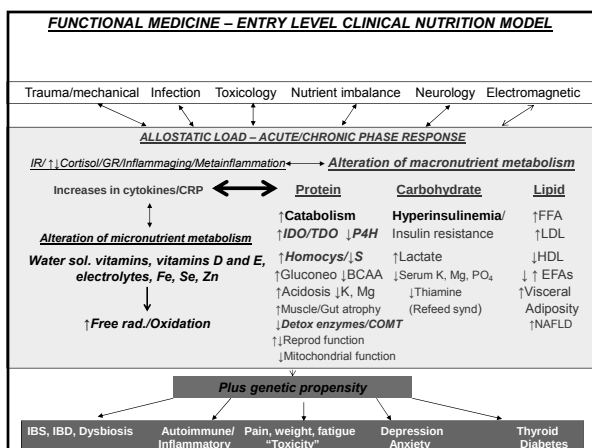


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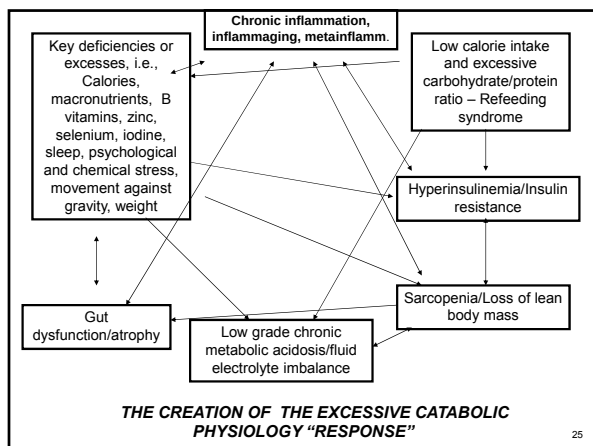
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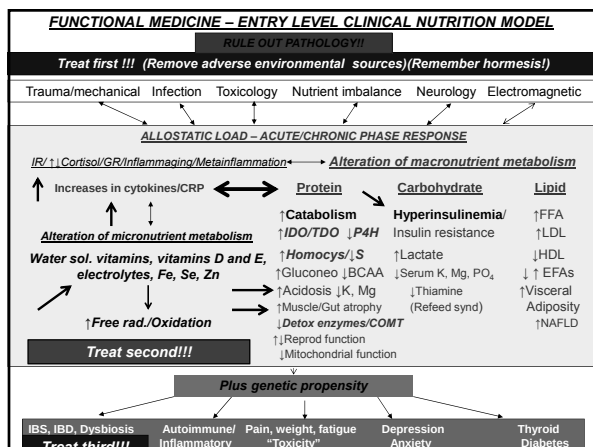
The collage consists of three main elements:

- Top Left:** The cover of the journal *Clinical Nutrition*, Volume 32, Number 1, February 2013. It features the title "Contents lists available at ScienceDirect" and the journal name "Clinical Nutrition".
- Top Right:** A small, dark, square photograph of a person, likely a patient or researcher involved in the study.
- Bottom:** A snippet of a research paper abstract from *Clinical Nutrition*, Vol. 32, pp. 186-192, 2013. The title is "Bouillanne O et al. Impact of protein pulse feeding on lean mass in malnourished and at-risk hospitalized elderly patients: A randomized controlled trial". The abstract discusses the impact of protein pulse feeding on lean mass and muscle function in elderly patients.



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Key metabolic imbalances seen with the acute phase response

- Low grade, chronic metabolic acidosis
- Loss of lean body mass (sarcopenia) and its relation to optimal protein intake
- Gastrointestinal dysfunction/gut atrophy
- Inflamm-aging (Increased innate immunity and decreased adaptive immunity)
- Metabolically induced insulin resistance
- Diet-induced hyperinsulinemia (Refeeding syndrome) and its relation to carbohydrate:protein ratio
- Deficiencies of key micronutrients such as zinc, selenium, and vitamin D

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Low grade, chronic metabolic acidosis

- Diagnostics - first morning urine pH, serum K, CO₂, medications, quality sleep, fad diets
- If urine pH is between 6.0 and 6.4, consider K Alkaline + Mg, 1 before bedtime and increase as needed based on urine pH.
- If urine pH is below 6.0, consider K Alkaline and Magnesium Glycinate, 1 of each before bedtime and increase as needed based on urine pH.

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Loss of lean body mass (sarcopenia) and its relation to optimal protein intake

- Diagnostics – Percent body fat via BIA (12-18% males, 22-28% females), grip strength, gait speed (elderly), physical examination.
- Treatment considerations – Weight-bearing exercise, optimal caloric intake, Select Meal, Select Whey (possibly with 2 g extra leucine per day), L-carnitine, Melatonin.

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Gastrointestinal dysfunction/gut atrophy

- Diagnostics – History, symptoms
- Treatment considerations – Diet (**especially protein**), **eating behaviors**, GastroSelect (upper GI), Betaine HCl, Pancreatin Select (stomach/duodenum), GI Select I, GI Select II (ileum, large intestine), HepatoSelect (Liver/gall bladder), Saccharomyces boulardii, ParaBotanic, Oregano Extract (antimicrobial).

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Inflamm-aging (Increased innate immunity and decreased adaptive immunity)

- Diagnostics – History, symptoms, food elimination, white count/differential, hs-CRP, ALT, AST, fasting glucose.
- Treatment considerations – Avoid offending foods, weight-bearing exercise, sleep, EPA/DHA, EPA/DHA HP, InflammaSelect, ImmunoSelect

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Metabolically induced insulin resistance

- Diagnostics – History, symptoms, serum glucose, glycosylated hemoglobin
- Treatment considerations – Weight-bearing exercise, optimal caloric intake and macronutrient ratio, Glycemic Select, Select Meal, Select Whey (possibly with 2 g extra leucine per day).

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Diet-induced hyperinsulinemia (Refeeding syndrome) and its relation to carbohydrate:protein ratio

- Diagnostics – History, symptoms, serum glucose, serum K, serum PO₄
- Treatment considerations - **Eating behaviors**, weight-bearing exercise, optimal caloric intake and macronutrient ratio, Glycemic Select, Select Meal, Select Whey (possibly with 2 g extra leucine per day), K Alkaline + Mg, B Complex Select.

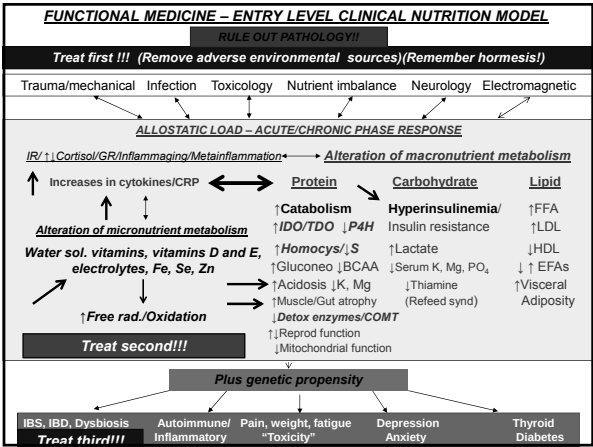
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Deficiencies of key micronutrients such as zinc, selenium, and vitamin D

- Diagnostics – Three-day diet history, Zinc taste test, serum 25 (OH) D, others as needed.
- Treatment considerations – MultiSelect, B Select, Buffered C Select, Moss Nutrition vitamin D products, Calcium Select, Iron Select, Zinc Select, Iosol (iodine)

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TUT TUT...
'NUF SAID!
SIDDOWN...
RELAX...

Thank you!!

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