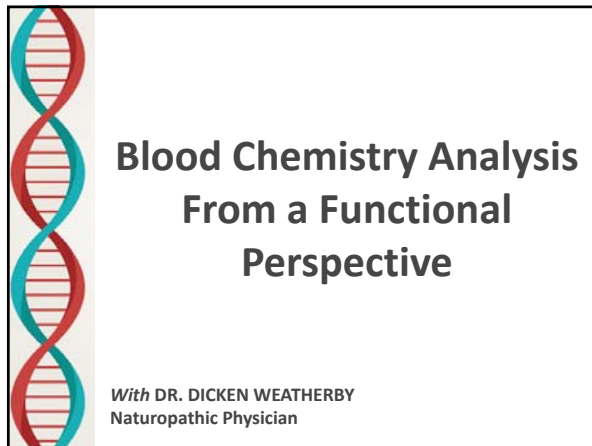
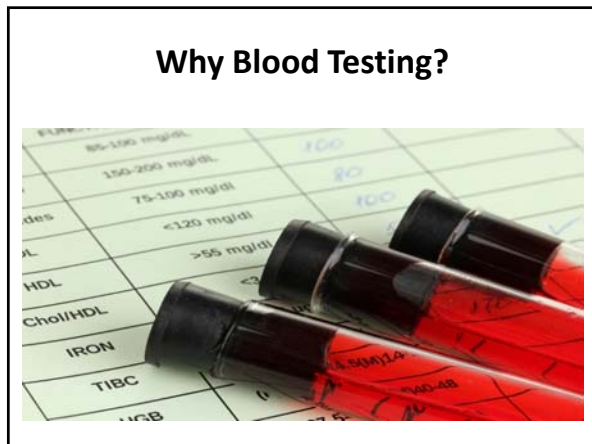


“10 Essential Blood Tests” – PART 1
Presented by Dr. Dicken Weatherby







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Here’s Why!

- Most commonly ordered lab test worldwide
- Most people have had a blood test
- Blood testing is the norm for health testing assessment
- Conditioned that blood contains the answers
- However, most health care practitioners are unaware that blood chemistry **IS** Functional testing



Benefits of Functional Analysis of Blood

- Detect early stages of dysfunction and hidden health trends
- Improves decision making and reduces uncertainty
- You get an objective proof of results
- It confirms thoughts made in the initial intake and history
- It guides therapy decisions and modification
- It helps assess the efficacy of treatment protocols
- It helps both you and the patient assess their progress

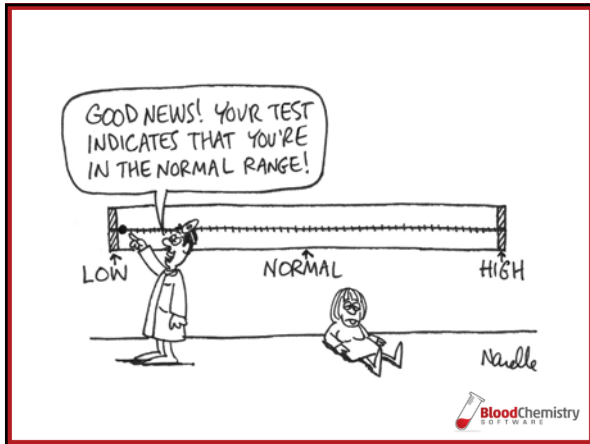


S/Sxs of a Functionally Disturbed Patient

- Fatigue or low energy
- Digestive disorders
- Allergies
- Reduced immunity
- Infertility
- Pain & Inflammation
- Thyroid issues
- Sex hormone dysfunction
- Sleep disturbances
- Skin issues
- Anxiety/depression
- Weight fluctuations
- Hypertension
- Cognitive impairment



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CASE STUDY:
Pertinent Health Information

- 39 year old male
- PTC with complaints of low libido, gaining weight, especially around the abdomen, not sleeping well, catches colds every winter, muscle aches and generally has low energy
- Ordered a comprehensive blood panel to try and evaluate what is going on

BloodChemistry SOFTWARE

Analysis of The Lab Test Report

BloodChemistry SOFTWARE

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Analysis of The Lab Test Report

BloodChemistry
SOFTWARE

Analysis of The Lab Test Report

BloodChemistry
SOFTWARE

Values Out of Range


BILIRUBIN, TOTAL	1.9 H	0.2-1.2 mg/dL
BILIRUBIN, DIRECT	0.3 H	< OR = 0.2 mg/d
DHEA SULFATE	66 L	110-370 mcg/dL


- What does this tell us about this patient’s condition?

BloodChemistry
SOFTWARE


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Traditional Lab Reports Lack Meaning







The Problem With “Normal”




- The “normal” range is based on statistics and not on whether a certain value represents good health or function.
- “Normal” reference ranges represent “average” populations, rather than the optimal level required to maintain good health.
- Normal is not the same as optimal.



The Functional “Optimal” Range




- A result in this “gray area” tells me something’s not right in the physiological system associated with this element.




Where do these optimal ranges come from?

- “Normal” ranges 20 to 30 years ago.
- Biochemical Biopsy
- Research
- “Old Time Docs”
- Clinical observations
- Where to Start?




**Organizing Your FBCA Analysis
Part 1**

**Drilling Down:
How to Think About
Individual Biomarkers**



1. Where does this biomarker come from?
2. What are some of the reasons why it might be elevated?
3. What are some of the reasons why it might be decreased?



Example: BUN

1. Where does it come from?



Example: BUN

2. What are some of the reasons why it might be elevated?



Example: Increased BUN

- Too much exogenously
- Too much endogenously
- Not being excreted



Example: BUN

3. What are some of the reasons why it might be decreased?



Example: Decreased BUN

- Not enough exogenously
- Not enough endogenously
- Too much being excreted



Organizing Your FBCA Analysis Part 2

Body Systems, Functional
Indicators and Patterns




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Pertinent Health Information

- 39 year old male
- PTC with complaints of low libido, gaining weight, especially around the abdomen, not sleeping well, catches colds every winter, muscle aches and generally has low energy

Values Out of Range

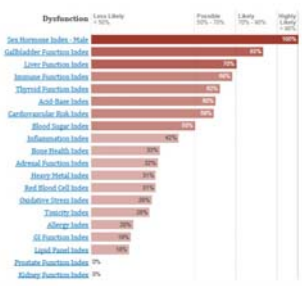

BILIRUBIN, TOTAL	1.9 H	0.2-1.2 mg/dL
BILIRUBIN, DIRECT	0.3 H	< 0.2 mg/dL
DREA SULFATE	66 L	116-370 mg/dL







Functional Systems Analysis

A Macro view of 13 Functional Body Systems and 7 Functional Accessory Systems


**Identifying and Assessing for
Dysfunctions in the GI**

Blood Testing, Signs and Symptoms Analysis
and Other Assessment Techniques




Functional Assessment G.I.

- Hypochlorhydria
- H. pylori
- Gastric Inflammation
- Pancreatic insufficiency
- Biliary Insufficiency
- Biliary Stasis
- Biliary obstruction




Hypochlorhydria - Causes

- Aging
- Stress
- Carbohydrates
- Zinc and Thiamine Deficiency
- Drugs
- Lack of protein in diet




Hypochlorhydria Signs and Symptoms

- Belching or gas within one hour after eating
- Bloating within one hour after eating
- Bad breath (halitosis)
- Stomach upset by taking vitamins
- Fingernails chip, peel or break easily
- Anemia unresponsive to iron
- Sense of fullness after meal




The Functional and Nutritional Physical Exam



Hypochlorhydria - Nutritional Physical Findings

- Adult acne
- Dilated capillaries on nose and face
- Dandruff
- Soft, poor growth of fingernails
- Brittle and splitting nails
- White spots on the nails

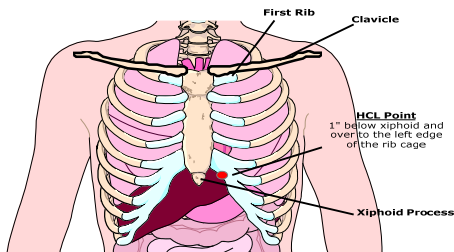


Functional Physical Findings G.I. & Hepato-Biliary

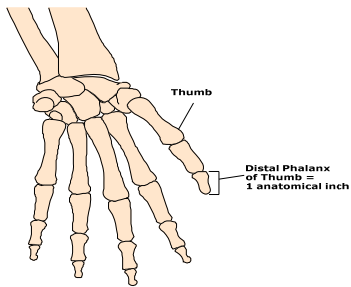
- Upper G.I. Reflexes
 - HCL & Enzyme Points
 - Chapman’s reflex for upper GI
- Hepato-Biliary (Liver Gallbladder) Reflexes
 - Chapman’s Reflex for Liver
 - Murphy’s Sign
 - Chronic Gallbladder Marker



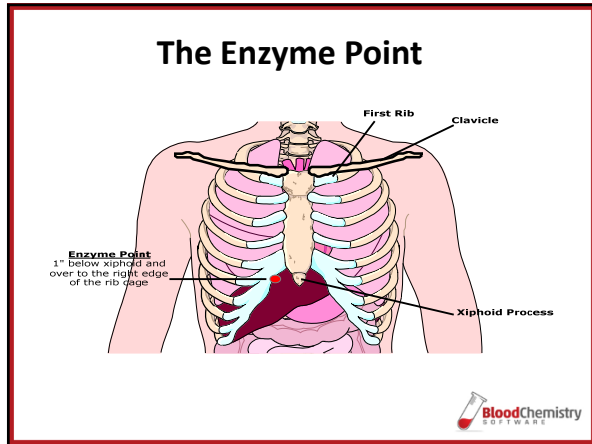
The HCL Point

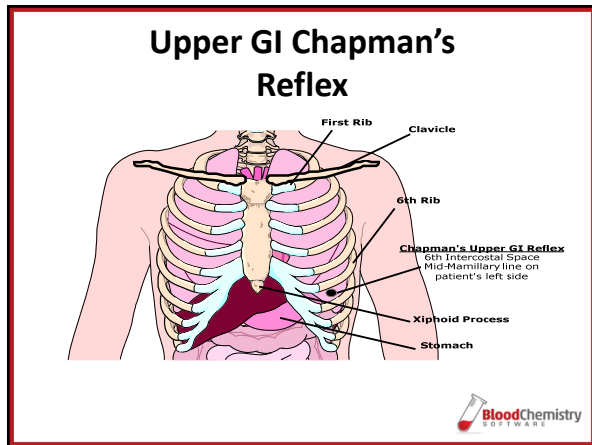


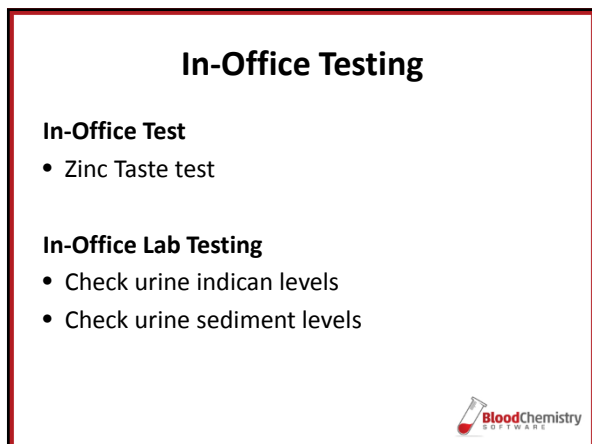
Anatomical Inch



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Blood Test Findings

- Suspect a hypochlorhydria when globulins start to climb above 2.8 or 28 g/L
- May also see a decreased total protein <6.9 or 69 g/L and/or a decreased albumin <4 or 40 g/L
- Likelihood increases with these findings:
 - Increased BUN (>16 or 5.71 mmol/L)
 - Decreased serum phosphorous (<3.0 or <0.97 mmol/L)
 - Decreased serum calcium (<9.2 or 2.3 mmol/L)
 - Increased MCV >90



Helicobacter pylori



H. Pylori - Symptoms

- Discomfort in the upper GI especially upper left quadrant discomfort
- Bloating
- Nausea
- Maybe even vomiting
- May have symptoms suggestive of an ulcer



H. Pylori Blood Test Pattern

- An increased or decreased total globulin (>2.8 or < 2.4)
- Increased or decreased total protein (<6.9 or > 7.4)
- Increased or Decreased BUN (< 10 or >16)
- decreased serum phosphorous (<3.0)
- Increased WBC count (>7.5)
- Increased Neutrophils (>60)
- Decreased Lymphocytes (<24)
- Normal or Increased Monocytes (N or >7)



H. Pylori - Advanced FDM Testing

- Blood test to measure H. pylori antibodies
- Breath test
- The H. pylori stool antigen test
- CDSA
- **Allopathic Testing**
 - Endoscopy with tissue biopsy



Gastric Inflammation



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Gastritis – S/Sxs

- (Very) frequent stools or normal stool frequency
- Weak appetite
- Epigastric pain
- Unexplained nausea
- Unexplained vomiting
- Fever: High/moderate/or slight
- Blood in the stool (end stage)
- Vomiting blood (end stage)



Gastritis – Blood Testing

- Decreased total globulin (<2.4 or 24 g/L)
- Decreased serum phosphorous (<3.0 or <0.97 mmol/L)
- Increased BUN (>16 or 5.71 mmol/L)
- Increased basophils (> 1)
- Increased ESR



Pancreatic Insufficiency – S/SX


- Loose watery stool
- Maldigestion
- Post prandial abdominal pain
- Stools with undigested food
- Acne
- Food allergies
- Hypoglycemic symptoms
- Abnormal weight gain, or more commonly, weight loss
- Gastroesophageal reflux
- Bloating
- Food intolerance



Pancreatic Insufficiency


- **Functional Physical Exam Findings**
 - Positive Ridler Pancreatic Enzyme
 - Positive Ridler HCL reflex

- **In-Office Lab Testing**
 - Elevated urine indican
 - Elevated urine sediment




**Pancreatic Insufficiency –
Blood Test Findings**

- Decreased Amylase <28
- Decreased Lipase <22
- Decreased WBC count <5.5
- Decreased Albumin <4.0
- Increased Globulin >2.8
- Increased GGT >30



**Pancreatic Insufficiency –
Lab Findings**

- **Advanced Lab Findings – Stool Analysis**
 - Decreased Pancreatic elastase
 - High fat in stool (steatorrhea)
 - Decreased Chymotrypsin




Hepato-Biliary Dysfunction

Biliary Insufficiency and Stasis




Biliary Insufficiency - Causes

- Changes in metabolism
- Diseases that affect gallbladder function
- Diseases that reduce the number of hepatocytes



Biliary Stasis - Causes

- Supersaturation of bile
- Decrease in bile acid formation
- Decrease in phosphatidylcholine secretion



Biliary Stasis - Problems

- Accumulation of toxins
- Digestive disorders
- Poor fat soluble vitamin absorption
- EFA deficiency
- Increased risk of gallstones



Biliary Dysfunction: S/Sxs

- Pain between shoulder blades
- Stomach upset by greasy foods
- Loose, bulky and offensive stools
- Greasy or shiny stools
- Nausea
- Sea, car, airplane or motion sickness
- History of morning sickness
- Light or clay colored stools
- Dry skin, itchy feet or skin peels on feet
- Headache over eyes
- History of gallbladder attacks
- Bitter taste in mouth, especially after meals
- Dark orange urine



Biliary Dysfunction: Nutritional PE

- Dry, scaly and hyperemic ear canal
- Dry skin and dry hair
- Red bumps on the elbow
- Follicular hyperkeratosis
- Clubbing of the fingers
- Steatthorea



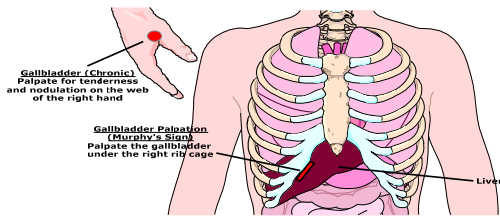
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Biliary Dysfunction: Functional PE

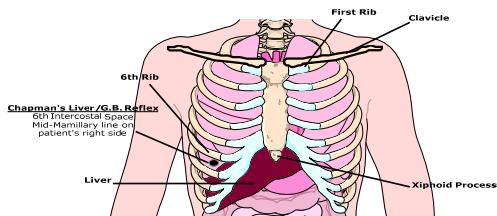
- Check for a positive Murphy’s sign
- Check chronic gallbladder sign
- Check for tenderness in the Chapman reflex for the liver-gallbladder
- **Functional Urinalysis**
 - Increased urinary sediment levels



Gallbladder Markers



Liver/GB Chapman's Reflex



Biliary Dysfunction: Blood Test

- **Biliary insufficiency**
 - Elevated total bilirubin (>1.2)
 - Increased GGTP (>30),
 - Increased SGPT/ALT (>30),
 - Increased alkaline phosphatase (>100)
 - Increased LDH (>200).



Biliary Dysfunction: Blood Test

- **Biliary stasis**
 - GGTP levels will frequently be increased (>30) but not necessarily.
 - Bilirubin levels will also be elevated (>1.2 or 20.5 $\mu\text{mol/dL}$)
 - Increased alkaline phosphatase (>100)
 - Increased total cholesterol (>220 or 5.69 mmol/L).
 - SGOT/AST and SGPT/ALT may be normal or increased (>30).



Biliary Obstruction

- Leads to cholestasis
- Intrahepatic obstruction
- Extrahepatic obstruction



Intrahepatic Biliary Obstruction - Pattern

- Elevated total bilirubin (>1.2 or >20.5 mmol/L)
- Elevated Indirect bilirubin (>0.7 or 12 umol/L)
- Increased GGTP (>30),
- Increased SGPT/ALT (>30),
- Increased alk phos (>100) and/or
- Increased LDH (>200).



Extrahepatic Biliary Obstruction - Pattern

- GGTP (>85)
- Alk Phos (>140)
- Normal or increased SGOT/AST (>55)
- Normal or increased SGPT/ALT (>55)
- Elevated total bilirubin (>1.2 or >20.5 umol/L)
- Elevated Direct Bilirubin (>0.2 or 3.4 umol/L)



SUMMARY



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Free FBCA Crash Course Training


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