Summary of Module 3

Understanding the Research

Limits to Research – Slide 2

The Gluten Lie – Slide 3
Talks about the book

Keep an open Mind – Slide 4
We are easily influenced – most never checkout or question what they hear or read.

General Gut Health Protocol

Gut Health Supplements – Slide 2
Using supplements alone

General rules for Supplementation – Slide 3
Start with one at a time

Two Scenarios – Slide 4
2 approaches to create a protocol:

- Client Type I – this first approach is for clients who do not have extreme issues or whose gut health issues are not apparent despite having other health issues
- Client Type II – has extreme gastrointestinal issue and may have a diagnosis for a specific GIT condition

Definition of Major vs Minor – Slide 5
A minor issue is something that with some intervention can generally improve or be resolved.
A major issue is something that is causing the client extreme discomfort or the client has major health issues related to the GIT such as ulcer, colitis, Crohn's disease, etc.

Client Type I – Slide 6
Pick 3-4 symptoms the client wants to resolve
Decide link to gut health

Basic Protocol – Slide 7
Minor fixes first and then work up to major interventions.

Filling out a Food Journal – Slide 8

Do not bias the client

Protocol – Slide 9

Start with the steps to good digestions:

1. See how they are chewing
2. Check the amount of liquids with meals
3. Assess eating habits
4. Assess the size of the meal or the timing of meals
5. Consider food combining or food sequencing (www.drbass.com)

Client Type I – Slide 10

If steps 1-4 resolve issues – then gut health can be supported with foods
If they won't eat the foods then a probiotic (preferably with a prebiotic) can be added
If step 5 is needed for them to see a difference, then more gut health support is needed
Start them on probiotics and digestive enzymes
If this gives some improvement – then leave them on this as you address their other concerns

Client Type II – Slide 11 - 12

If you have introduced probiotics and they are not seeing enough improvement then try a higher dose probiotics.
If they cannot maintain their improvement, then they need to go back on the probiotics and add a gut health repair product. – Slide 12

Client Type I – Slide 13

May need Candida/Parasite cleanse

Client Type II – Slide 14 – 16

Clients are super reactive
You must carefully listen to what they say bothers them
They need major gut health work and for a long time but getting them on products that help and that they can tolerate may be difficult.
They need to get to a place where they are on: - Slide 15

1. High-dose probiotic (ideally with a prebiotic if tolerated)
2. Gut health supplement
3. Multi vitamin/mineral with Bs
4. EFAs
5. Specialty nutrients for gut including anti-microbial

The questions is how to get there – Slide 16

Proper Elimination/Provocation Diet – Slide 17

Most common allergens: Wheat (gluten), dairy, soy, dairy, eggs, chocolate, caffeine, citrus, tomatoes, nuts.
Also, may consider removing anything eaten daily

Remove suspect foods for 2 weeks and
Reintroduce one at a time every 72 hours.
Eat once and observe any symptoms that may occur in the three day period.
Do not eat the foods again until the re-entry phases is over

Client Type II – Slide 18
Client may need a candidiasis/parasite protocol and maybe even a leaky gut protocol but they need to work up to this.

Antimicrobials – Slide 19
Options:

1. Aloe vera
2. Oil of oregano
3. Grapefruit seed extract
4. Colloidal Silver – make sure it is a good quality one

Client Type II – Slide 20
Psychospiritual work would be helpful

Lactobacillus Bateremia

Lactobacillus Bacteremia – Slide 2
A condition where strains of lactobacillus are found in the blood stream
Associated with an underlying disease such as ulcerative colitis or with immunosuppression
L. rhamnosus is the most common strain found, with L. casei, L.fermentum, L gasseri, L. jensenii
While rarely fatal in itself, lactobacillus bacteremia identifies patients with serious and rapidly fatal illness

Lactobacillus Bacteremia – Slide 3
Finish study found increased probiotic use has not led to an increase in Lactobacillus bacteremia
No evidence that the lactobacillus strains are causing any harm
Most are speculating it is due to the nature and issues of the pre-existing condition and usually sepsis is involved

Understanding Probiotic Supplements

Probiotics – Slide 2
Health Canada Definition

Health Canada Monographs – Slide 3
Various Websites

U.S. – Slide 4
Probiotics not regulated

U.K. – Slide 5
MHRA Medical and Healthcare Products Regulatory Agency

Identifying Strains – Slide 6
Difficult to identify specific strains as they often have same genus and strains are highly similar

Supplements – Slide 7
Supplement manufacturers have to confirm that the strain they are using has been tested (Health Canada, FDA, MHRA verification)
Measured as CFUs (colony-forming unit) - is a unit used to estimate the number of viable bacteria
Look for research and materials from company for the answers

Making it More Complicated – Slide 8
Manufacturers want to protect proprietary information

Supplements Brands – Slide 9
So many – each claiming theirs are the best
Just like food – there is no one right probiotics for everyone
Different brands work differently on different people

Renew Life – Slide 10 - 11
Uses a unique, water-based enteric coating that protects the probiotics against being destroyed in the acidic environment of the stomach, yet still allows for the probiotics to populate in the intestinal tract –uses a lot of human microflora.

Premature Infants Study – Slide 12
A probiotic with B. breve, B.infantis B. bifidum, B. longum and L. Rhamnosus GG was significant were administered

Metagenics – Slide 13 - 17
Human Microflora and uses a lot of research for their products
Clinical study on children using L. acidophilus NCFM / B. lactis BI-07
Daily consumption of NCFM and Bi-07 and of NCFM alone significantly support immune health in children.

Genestra (Seroyal) – Slide 18
Natural pH and bile acid resistance: No enteric coatings required
Naturally strong adherence: High ratio of intestinal tract carriage

Probiotics – Slide 19
Various products from 2 -150 billion – usually four strains

HMF Neuro – Slide 20
HMF Neuro has been formulated with specific strains to degrade exorphins from food especially wheat

Antibiotic Care for taking after antibiotics – Slide 21 – 22
Chart

New Roots – Slide 23 – 24
Do their own enteric coating - a water based coating that resists the acidity of the stomach and only opens up within the small intestine at a PH of approximately 5

Bioflor 7 – Slide 25
Liquid active bacteria (similar to a food bacteria form)
5 strains - L. Acidophius, L. Paracasei, L. Plantarum and B. Lactis plus they recently added Bascillus Coagulans

Biotica – Slide 26
Naturally fermented – increases in numbers as it ages
Lactobacillus Fermentum ME-3 research shows it raises glutathione levels in the body

Molkasan - A Vogel – Slide 27
Made from fermented whey (from organic milk) – providing alkalizing minerals and L+ lactic acid – fosters the right ph to aid the growth of the good bacteria (4.5-5.0)
Is considered a prebiotic product

Megaspore Biotic – Slide 28
http://www.gomegaspore.com/
http://www.gomegaspore.com/webinar-2/
Clostridium and Bacillus are two types of bacteria that can exist in spore form

From Megaspore Site – Slide 29 – 30

Bacillus spores – Slide 31
Bacillus spores are the most widely prescribed prescription probiotics in the world - studied extensively in human clinical trials and have a very long history of use.

Why these five strains – Slide 32
Chart

Controversial Part – Slide 33
Claim that no probiotic makes it past the stomach acid and had some proof of this (yet we know that lactobacillus stains live there)

In Conclusion – Slide 34

VSL-3

A Unique High Dose Probiotic – Slide 2
Professional grade - 450 billion, 8 strains

1. Bifidobacterium breve
2. Bifidobacterium longum
3. Bifidobacterium infantis
4. Lactobacillus acidophilus
5. Lactobacillus plantarum
6. Lactobacillus paracasei
7. Lactobacillus bulgaricus
8. Streptococcus thermophilus

Study of VLS-3 and Ileal Pouch – Slide 3
Pouchitis is an inflammation of the lining of the pouch and is believed to be related to an overgrowth of bacteria affects up to 50% of patients with an ileal pouch (formed by folding loops of small intestine (the ileum) back on themselves and stitching or stapling them together and attaching near the rectum. The internal walls are then removed thus forming a reservoir)
People who took VSL-3 - The median stool frequency of pouch patients consuming VSL#3® on a daily basis progressively decreased at 6, 9, and 12 months.

Study – Slide 4 - 5
VSL#3® is the only probiotic recognized as an effective tool for the management of pouchitis by the American College of Gastroenterology, the British Society of Gastroenterology and the German Association of Gastroenterology.

Ulcerative Colitis – Slide 6
Patients with UC typically have lower amounts of lactobacilli and bifidobacteria, in their gut compared with normal individuals.

Ulcerative Colitis Study – Slide 7 – 8
Study and Chart

Ulcerative Colitis Study – Slide 9
Study, Before and After pictures

Slide 10
VSL-3 used by doctors

Special Nutrients For Gut Health

Helpful – Slide 2
List of nutrients you might find in supplements

Aloe Vera – Slide 3
Anti-microbial – anti-viral, anti-bacterial and anti-fungal
Anti-inflammatory

Glutamine – Slide 4 - 5
Help rebuild and repair the intestinal lining
Anti-inflammatory
Balances mucus production
Stabilizes blood sugar, curbs sugar and alcohol cravings – Slide 5

Butyrate – Slide 6
Lowers inflammation
Produces T-Reg cells in the gut

DGL – Slide 7
Contraindicated with blood pressure medication
Sooths mucus membrane

Marshmallow – Slide 8
Aids and sooths mucosal lining
Can promote phagocytosis

Slippery Elm – Slide 9
Helpful for ulcers
Can provide relief for IBS, diarrhea, colitis, Crohn's and GERD

Triphala – Slide 10
Aids constipation
Improves peristalsis
Helps improve and protect the intestinal wall lining during radiation treatments

N-acetyl Glucosamine – Slide 11
Calms inflammation of the mucosa
Helps with ulcers

Fiber – Slide 12
Citrus Pectin – Prebiotic - helps L. rhamnosus adhere better to intestinal cells than inulin (FOS), and reduces the adhesion of Salmonella
Lowers inflammation and speeds healing

MSM – Slide 13
Anti – inflammatory
MSM can coat the mucous membranes and prevent allergens from entering the bloodstream

Chamomile – Slide 14
Anti-inflammatory and anti-cancer properties
Aids colic, diarrhea and eczema

Other Nutrients – Slide 15 - 16
Zinc Carnosine: Protects and repairs the intestinal wall lining
Quercetin: helps inhibit histamine release, controlling intestinal inflammation and intestinal barrier function
Cat's Claw: wound healing, anti-inflammatory and helps with ulcers and protects against oxidative stress
Okra Extract: protects the liver, stabilizes blood sugar and is an antioxidant and supports the health of the intestinal tract – Slide 16
Prune Powder contain phenolic compounds neochlorogenic and chlorogenic acids that aid bowel movement, control absorption of glucose
Colostrum – IGF-1 has been shown to have a healing effect for the intestinal wall lining

Prebiotic Example – Slide 17
Chart of a prebiotic supplement

Example Intestinew – Slide 18 – 19
Showing what is in the supplement Intestinew

Histamine Intolerance

Why? – Slide 2
Some clients can't eat fermented foods, might be due to histamine intolerance

Histamine – Slide 3 – 4
A neurotransmitter that helps regulate communication between cells
Regulates gastric function
Helps with the permeability of blood vessels
Helps with brain function
Aids muscle concentrations
Certain strains of bacteria convert histadine (in foods) to histamine – Slide 4

Other strains helps break down histamine

Breaking Down Histamine – Slide 5
Two enzymes in particular:
N-methyl transferase (HNMT) – primarily from the liver and kidneys
Diamine oxidase (DAO) – made in the intestines

Symptoms – Slide 6 – 7
Itching eyes, ears, skin and nose
Hives (urticaria)
Low blood pressure
Tissue swelling
Increased pulse rate
Symptoms like anxiety and panic attacks
Nasal congestion and runny nose
Itchy, watery, red eyes
Headaches, fatigue, confusion, irritability
Digestive upset, reflux, heartburn
Possible loss of consciousness – Slide 7
Eczema will be worse
Histamine levels fluctuate during hormonal cycles
Drugs such as aspirin, ibuprophen, NSAIDs, some diuretics, antibiotics, and antidepressants depletes DAO

Strains – Slide 8
Strains capable of degrading histamine:
Lactobacillus curvatus Lactobacillus sakei Lactobacillus sp. Weisella hellenica ***Leuconostoc mesenteroides*** Leuconostoc sp. Escherichia faecium sp.group Sarcina lutea
B. infantis, B.longum, L. rhamnosus. L. salivarius, L. sporogenes, L. plantarum and L. gasseri break down histamine
L. casei and L. bulgaricus increase histamine

Liver – Slide 9
Having sufficient HNMT requires good liver function
Glutathione is needed for both Phase I and Phase II and is associated with HNMT

Glutathione Foods – Slide 10
Sulfur foods – garlic and onions
Watercress
Beef liver
Glutathione-containing foods spinach, asparagus, avocado, squash, zucchini, potatoes, melons, grapefruit, strawberries, and peaches

Foods – Slide 11
Chart

Foods that Counter Histamine – Slide 12
Quercetin-rich foods:
Apples.
Peppers.
Red wine.
Dark cherries and berries
Cruciferous veggies, including broccoli, cabbage and sprouts
Leafy green veggies
Citrus fruits.

Other Histamine Lowering Foods – Slide 13

Protocol – Slide 14
DAO supplement such as Xymogen HistDAO
Multi containing copper or copper supplement
Probiotic that does not contain L. casei or L. bulgaricus Liver support
High antioxidants
Quercetin (reduces mast cell activity and therefore histamine)

Should You Remove Foods? – Slide 15
Using the DAO enzyme is the first step
Add other recommended supplements
Counter histamine foods with quercetin foods and histamine lowering foods (start with these first)

And finally... – Slide 16
The DAO enzyme should help immediately
The issue with glutathione, methylation and HNMT will take time

VITAMINS, MINERALS AND THE GUT

Nutrients – Slide 2
It supports more a whole food diet or multi nutrients approach
Research is basically bits and pieces but there is enough to indicate all bases should be covered

Dybiosis – Slide 3
Some indication that nutrients have relationship with good bacteria, some even promote the growth of specific strains
Deficiency of nutrients could also be a factor in developing dysbiosis

Oxidative Stress – Slide 4
Oxidative stress – factor for inflammation
Another role for gut bacteria is to protect us from oxidativestress
Going from no exercise to moderate improves microbiota levels.

Oxidative Stress – Slide 5
Many bacteria (especially good bacteria) are anaerobic so oxygen is harmful to them
Gut bacteria have the ability to potentiate antioxidants (both phytonutrients and vitamins and minerals)

Antioxidants – Slide 6
Superoxide dismutase (SOD), glutathione peroxidase, and catalase are the enzymes involved in protecting cells from the damaging effects of oxidative stress
Complex relationship exists between gut bacteria, amino acids need to produce these enzymes and minerals such as zinc, iron and manganese
For example – glycine deficiency has been noted in diseases such as diabetes, obesity and fatty liver disease.

Antioxidants – Slide 7
Glycine is one of three amino acids needed for glutathione production
Butyrate increases glutathione
Gut bacteria regulates glutathione metabolism and levels in the gut and body

EFAs – Slide 8
Omega 6 helps promote healthy cell membranes and can help regulate inflammation in the gut and body.
Omega 3 can counter inflammation in the gut and body. EFAs aid in gut health repair, improve bowel function and play a role in protecting the gut lining.
Antioxidants protect EFAs

EFAs – Slide 9
Also help repair the gut from the effects of colitis and other gastrointestinal issues.
One experiment showed that Omega 3 increased butyrate producing bacteria

Amino Acids – Slide 10
Important for many functions
Gut bacteria produce many amino acids and facilitate their absorption into the body
Deficiency of gut bacteria can be a factor of amino acid deficiency and related conditions

Vitamins – Slide 11
Act as catalyst in the body
Gut bacteria makes a number of vitamins
Several vitamins promote the production of good bacteria strains

Specific nutrients have relationships with specific strains

Vitamin D – Slide 12

Cell receptors in the gut for vitamin D
It also helps reduce inflammation and repair the gut lining.
Vitamin D promotes good bacteria levels, especially when combined with B vitamins.

Vitamin A – Slide 13

It helps with allergies and autoimmune conditions.
It also has an ability to help the gut lining function.

B Vitamins – Slide 14

B vitamins involved for the intestinal role of immune function response
Gut microbes make B12 but it appears that they make it for themselves and not for use by the body and use it for regulatory purposes such as transcription (gene expression)

B Vitamins – Slide 15

Folic acid helps maintain T-Regulatory cells
B 2 is involved with MAIT Cells (innate-like lymphocytes with anti-bacterial function) to help fight infection
Fermented milk and sourdough are just two fermented foods that produce B-vitamins.

Vitamin C – Slide 16

Helps promote many good bacteria strains
Preventing or helping to repair damage to the intestinal wall lining and damage good gut bacteria
Helps reduce intestinal inflammation
Some early research has found that bacteria (specific strains) can produce Vitamin C

Vitamin E – Slide 17

Like vitamin C, vitamin E helps protect against free-radical damage. It can also help balance histamine in the intestines and the body
In animal models, when gut bacteria levels were lowered, symptoms of vitamin E deficiency appeared

Vitamin K – Slide 18

Bacteria produces vitamin K
Antibiotics deplete vitamin K
Warfarin inhibits the activation of the Vitamin K (in order to thin the blood)

Minerals – Slide 19

Some bad bacteria strains actually deplete minerals while good bacteria has a synergistic relationship

Lactobacillus and bifidus strain produce lactic acid which lowers the intestinal ph and increase mineral absorption (they become more soluble)
Prebiotics such as inulin and FOS have been shown to increase mineral absorption

Calcium/Magnesium – Slide 20
Calcium may play a role in helping our good gut bacteria survive.
Contributes to how lactobacillus strains do their job
Studies show that a deficiency in magnesium lowers bifidobacteria in the colon and is also connected to symptoms of depression and anxiety
A lack of magnesium is also connected to higher levels of intestinal inflammation.

Calcium/Magnesium – Slide 21
Calcium and magnesium work together for intestinal health.
Aid muscle contraction in the gastrointestinal system
SCFA increase calcium solubility and absorption
They also aid the absorption potassium, sodium and magnesium
L. acidophilus and L. rhamnosus aid electrolyte absorption

Manganese – Slide 22
Researchers believe that manganese is needed to help several strains of good bacteria grow.
Also involve in the production of manganese catalase – gut bacteria either manufacture or produce enzymes that do so

Zinc – Slide 23
A zinc deficiency may result in several gastrointestinal issues.
Too little zinc can alter the quality and quantity of good bacteria.
Zinc is needed for the survival of several species of bacteria
Regulates the gap junctions in the gut lining and helps prevent them from opening up.
Zinc is also essential for producing stomach acid, which aids the digestion of protein

Selenium – Slide 24
This is essential for gut health as it regulates inflammation, prevents free radical damage and helps prevent damage to the gut lining.
Selenium increases the diversity of bacteria strains and in turn, the good gut bacteria, help to improve the availability of selenium in the body.
As an antioxidant protects microbes and intestines form oxidative stress

Sulfur – Slide 25
Some strains of good bacteria produce sulfur.
Sulfur is an important mineral that helps maintain hair, skin cartilage and tissue.

Sulfur – Slide 26

It also helps keep enzymes active and makes vitamin D from the sun more available to the body.

Sulfur benefits glucose metabolism and a deficiency of the mineral has been noted in those with Alzheimer's.

Dysbiosis has been linked with sulfur deficiency as strains of bad bacteria can reduce sulfur levels, making it unavailable to the body.

OBJ

Iron – Slide 27

One rat study found that iron aided the production of butyrate by bifidus bacteria

It increases the overall number of Bacteroides and Clostridium Cluster IV

Involved in the production of catalases – which are involved in Phase I and II activities of intestinal bacteria

OBJ

Nutrients – Slide 28

Unless a known deficiency is present – help clients with a cross sections nutrients

Algae (chlorella or spirulina) have many of the key nutrients

Bee pollen is also high in nutrients for gut

Make sure all nutrients are covered

OBJ

Making A Decoction

No handouts

Explaining The Strains By Condition Chart