

Irritable Bowel Syndrome: An Integrative Approach

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What is IBS?

- ◆ **What it isn't**

- ◆ Ulcerative Colitis
- ◆ Crohn's Disease
- ◆ Collagenous Colitis: no mucosal lesions, positive biopsy
- ◆ Dyspepsia, GERD (often co-exist)
- ◆ Celiac Disease
 - ◆ Many symptoms in common
 - ◆ Important to investigate/rule out



What is IBS?

- ◆ **Diagnostic Considerations: Rome III**
Recurrent abdominal pain or discomfort
 - ◆ Duration \geq 6 months
 - ◆ At least 3 days/month the past 3 months
 - ◆ Two of the following:
 - ◆ **Improvement with defecation**
 - ◆ **Onset associated with change in frequency of defecation**
 - ◆ **Onset associated with a change in the form/appearance of the stool**



What is IBS?

- ◆ Other possible symptoms that support diagnosis:
 - ◆ **More than 3 movements/day, or less than 3/week**
 - ◆ **Abnormal stool form: lumpy hard, or loose watery**
 - ◆ **Passage of mucus**
 - ◆ **Abdominal bloating or distended feeling**
 - ◆ ***Usually* does not awaken patient at night**



What is IBS?

- ◆ **Alternate Diagnostic Criteria: Manning**
 - ◆ Abdominal pain relieved by bowel movement
 - ◆ Looser stool at pain onset
 - ◆ More frequent stools at pain onset
 - ◆ Visible Abdominal distension
 - ◆ (Sensation of incomplete evacuation)
 - ◆ (Passage of mucus)



Extra-colonic symptoms or co-morbidities:

- ◆ Nausea/Dyspepsia (1/3 of IBS patients)
- ◆ Headache
- ◆ Impaired sleep
- ◆ Chronic Fatigue
- ◆ Urinary frequency/urgency
- ◆ Dyspareunia
- ◆ Mood Disorders
- ◆ Fibromyalgia



Sub-Type Nomenclature:

- ◆ IBS-D: Diarrhea prevalent $\geq 25\%$
- ◆ IBS-C: Constipation prevalent $\geq 25\%$
- ◆ IBS-M: Mixed or alternating constipation & diarrhea, $\geq 25\%$ @
- ◆ IBS-U: Constipation or Diarrhea $\leq 25\%$, but meets other criteria



*Alarm symptoms/Red Flags:
Consider other diagnoses
first–*

**...and, *reconsider* the IBS
diagnosis if they appear
later in the course.**



Investigate!



Alarm Symptoms/Red Flags:

- ◆ Anemia
- ◆ Positive fecal blood (micro/macro)
- ◆ Weight loss \geq 10 lbs
- ◆ Fam Hx: colon cancer; IBD
- ◆ Recurring fever
- ◆ Chronic severe diarrhea or constipation
- ◆ Nocturnal symptoms, awakening
- ◆ Recurrent vomiting
- ◆ Progressive dysphagia
- ◆ Travel history to areas with endemic parasites
- ◆ New onset > age 50
- ◆ True malabsorption



Why are we interested in IBS?



Why are we interested in IBS?

- ◆ **Incidence & prevalence, gender distribution**
 - ◆ Prevalence in USA: 8-22%, depending on criteria
 - ◆ Incidence poorly defined
 - ◆ Female:Male = 60-67:40-33
- ◆ **Costs**
 - ◆ USA: 2.4-3.5 million medical visits/year, 2.2 million Rx's
 - ◆ Direct: \$1.6 Billion; Indirect: \$19.2 Billion



Risk Factors & Potential Triggers:

- ◆ Bacterial gastroenteritis, especially *Campylobacter*
- ◆ Bacterial overgrowth of usual non-pathogens: *Citrobacter*, *Klebsiella*, *Pseudomonas*, *Proteus*
- ◆ *Giardia lamblia* & *Blastocystis hominis*



Risk Factors & Potential Triggers:

- ◆ Depression
- ◆ Adverse Life Events (STRESS!)
- ◆ History of childhood sexual abuse (?)
- ◆ Somatization
- ◆ Female
- ◆ Younger age
- ◆ Affluent childhood environment (!)

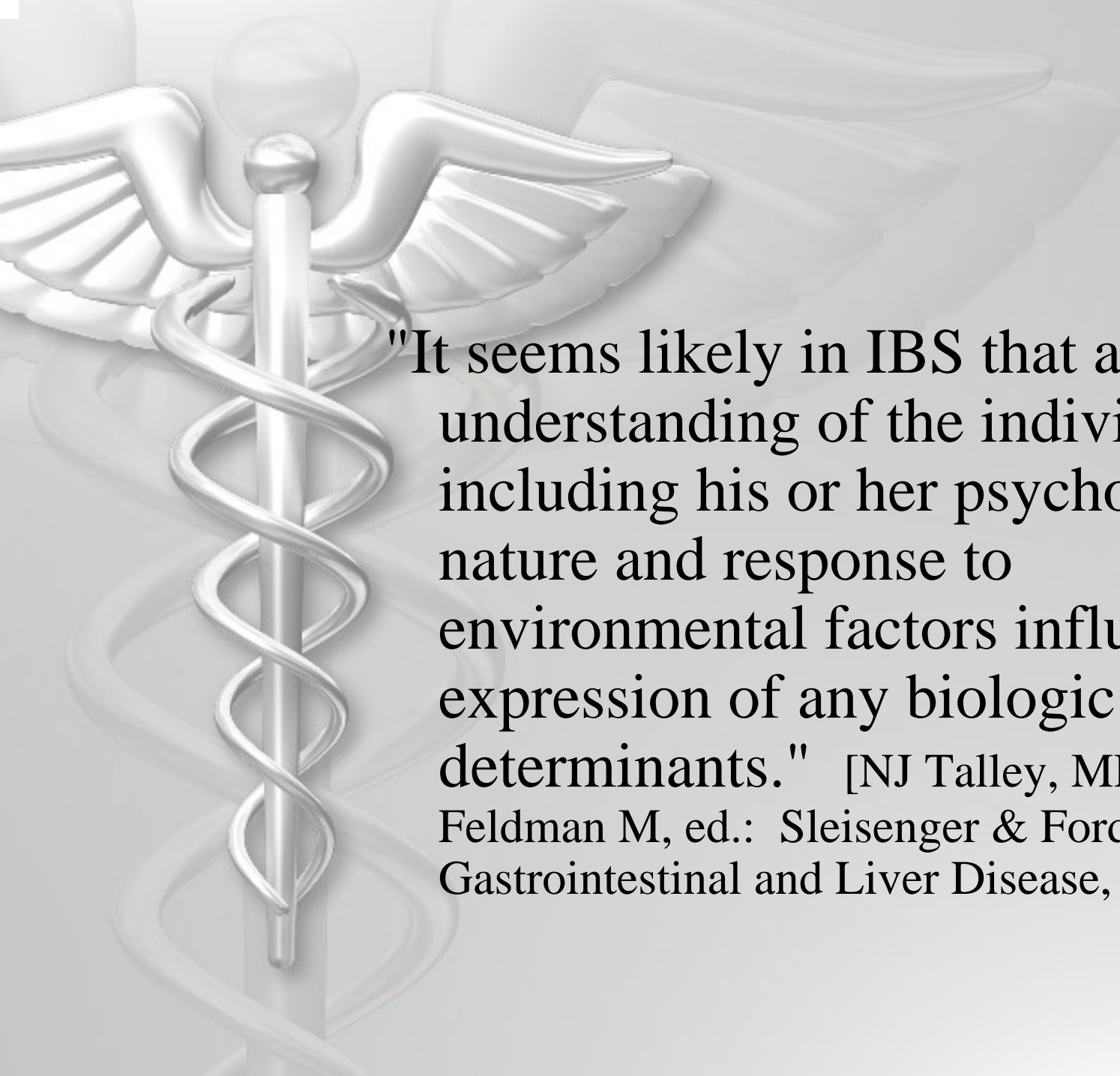


Risk Factors & Potential Triggers:

- ◆ Prolonged diarrhea after initial attack of infectious diarrhea
- ◆ Recent antibiotic use (overgrowth of *Candida a.* & resistant bacteria)
- ◆ Food intolerance
- ◆ Post-menopausal estrogen therapy

***Broader concepts—It gets
more interesting...***





"It seems likely in IBS that an understanding of the individual, including his or her psychosocial nature and response to environmental factors influences the expression of any biologic determinants." [NJ Talley, MD, in Feldman M, ed.: Sleisenger & Fordtran's Gastrointestinal and Liver Disease, 8th ed. 2006]



What is IBS?

It depends on who you ask.



Other medical systems:
Examples of issues

- ◆ TCM & Ayurveda: There is no distinct entity which fits the Rome or Manning criteria. These systems organize their understanding of and approach to the variety of symptoms and signs in the context of their own theoretical and empirical structures. In general, their diagnostic formulations include all levels of the person—body, emotions, mind, spirit.



Other medical systems:

Examples of issues

- ◆ TCM ex: “Treatment of Irritable Bowel Syndrome With Chinese Herbal Medicine: A Randomized Controlled Trial”, Bensoussan A, et. al., JAMA, 11/11/98 Vol.280 No. 18 pp 1585-1589



Other medical systems:
Examples of issues

◆ **Homeopathy:**

- ◆ **In a class of its own**
- ◆ **The symptoms are considered in the total context of the patient's constitutional and life pattern, and matched to a remedy pattern.**
- ◆ **A phenomenological/empirical system**
- ◆ **No theories of pathophysiology or mechanism of action of the remedies which fit a modern scientific framework**
- ◆ **Placebo control & blinding are very easy, but case definition and inter-provider consistency are not!**



Pathophysiology of IBS

- ◆ **Conventional Concepts**

- ◆ Normal intestine in a state of chronic low-grade inflammation, compared to other organs
 - ◆ **Normal aspect of its boundary function—processing antigens**
 - ◆ **A subset of IBS patients have increased inflammatory markers**
 - ◆ **Crohn's disease and IBS-D exacerbations can have the same food and emotional triggers**



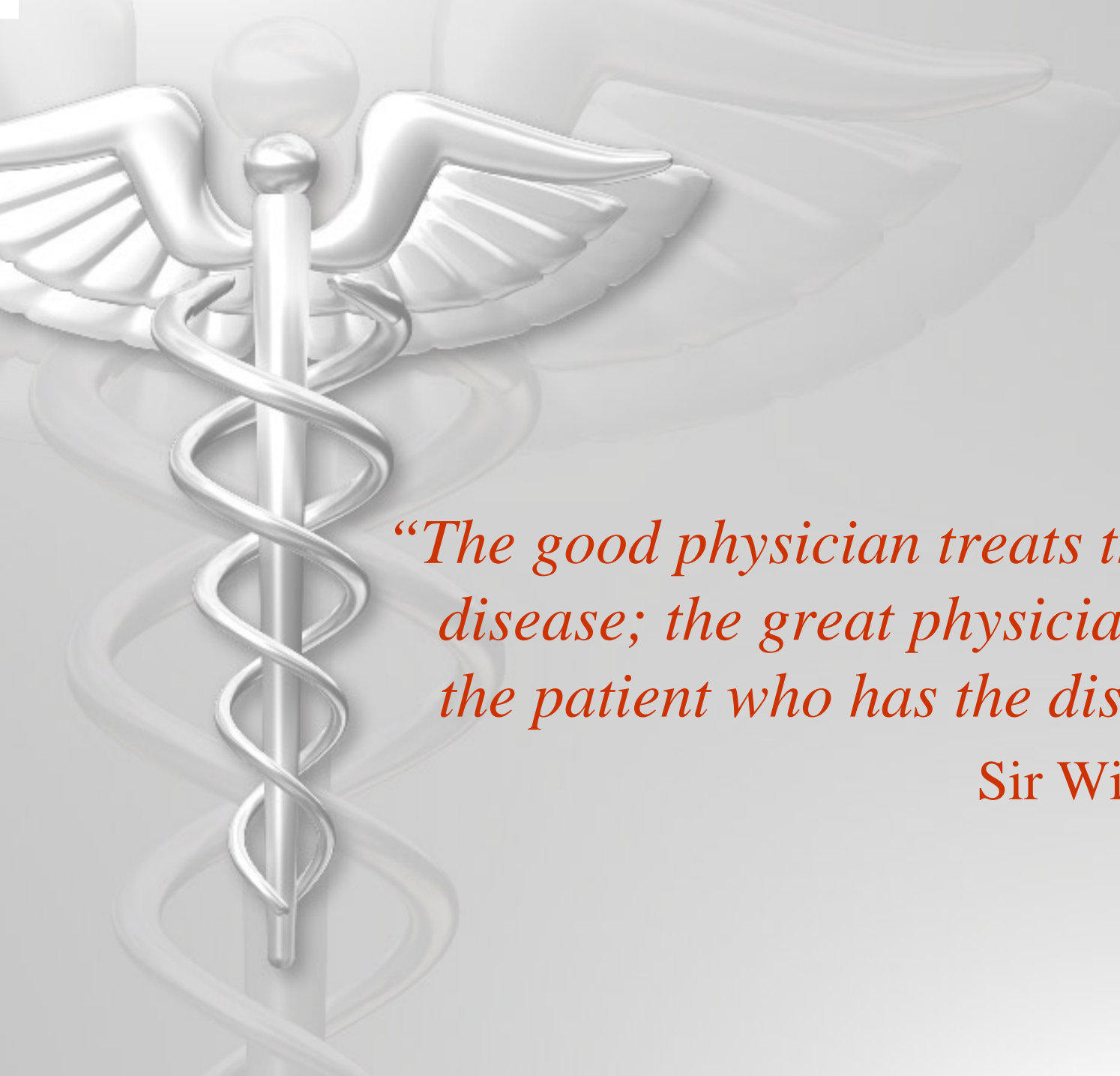
Pathophysiology of IBS

◆ **Conventional Concepts**

- ◆ Documented increased visceral hyper-perception-sensation
- ◆ Altered motility (hypo/hyper) and peristaltic "incoherence"
- ◆ Increased output, decreased re-uptake of serotonin in the gut, which accounts for >90% of serotonin in the body



*And now,
for something completely
different.....*



“The good physician treats the disease; the great physician treats the patient who has the disease.”

Sir William Osler



Integrative Medicine

What is it?



Integrative Medicine

Definition: 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. [Arizona Center For Integrative Medicine, 2009]



Integrative Medicine

- ◆ **Applies a holistic, systems approach to conventional medical practices.**
- ◆ **May include concepts & practices from other medical systems or, *for example*:**
 - ◆ Naturopathy, herbalism
 - ◆ TCM
 - ◆ Ayurveda
 - ◆ Homeopathy
 - ◆ Mind-Body
 - ◆ Others



But wait, there's more....



Functional Medicine

What's that?



Functional Medicine

- ◆ A systems biology approach to medicine
- ◆ Holographic/Holistic: each part reflects the entire system, as the whole system is more than the sum of its parts.
- ◆ Based on core scientific principles of cell biology, immunology, physiology, etc.
- ◆ Recognizes and exploits biochemical individuality & genetic uniqueness



Functional Medicine

- ◆ Patient-centered rather than disease/diagnosis-centered
 - ◆ **Antecedents-Triggers-Mediators-Systemic dysfunctional pattern=illness**
- ◆ Homeodynamics
- ◆ Web-like interconnections
- ◆ A *natural* for inclusion in **Integrative Medicine**



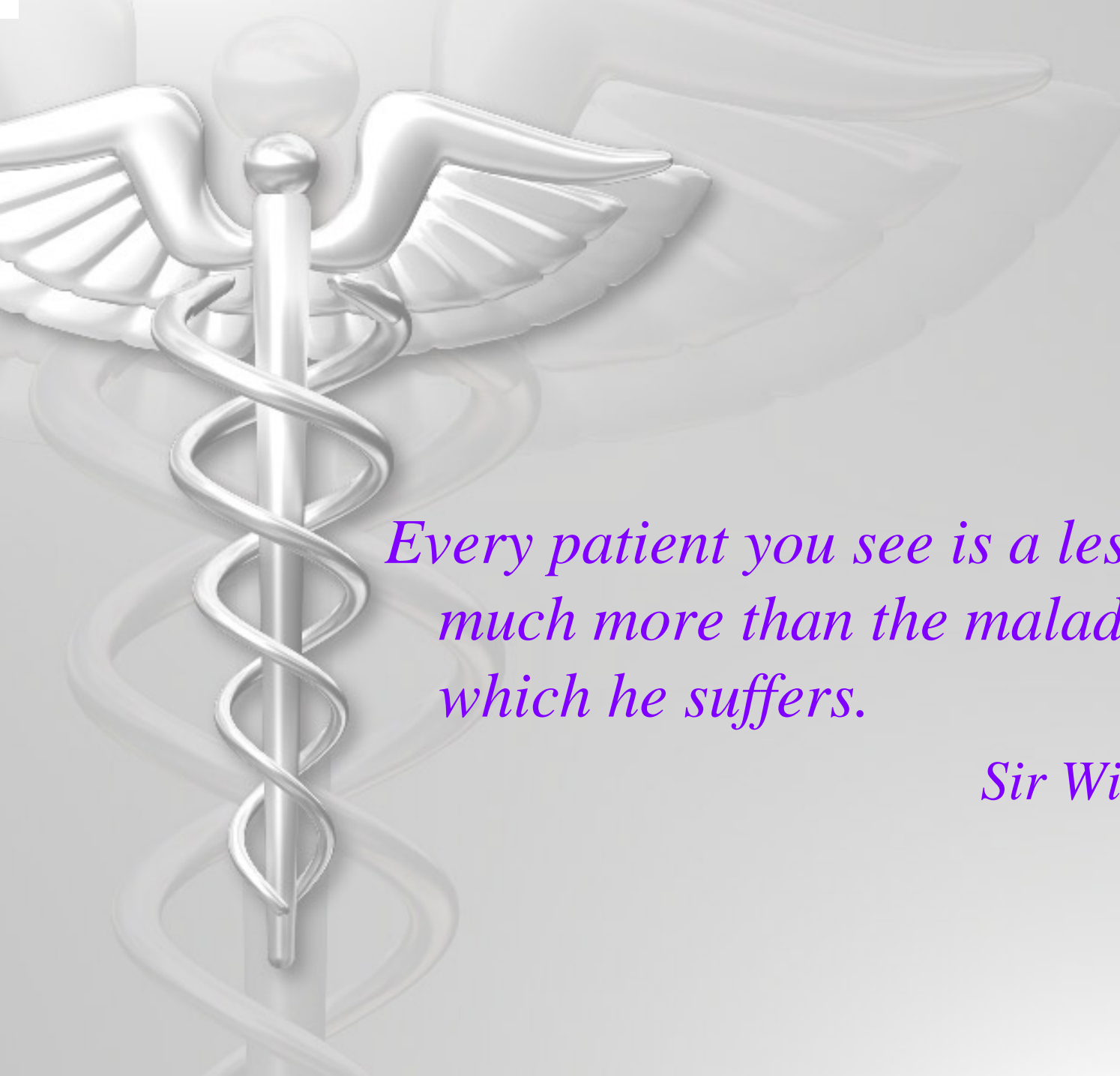
Functional Medicine

- ◆ **Core processes:**
 - ◆ **Intracellular & extracellular communication**
 - ◆ **Bioenergetics & biotransformation**
 - ◆ **Digestion & excretion**
 - ◆ **Inflammation & Immune activity**



Functional Medicine

- ◆ **Core imbalances/dysfunctions:**
 - ◆ **Endocrine balance & imbalance**
 - ◆ **Neurological**
 - ◆ **Oxidation-reduction-metabolic**
 - ◆ **Detoxification & biotransformation**
 - ◆ **Immune/Inflammatory**
 - ◆ **Digestive, Absorptive, Microbiological**
 - ◆ **Structural**



*Every patient you see is a lesson in
much more than the malady from
which he suffers.*

Sir William Osler



Functional Medicine

History and diagnostic tests aim to detect overall functional status, and deviations from optimal functioning in multiple systems.



Functional Medicine Concepts: IBS

- ◆ **IBS symptom patterns are a limited number of ways the gut responds to a variety of situations.**
- ◆ **An exaggerated stress response**
- ◆ **Observation: IBS is associated with dysfunction of other systems beyond the GI: fibromyalgia; depression; chronic fatigue; PTSD**



Functional Medicine Concepts: *IBS*

- ◆ **Question: Could there be common processes involved, with multiple pathways of reaction/expression?**
- ◆ **Associations/Co-Morbidities:**
Fibromyalgia; Chronic Fatigue Syndrome; Mood Disorders; PTSD



Functional Medicine Concepts: IBS

- ◆ **The gut has the majority of the immune cells in the body, its own nervous system, and produces many of the neurotransmitters found in the brain.**
- ◆ **Since it has connections with the other systems, it both affects the status of the whole organism, and reflects that status.**



Functional Medicine Concepts: IBS

- ◆ **The gut is our major boundary, with an average surface area the size of a tennis court.**
- ◆ **Any factors which influence our boundary function and perception will impact on the gut, and involve it.**



Functional Medicine Concepts: IBS

- ◆ **The gut itself is involved with all of the core processes, if we include the liver.**
- ◆ **Core dysfunctions involving the gut: neurological; detoxification; immune/inflammatory; digestive, absorptive and microbiological**



Integrative/Functional Medicine
Diagnosis

- ◆ Antecedents
- ◆ Triggers
- ◆ Mediators
- ◆ Symptoms & Signs
- ◆ Patterns of Dysfunction



Integrative/Functional Medicine

Diagnosis: Antecedents

- ◆ genetic/family history;
- ◆ childhood feeding & illness history: ex-- "outgrown" food intolerances; multiple ear infections, antibiotics
- ◆ Personality: Immune/Inflammatory system establishes its "personality" around when the mental/emotional system does.
- ◆ Episodes of antibiotic exposure, and GI symptoms
- ◆ Exposures to solvents, environmental pollutants, toxic elements
- ◆ Stresses in early development, and as an adult—Chronic/recurrent (Holmes & Rahe score)