FOUNDATIONAL MEDICINE

DENALI MEDICAL CENTER

Maximizing The Effectiveness of Peptide Treatments & WHY Some Patients Are Resistant

Brett J. Earl, M.D.

- Pancreatic Endocrine Enzymatic Insufficiency
- Vitamin D
- Fish Oil
- NaCl vs. Natural Salts

83% of studies prove exactly what the funder was hoping to prove

75% of ‘positive’ studies get published vs 25% of ‘negative’

Your presence places you in an very small percentage of medical providers. Western Medicine tends to trail the ‘cutting edge’ of providership by 15-20 years.

Mainstream News, Medical Magazines and Medical Organizations receive large amounts of funding from Big Pharma

Therapeutic peptides are a relatively new class of pharmaceutical agents typically composed of molecules bound by peptide bonds (similar to protein bonds) in an organized array of less than 50 elements.

Their discovery amongst what was considered **'waste'** or **'metabolites'** from the breakdown of the miracle human bodies natural processes has and will change medicine in dramatic and beneficial ways.

Table 1. Peptide drugs approved since 2000, with their targets and indications

Target name	Peptide name	First approval	Approved indication(s)
GLP-1 receptor	Exenatide[462]	2005	Indicated for Type 2 Diabetes Mellitus
	Liraglutide[463]	2009	
	Lixisenatide[464]	2013	
	Albiglutide[465]	2014	
	Dulaglutide[466]	2014	
	Semaglutide[467]	2017	
GLP-2 receptor	Teduglutide[468]	2012	Treatment of Short bowel syndrome and malabsorption
GC-C receptor	Linaclotide[469]	2012	Treatment of irritable bowel syndrome (IBS) with constipation and chronic idiopathic constipation
Calcitonin receptor	Pramlintide[470]	2005	Treatment of Type 1 and Type 2 Diabetes Mellitus
GnRH receptor	Abarelix[471]	2003	Treatment of advanced prostate cancer
	Degarelix[472]	2008	
Binding to active site of the 20S proteasome	Carfilzomib[473]	2012	Treatment of multiple myeloma
NOD2 protein	Mifamurtide[474]	2009	Treatment of high-grade, resectable, non-metastatic osteosarcoma
VIP1 receptor	Aviptadil[475]	2000	Treatment of erectile dysfunction
OT receptor	Atosiban[476]	2000	Indicated for use in delaying imminent pre-term birth
	Carbetocin[476]	2001	Used for postpartum hemorrhage
TRH receptor	Taltirelin[477]	2000	Spinocerebellar degeneration
MC receptors	Bremelanotide[478]	2019	Indicated for hypoactive sexual desire disorder
PTH1 receptor	Teriparatide[479]	2002	Treatment of osteoporosis
	Abaloparatide[480]	2017	
Guanylate cyclase C	Plecanatide[481]	2017	Treatment of chronic idiopathic constipation
NPR-A	Nesiritide[482]	2001	Treatment of acute decompensated heart failure
AT_1 receptor	Angiotensin II[483]	2017	Indicated for sepsis and septic Shock
Beta2-receptor	Icatibant[484]	2008	Approved for use in acute attacks of hereditary angioedema
gp41	Enfuvirtide[485]	2003	Used in combination therapy for the treatment of HIV-1
GHRH receptor	Tesamorelin[486]	2010	Reduction of HIV lipodystrophy
N-type calcium channels	Ziconotide[487]	2004	Management of severe chronic pain
Thrombopoietin receptor	Romiplostim[488]	2008	Treatment of chronic immune thrombocytopenic purpura
Human erythropoietin receptor	Peginesatide[489]	2012	Treatment of anemia associated with chronic kidney disease
Pulmonary surfactant	Lucinactant[490]	2012	Prevention of respiratory distress syndrome
CaSR	Etelcalcetide[491]	2016	Indicated for secondary hyperparathyroidism
MC1 receptor	Afamelanotide[492]	2014	Prevention of phototoxicity
Somatostatin receptors	Pasireotide[493]	2012	Treatment of Cushing's disease
	Lutetium Lu 177 dotatate[494,495]	2018	Treatment of somatostatin receptor-positive gastroenteropancreatic neuroendocrine tumors
	Edotreotide gallium Ga-68[496,497]	2019	Indicated for diagnose somatostatin receptor positive neuroendocrine tumors
Melanocortin-4 receptor	Setmelanotide[498,499]	2020	Indicated for chronic weight management of obesity

Table 2. Examples of peptides in different clinical trials and their indications

Clinical trial phase	Peptide name	Indication(s) for investigation
IV	Avexitide[500]	Hypoglycemia
	Calcitonin gene-related peptide[501]	Migraine
	Corticorelin[502]	Brain swelling; brain neoplasms
	Leptin[503]	Lipodystrophy; obesity
	Thymalfasin[504]	Liver Cirrhosis; Sepsis
III	Aclerastide[505,506]	Diabetic foot ulcers
	Albusomatropin[507]	Growth hormone deficiency
	Anamorelin[508]	Cachexia; lung cancer non-small cell cancer
	G17DT[509]	Various forms of cancer
	Insulin peglispro[510]	Diabetes mellitus
	Lenomorelin[511]	Malignancies
	Selepressin[512]	Shock; septic
	Somapacitan[513]	Adult growth hormone deficiency
	Taspoglutide[514]	Type 2 diabetes mellitus
	Thymosin beta-4[515]	Dry eye syndrome
	Tirzepatide[516]	Type 2 diabetes mellitus
	Ularitide[517]	Decompensated heart failure
	Vapreotide[518]	Gastric varices; oesophageal haemorrhage; portal hypertension; esophageal varices
	Vosoritide[519]	Achondroplasia
	Zoptarelin doxorubicin[520]	Endometrial cancer; prostate cancer
II	Angiotensin 1-7[521]	Miscellaneous Peripheral Blood Cell Abnormalities
	Bombesin[522]	Prostate cancer
	Cenderitide[310]	Heart failure
	Deslorelin[523]	Puberty; precocious
	Gastric inhibitory polypeptide[524]	Type 2 diabetes mellitus
	MK-3207[525]	Migraine
	Olcegepant[526]	Migraine Disorders
	Pancreatic Polypeptide[527]	Type 1 diabetes
	Peptide YY (3-36)[528]	Metabolic disease; obesity
	Pirnabine[529]	Chronic idiopathic constipation
	Somatoprim[530]	Acromegaly
	Somatropin pegol[531]	Growth hormone deficiency
	Thyrotropin[532]	Benign nontoxic and toxic goiter; goiter; nodular
	TT-232[533]	Renal cell adenocarcinoma
I	BPI-3016[534]	Type 2 diabetes mellitus
	NBI-6024[535]	Type 1 diabetes mellitus
	Many more…	

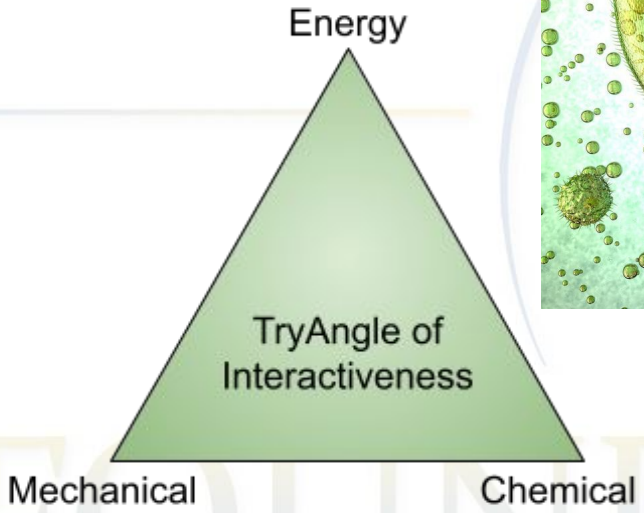
Good to Know

Most of the peptides we are ‘discovering’ are **natural functions** of the human body - this is important! Critical! It is the power of the inhibitors of normal bodily functions that play a huge role in resistance and rejection of these treatments!

There are NO silver bullets!

Peptides are amazing in their realm. Let’s see why they may not work optimally and what we can do to increase their potency and scope.

The BioPhysics and BioChemistry of Organisms



Single Celled Organisms

Best Success: Strong Attraction, Strong Repulsion = Survival and Optimization

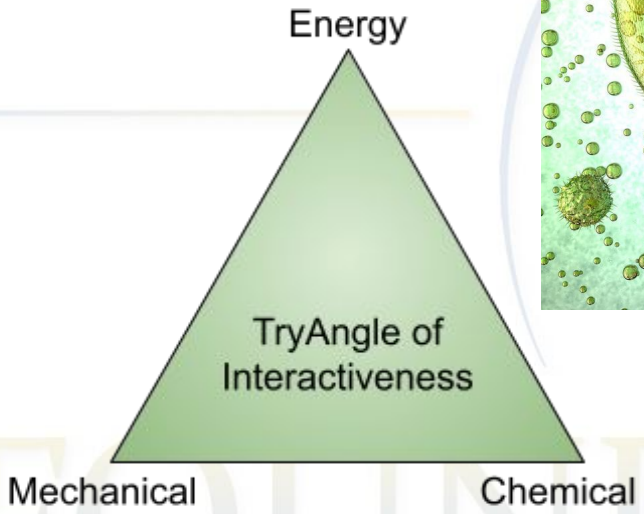
Influence:

1. Self
2. Environment
3. Other Organisms

Purpose: Attract Bennies, Repel Enemies!

Key: One Cell Influences MANY!

The BioPhysics and BioChemistry of Organisms



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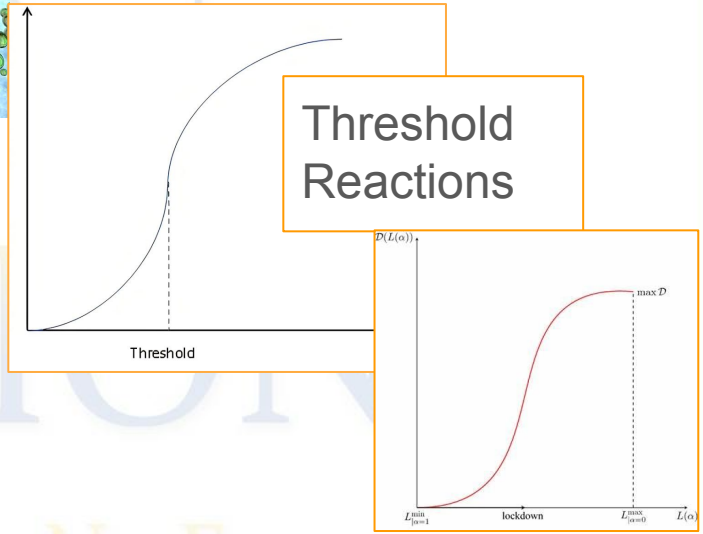

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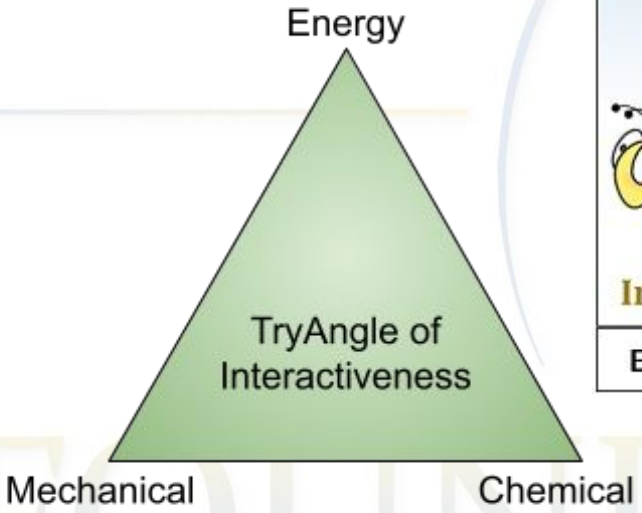
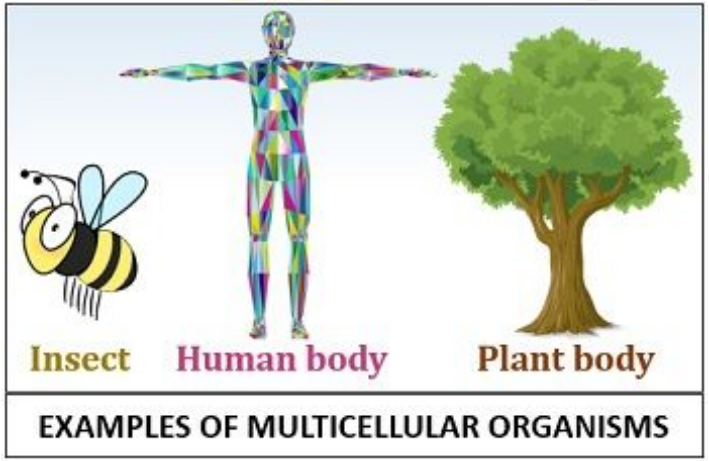




Best Success:
Strong Attraction,
Strong Repulsion
= Survival and
Optimization

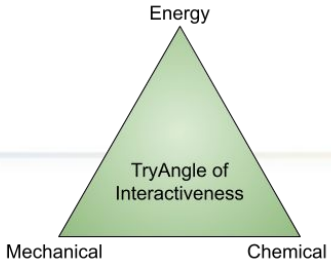
Influence:

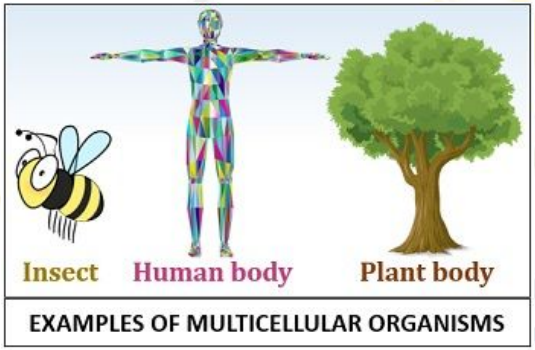
1. Self
2. Environment
3. Other Organisms

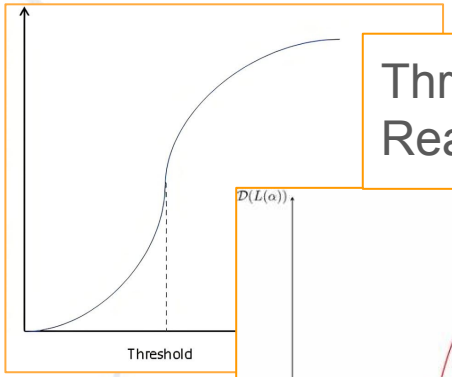
Purpose: Attract Bennies, Repel Enemies!

Key: Many Cells Influence Organism!

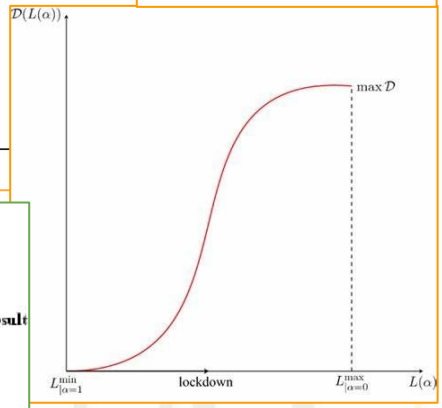
The BioPhysics and BioChemistry of Organisms



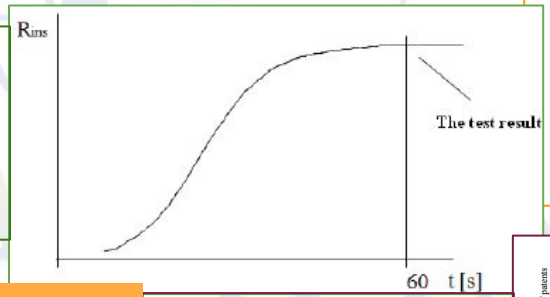


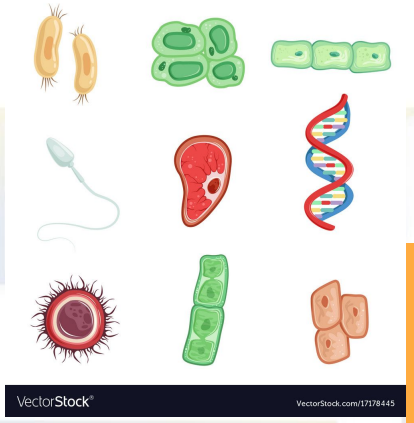


Threshold Reactions



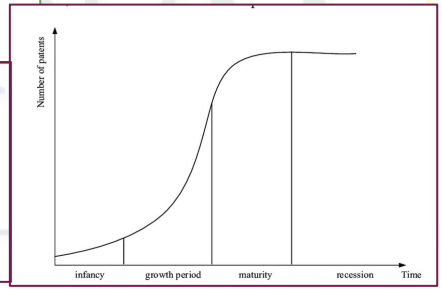
Timed Threshold Reactions



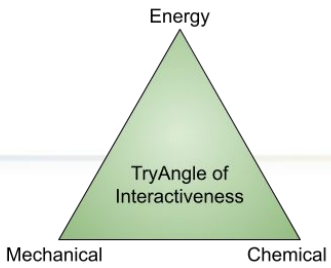


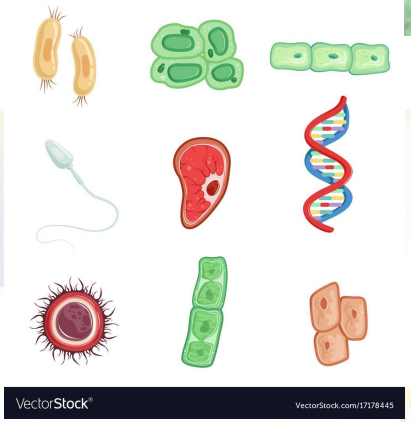
Multicellular Organisms CANNOT mount Critical Response to Every Cell!

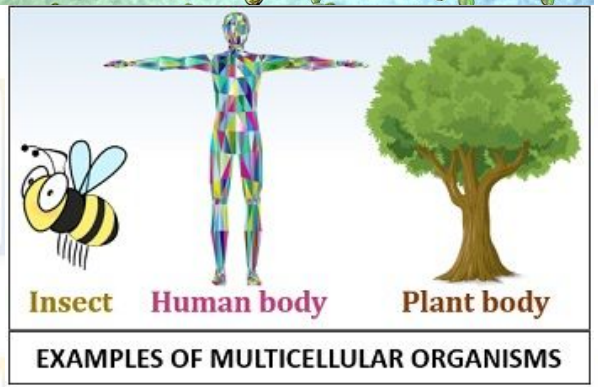
Multiple Threshold Reactions AND Tempered Reactions



The BioPhysics and BioChemistry of Organisms







Why is this important?

When Single Celled Organisms Invade Multi-Celled Organisms the SCO Has a **Threshold Reaction Advantage**

Influence:

1. Self - Mobility - Location
   a. **Anatomical Recesses**
2. Environment - Camo
   a. **Biofilms**
   b. **Membranes**
3. Other Organisms - Host
   a. **Epigenetics**

In the right environment, the invader **WILL** run the metabolism, energy and function of the host!

The environment of which I speak is called: DISEASE.

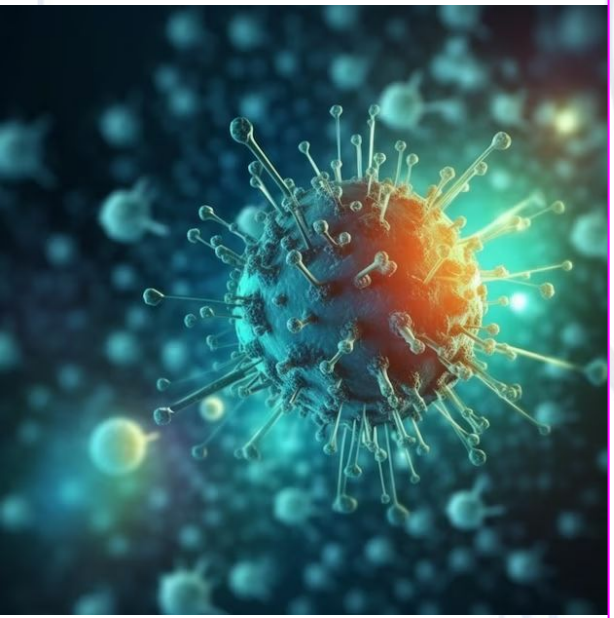
MULTIPLE studies across many DECADES old have proven that **chronic Viral, Fungal and Parasitic** infections are a MAJOR source of disease:

- CAD - MI - HTN
- CVD - Strokes
- Metabolic Dz - DM, Obesity, etc.

Another often overlooked element of these disease processes is what these chronic infections do to our systemic microbiome. FYI: They manipulate IT just as they do US!

The BioPhysics and BioChemistry of Organisms

What creates optimal environments for disease?



7 Triggers of ALL Disease:

1. Congenital - Dz vs Predisposition
2. Toxins
   a. Metals - InOrganic
   b. HydroCarbon - Organic
3. Infection
   a. Viral
   b. Fungal
   c. Parasites
   d. Bacterial
4. Trauma - Physical Accidents
5. Nutrition Deficiencies (97%)
6. Stress - Emotional - Infections
7. Energy - EMF's - Etc.

The BioPhysics and BioChemistry of Organisms

A Common Scenario:

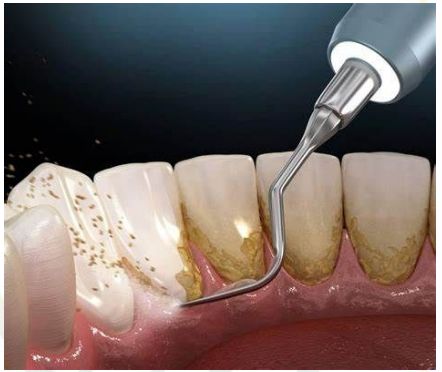
1. Weakened Organism:
    a. **Congenital** Predisposition
    b. **Nutritional** Deficiency
    c. **Toxic** Intake
    d. Trauma
    e. Stress
    f. EMF's
2. Enter **Infection** - Finds Location
    a. Camo
    b. Biofilms
3. Infections use:
    a. Toxins - NeuroToxins - Collagenase
    b. Biofilms
    c. Epigenetics - DNA

The BioPhysics and BioChemistry of Organisms

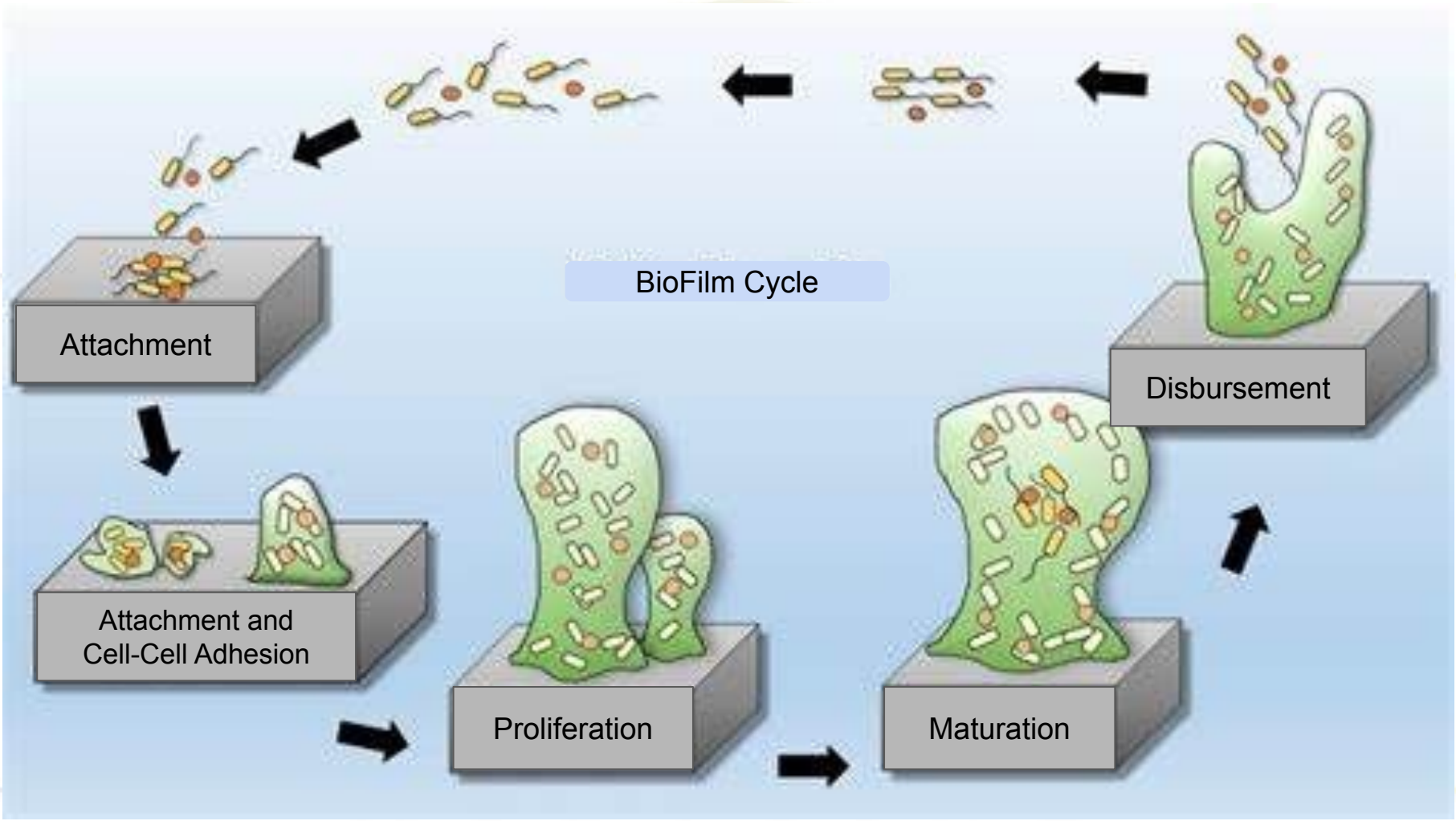
Well, Duh!

Rapid Fire Facts:

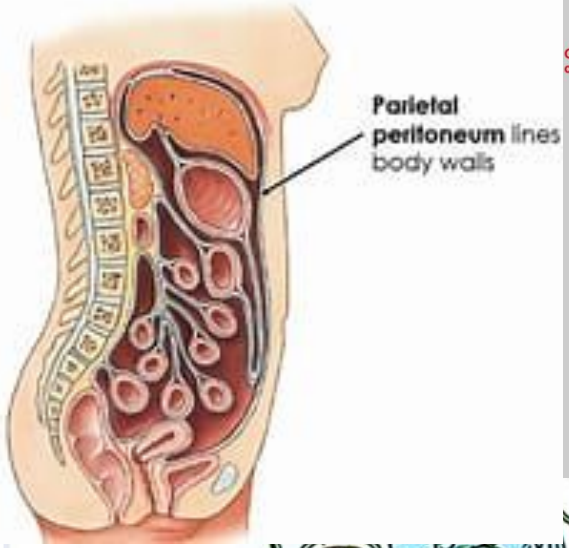
- VFP Infections epigenetically cap and alter our DNA expression (methylation)
- VFP's alter our immune function (often first is fever)
- VFP's set up biofilms whenever and wherever they can:
  - Dental Plaques - Tarter
  - Arterial Plaques
  - Gallstones
  - Appendicoliths
  - The worst is when they set up in the Peritoneal Anatomical Recesses in the abdomen and pelvis

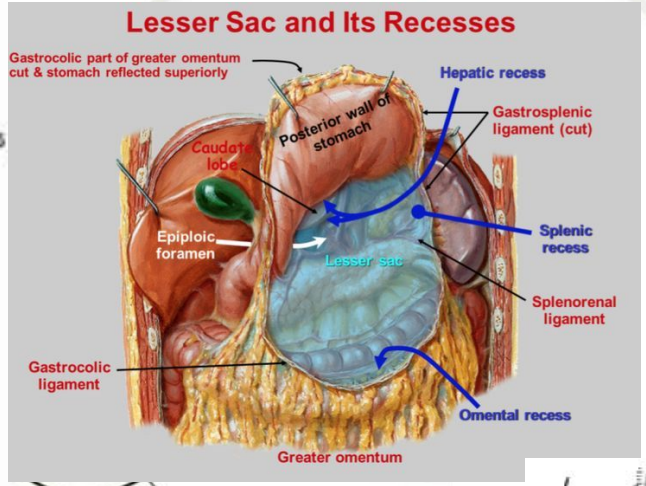


WE ALL HAVE BIOFILMS WITHIN US


BioFilm Cycle
Attachment
Attachment and
Cell-Cell Adhesion
Proliferation
Maturation
Disbursement

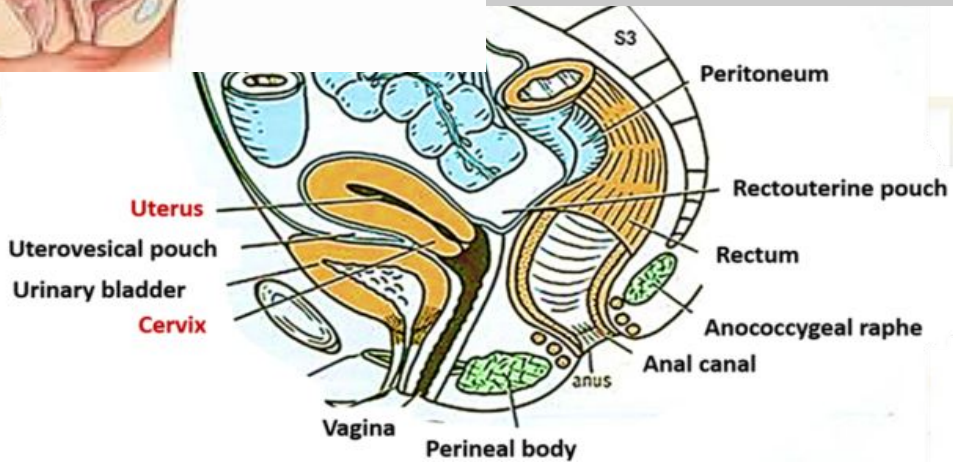
Peritoneal Abdominal Anatomical Recesses

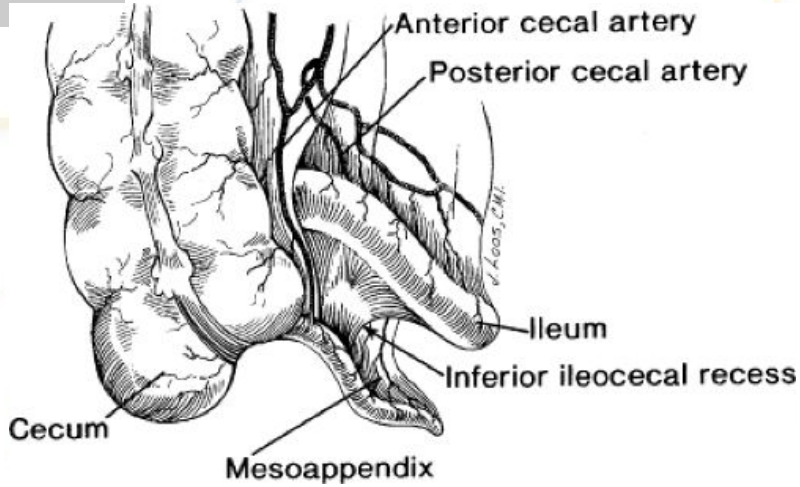




Recesses – pouches formed by the peritoneal folds

- duodenojejunal recess
- superior ileocaecal recess
- inferior ileocaecal recess
- retrocaecal recess
- intersigmoid recess

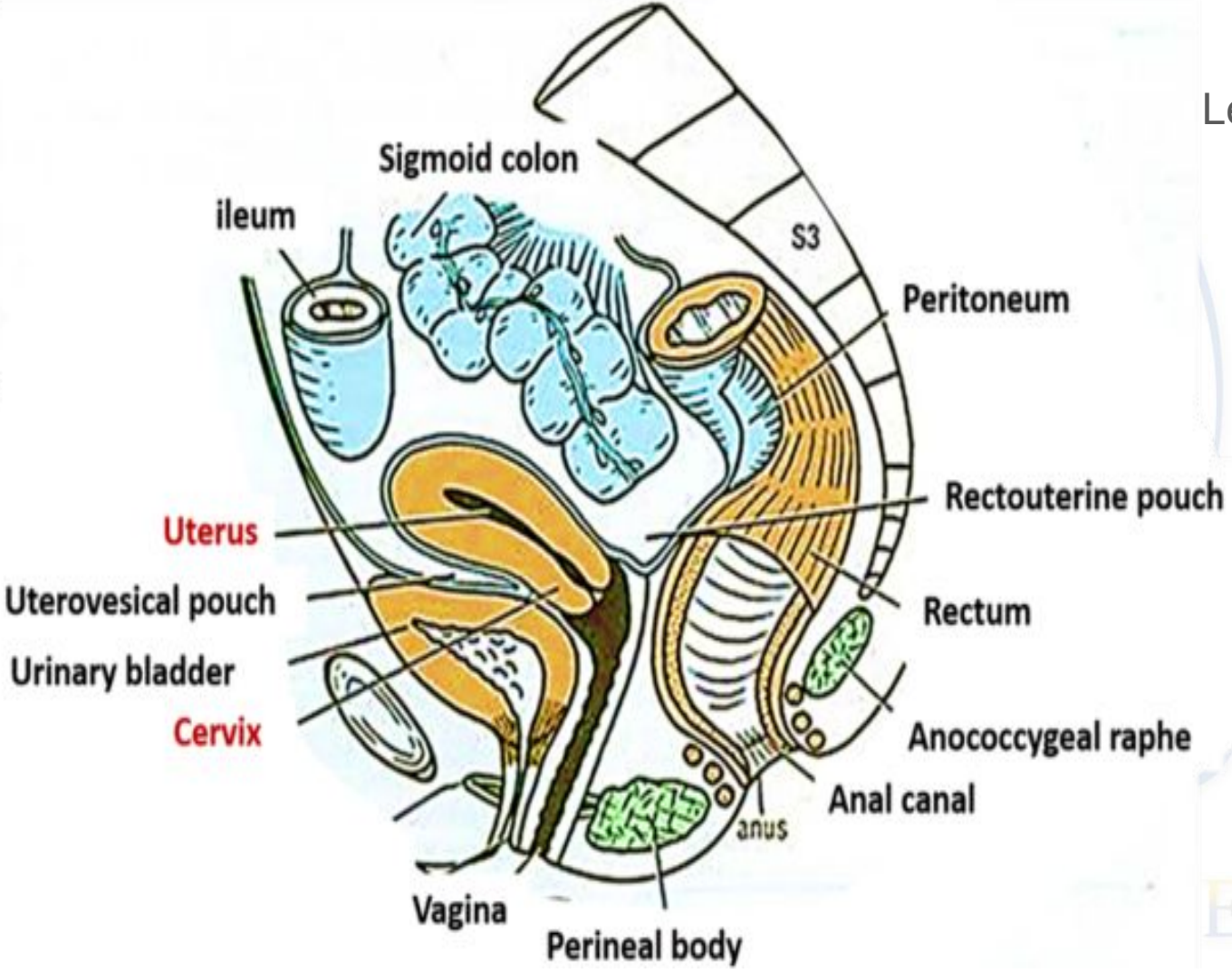




The BioPhysics and BioChemistry of Organisms

BIOFILM FACTS:

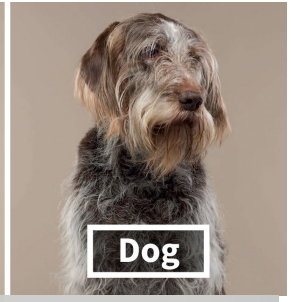
- **Protect** against Antibiotics - Natural or synthetic
- **Protect** against energy therapies -
  - Snot is a great insulator
- Allow MULTIPLE organisms to work **synergistically**
  - Parasites release NeuroToxins and **Collagenase**
  - Fungi release **NeuroToxins** and Collagenase
- Pathologic bacteria often enter the conglomeration
- The Community uses trapped toxic metals and hydrocarbons as **enzymatic catalysts**. - Calcium, Lead & Mercury are commonly used
- **Acidic** - which further toxifies the conglomerate community
- **Hypoxic** - major epigenetic microbiome alteration and influence
- EXTREME TOXICITY!

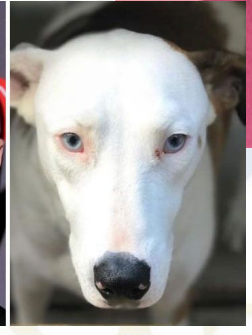


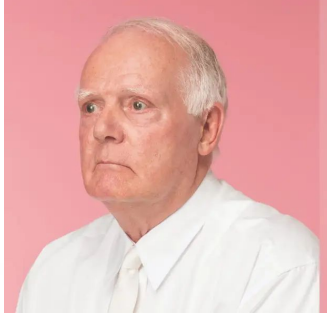
Let's Rethink:

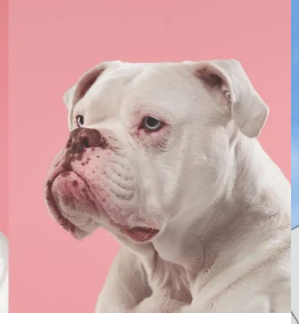
- Prolapse:
  - Vaginal
  - Bladder
  - Rectum
- Diverticulitis
- Chronic Pelvic Pain - ? Source
- Constipation
- Diarrhea
- Interstitial Cystitis
- Prostatitis
- Incontinence
- Chronic UTI's
- Etc.


Owner


Dog





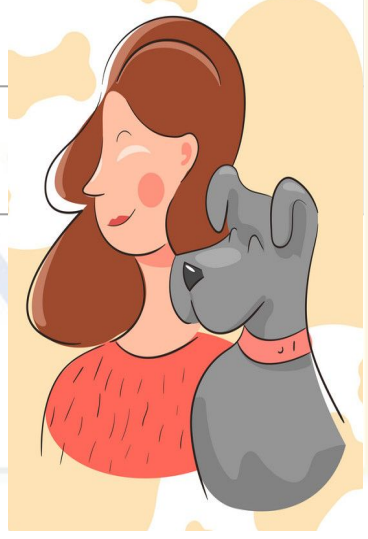


Let's Bring This Full Circle

Peptide Purpose	Pathogenic Block	Result
GLP-1 - Metabolic Adaptations	Epigenetic block to metabolic pathways NeuroToxins = Sluggish 2nd brain	Diminished to zero response May only see side effects & zero benefit
BCP-157 - Stem cell Activation, Collagen formation/repair, etc	Epigenetic blocks Collagenase - Brakes faster than repair	Diminished to zero response
CHK-Cu - Epigenetic Stem Cell Activation	Epigenetic Blocks Collagenase	Wrinkles, etc.

Most if not all of our peptides need:

1. Functional Tissue
2. Zero Toxins
3. Time



Maximize Effectiveness:

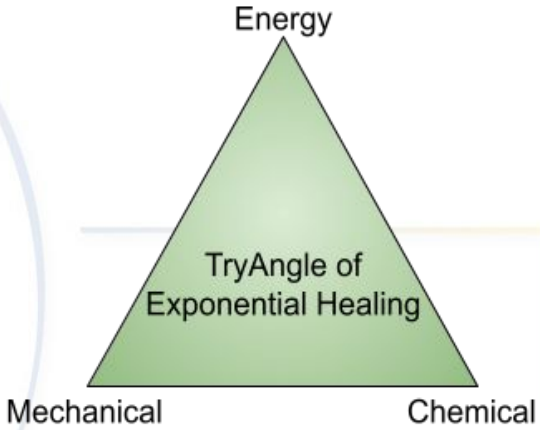
7 Triggers of ALL Disease:

1. Congenital -
2. Toxins -
3. Infection
4. Trauma -
5. Nutrition Deficiencies -
6. Stress -
7. Energy -

Supplements
Consider Meds (NSAIDS)
Aggressive Detox

a. **Anti-Viral**
b. **Attack Biofilms**
   i. **Anti-Fungal**
   ii. **Parasitics**
   iii. **ABX**

RenuO2 or Prolozone
Supplement
Stacked Stress Tx
PEMF, SoundWave, others



Tempered and Threshold Reactions will be different for each and every patient!

- **Congenital** Predisposition
- **Trauma**
- Exposures to **Toxins/Infections**
- **Nutrition** Availability
- **EMF** Exposure

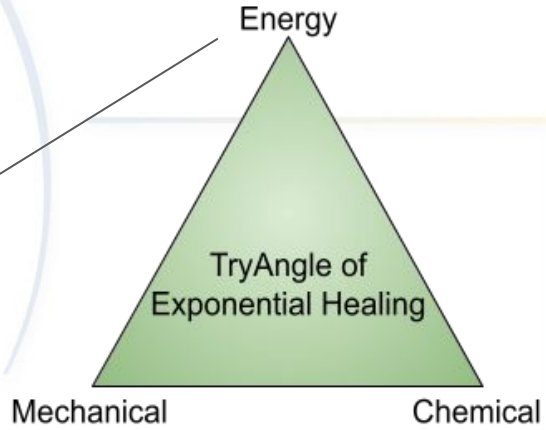
The BioPhysics and BioChemistry of Organisms

Of Note!

Fungal and Parasite Infections are chronic, camouflaged and very difficult to discover.

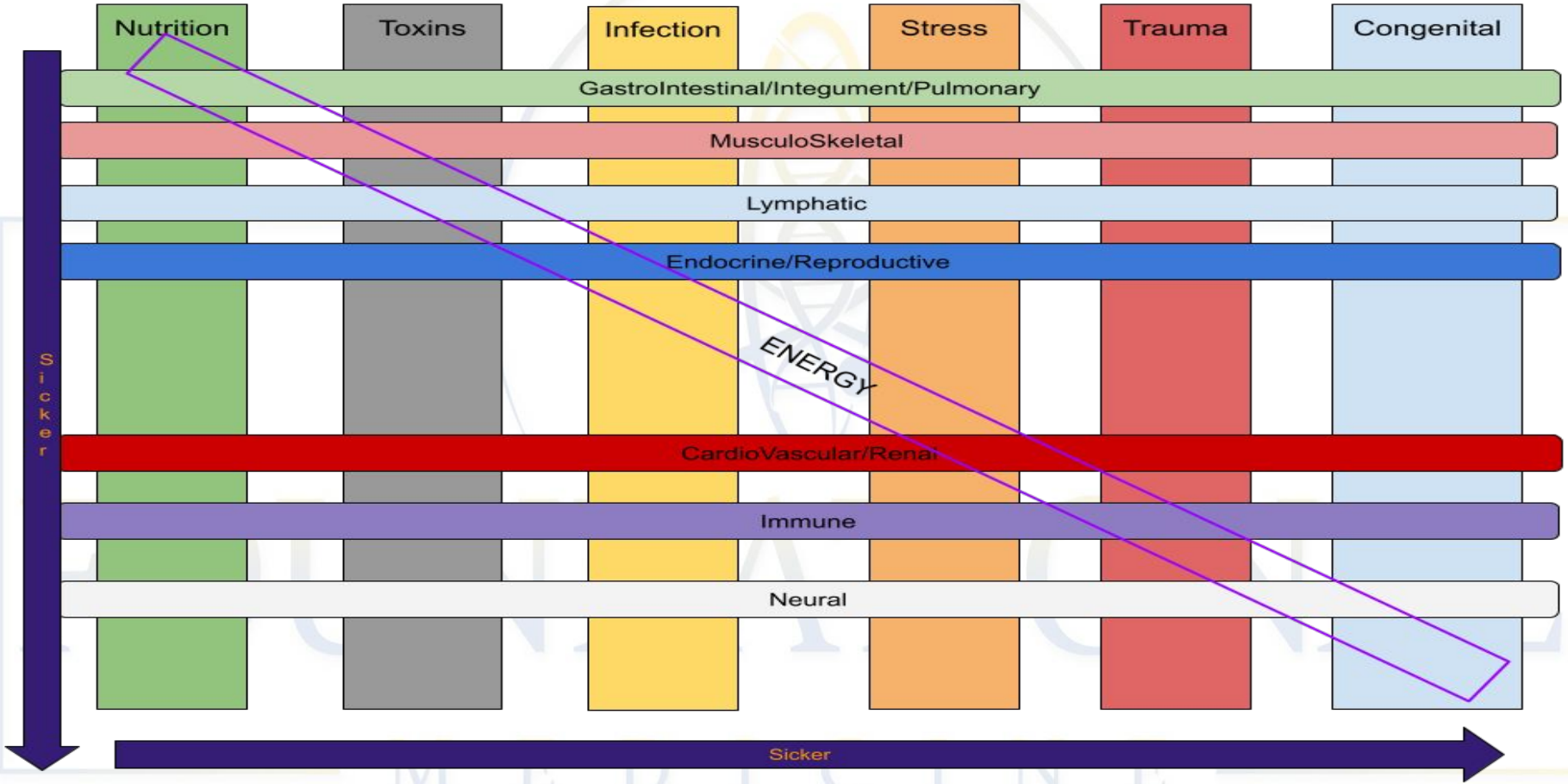
I use:

Detailed Intake Form
Energy Testing (SCENAR Tech)
Physical Examination
Lab Testing (Which is still lacking)



Findings:
All patients have chronic HS Viruses
8-16 Varieties of Fungal Infections
25-35 Varieties of Parasites

Discovery Continuum



Summary

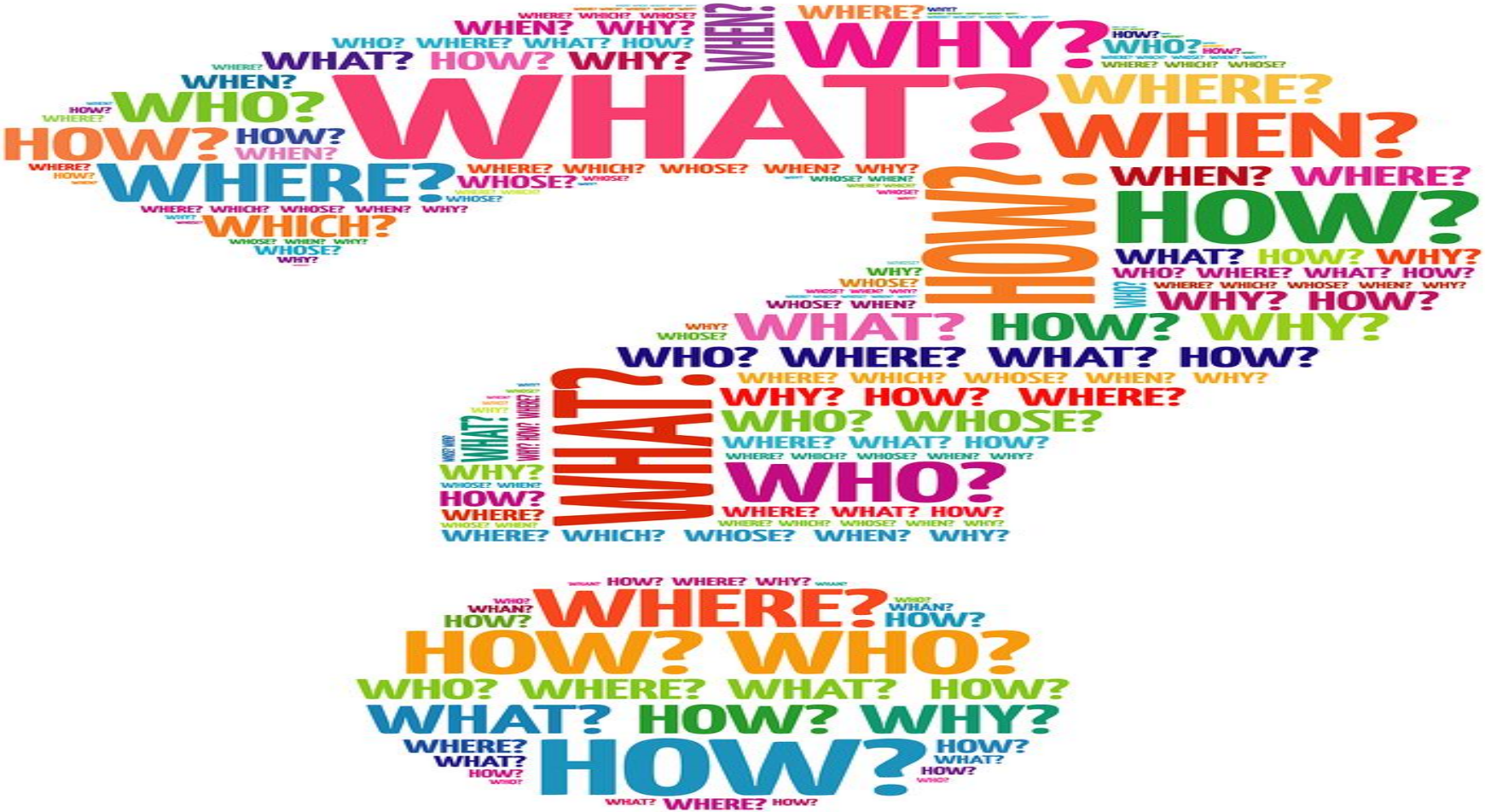
Tempered and Threshold Reactions will be different for each and every patient!

- **Congenital** Predisposition
- **Trauma** History
- Exposures to **Toxins/Infections**
- **Nutrition** Availability
- **EMF** Exposure History

- Stay Vigilant!
  - Stand strong for your patients - Keep Optimizing your care
  - Seek higher ground with morals and ethics!
  - Walson's Law: The Flow of Information and Ideas = Success and $$

This is the only chance we have against the big boys of medicine.

- You got this!


WHAT?
WHERE?
WHEN?
WHY?
WHO?
HOW?
WHICH?
WHOSE?

Research:

1. http://peptides.org
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