

# Gastrointestinal System

## The Ecological Approach

BSEM

Training Day May 2018

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# Topics

- History taking and examination
- Key Approaches:
  - Food Allergy or Intolerance
  - Dysbiosis
- Common complaints and conditions
  - Within the GI tract
  - Systemic Manifestation of GI Disturbance
- Case Histories

# History Taking

**SAMPLE PATIENT QUESTIONNAIRE- Confidential**

Please complete this form and return it to confirm your first appointment.

DATE OF FIRST CONSULTATION \_\_\_\_\_

SURNAME \_\_\_\_\_ FORENAME (S) \_\_\_\_\_

ADDRESS \_\_\_\_\_

TEL NO: (Home) \_\_\_\_\_ (Work/Mobile) \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_

OCCUPATION \_\_\_\_\_ DATE OF BIRTH \_\_\_\_\_

MARITAL STATUS \_\_\_\_\_ GENDER \_\_\_\_\_

NAME AND ADDRESS OF FAMILY DOCTOR \_\_\_\_\_

WEIGHT \_\_\_\_\_ HEIGHT \_\_\_\_\_ ETHNIC ORIGIN \_\_\_\_\_

DO YOU WANT YOUR FAMILY DOCTOR TO BE INFORMED OF THE DETAILS AND OUTCOME OF  
TREATMENT RECEIVED?

Please Indicate Yes/No YES \_\_\_\_\_ Signed by Patient \_\_\_\_\_

NO \_\_\_\_\_

HOW, OR BY WHOM, WERE YOU REFERRED TO THE CLINIC? \_\_\_\_\_

DETAILS OF NEXT OF KIN AND EMERGENCY CONTACT: NAME: \_\_\_\_\_

RELATIONSHIP \_\_\_\_\_ TEL NO: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

IF RELEVANT, PLEASE GIVE DETAILS OF PRIVATE HEALTH INSURANCE COMPANY (including  
registration No.):

WHAT ARE YOUR EXPECTATIONS OF THIS CONSULTATION AND WHICH SERVICES AT THE CLINIC  
ARE YOU MOST INTERESTED IN?

MAIN SYMPTOMS OR CONDITIONS THAT PROMPTED THIS CONSULTATION:

Approx. Date of Onset

- |          |       |
|----------|-------|
| 1. _____ | _____ |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |

HOW FREQUENTLY DO SYMPTOMS OCCUR?: \_\_\_\_\_

HAVE YOU NOTICED ANYTHING THAT MAKES YOUR SYMPTOMS WORSE OR BETTER? : \_\_\_\_\_

Are you taking any **DRUGS or MEDICATIONS**? (including sleeping tablets, painkillers, antihistamines, blood pressure pills, contraceptive pills, hormone replacement therapy, laxatives, etc.)

- |          |          |
|----------|----------|
| 1. _____ | 3. _____ |
| 2. _____ | 4. _____ |

Are you taking any VITAMINS, MINERALS, or other **NUTRITIONAL SUPPLEMENTS**?

- |          |          |
|----------|----------|
| 1. _____ | 3. _____ |
| 2. _____ | 4. _____ |

List any DRUG to which you have ever reacted adversely:

DRUG

SYMPTOMS

- |          |       |
|----------|-------|
| 1. _____ | _____ |
| 2. _____ | _____ |
| 3. _____ | _____ |

**VACCINATION HISTORY**

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### PAST MEDICAL HISTORY

Please list all main conditions, major illnesses, operations, infections, accidents, etc. from which you have suffered. Ladies should include pregnancies, miscarriages, fertility treatments and menopause, if relevant.

Year	Illness, Operation, Accident, Pregnancy, Hospitalisation
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____

### FAMILY MEDICAL AND SOCIAL HISTORY

Mother \_\_\_\_\_

Father \_\_\_\_\_

Siblings \_\_\_\_\_

Children \_\_\_\_\_

Paternal Grandparents \_\_\_\_\_

Maternal Grandparents \_\_\_\_\_

Other \_\_\_\_\_

### GENERAL DIET AND LIFESTYLE QUESTIONS

1. What is your daily consumption of tobacco? \_\_\_\_\_
2. Have you smoked in the past? \_\_\_\_\_
3. What is your daily consumption of alcohol (give details) and have you been a heavy drinker in the past?  
\_\_\_\_\_  
\_\_\_\_\_
4. Source of water consumed? \_\_\_\_\_
5. What is your water consumption per day \_\_\_\_\_ cups? Do you consume any soft drinks/juices \_\_\_\_\_ cups?

6. How many cups of **tea/coffee** do you drink daily? \_\_\_\_\_ Tea \_\_\_\_\_ Coffee
7. How much **sugar/sweetener/sugar substitute/honey** do you take in your tea/coffee? \_\_\_\_\_ per cup?
8. **What do you normally eat for:**

Breakfast \_\_\_\_\_

Midday meal \_\_\_\_\_

Evening meal \_\_\_\_\_

Snacks in between meals \_\_\_\_\_

9. Are there any foods you avoid eating?

List any food, drinks, etc. which you know have caused you an allergic reaction \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10. List the **cookware** you utilise and the **materials** they are made from?

#### **SECTION A: FOOD SENSITIVITY**

Do you suffer from?

a) Undue fatigue \_\_\_\_\_

b) Fast beating heart/palpitations \_\_\_\_\_

c) Bouts of sweating for no obvious reason (During day or at night) \_\_\_\_\_

d) Swelling or puffiness of ankles, fingers, etc. \_\_\_\_\_

e) Restless legs \_\_\_\_\_

f) Overweight or major fluctuations in weight \_\_\_\_\_

Current Weight \_\_\_\_\_ Height \_\_\_\_\_

g) Food cravings of any sort \_\_\_\_\_

h) Headaches/Migraines \_\_\_\_\_

i) Feeling particularly bad first thing in the morning \_\_\_\_\_

j) Feeling much worse if you miss a meal \_\_\_\_\_

k) History of Gastroenteritis or parasitic infections \_\_\_\_\_

l) Do you have a history of living in the tropics? \_\_\_\_\_

m) Do you consume raw or undercooked foods regularly? \_\_\_\_\_

n) Do you have a history of viral illnesses that you are aware of? \_\_\_\_\_

The Vagus

# **THE GUT HEART AXIS**



# Case History

- 58 year old London Taxi Driver
- 4 year history of tachyarrhythmia; AF
- Requiring ablations x5
- Treated with Amiodarone:
  - Resulted in hypothyroidism

# Past Medical History

- No other history of cardiovascular disease
- On Statins for borderline hyperlipidaemia
- Hypothyroid
- Generally fit and well; keen cyclist; non-smoker

# On Direct Questioning

- Palpitations often post prandial
- High carbohydrate low fat diet
- Poor digestion with bloating and alternating loose stools and constipation
- Moderate alcohol, caffeine, and chocolate intake in past
- Frequent muscle cramps
- Fatigue

# Salient Relevant History

1. Occupational exposure
2. Post prandial palpitations
3. Digestive problems
4. High carbohydrate, low fat/low protein diet;
5. Moderate alcohol consumption
6. Statins
7. Stimulants
8. Muscle cramps
9. Fatigue

# Investigation

- Red cell magnesium levels were low
- Low plasma zinc levels
- Low function of vitamins B2, B3, and B6
- Raised burden of metals and benzene and its metabolites
- Significant elevation of Arabinose and other fungal metabolites in urine
- Low Co-enzyme Q10 levels

# Biochemical causes of Arrhythmia

- Poor mineral base:
  - Magnesium deficiency
  - Depleted by high carbohydrate diet
  - Increased loss through alcohol intake
  - Lead and other toxic metal exposure
- Co-enzyme Q10 depletion
  - Low fat diet
  - Blocked synthesis by HMG CoA reductase inhibitor

# Biochemical Causes of Arrhythmias 2

- Dysbiotic bowel:
  - Dysbiotic fermenting microbiota altering metabolome by generating toxic alcohols
  - Irritation of enteric nervous system (vagus nerve)
- Raised toxic load (lead):
  - Increased endothelial, nervous, and myocyte dysfunction
  - Lipid peroxidation

# Treatment

- Addressing Dysbiosis
  - Increased nutrient density
  - Anti-fungal medication
- Supplemental:
  - Magnesium
  - Coenzyme Q10
  - Zinc
- Reduce total body burden of lead



# Outcome

- Off Flecainide and Statins
- No further tachyarrhythmia
- Extremely fit and competitive sport
- No further ablations in the last 7 years.

# Summary

- Palpitations and cardiac arrhythmias as indication for gut dysbiosis and digestive disturbance
- Treating gut microbiota, digestion, and nutrient status not only helps digestion but treats the heart

# Heart Rate and Blood Pressure

# Case History: 40-year-old Housewife Treated by Elimination Diet

- **30-year history of multiple health problems**
- **severe migraine**
- **frequent sterile dysuria and bladder pain attacks**
- **irritable bowel syndrome with diarrhoea**
- **depression - suicide attempts 1972 and 1975  
ECT 1972 and 1973**
- **perennial rhinitis**
- **Required 11 different medications concurrently**
- **In-patient during 1977 for 30 days with twenty out-patient  
attendances and 28 GP visits**

# Case History

## 40-year-old housewife treated by elimination diet

**DAY 1** Severe migraine started in late afternoon

**DAY 2** Bad migraines with vomiting, severe muscle aches

**DAY 3** Diarrhoea and muscle aches persisting

**DAY 4** Very weak and dizzy, aching all over – like ‘flu’

**DAY 5** Improving but very hungry, craving tea and biscuits

**DAY 6** Woke up feeling fantastic! Never so good.

**DAY 7** Still feeling well, some bladder pain and mild headache

**DAYS 8 - 10** ‘I don’t remember feeling this well for a long time. Main problem now is the diet, but if I could go on feeling like this, I would stay on it for ever!’

# Pulse and symptom responses after food challenge

Minutes after ingestion:

	0	20	40	60	80	100	120	Symptoms in next four hours
Turkey	92	92	92	92	92			None
Potato	92	92	92	92	92			None
Cow's Milk	90	90	<u>98</u>	<u>104</u>	<u>120</u>			Sneezing, chest tight, runny nose, pain in temples
Plaice	92	92	92	92	90			None
Soya	88	88	88	88	88			None
Pork	88	<u>96</u>	<u>100</u>	<u>96</u>	88			None
Tomato	80	80	88	88	88			Slight headache
Rice	92	92	92	94	94			None
Butter	84	84	<u>104</u>	<u>96</u>	<u>96</u>			Headache, agitated
Onion	82	82	82	82	82			None

# Pulse and symptom responses on re-challenge

Minutes after ingestion:

	0	20	40	60	80	100	120	Symptoms ensuing 4 hrs
Wheat 1	84	84	<u>96</u>	<u>94</u>	<u>94</u>	90	82	None
Wheat 2	82	84	<u>96</u>	84	80	80	80	None
Wheat 3	80	80	80	80	84	--	--	16 hours very depressed, 22 hours severe migraine and took an overdose. Admitted for iv Saline drip for three days.
Banana	78	78	78	76	78			None
Egg	88	88	<u>100</u>	<u>106</u>	<u>120</u>			Frontal headache, nausea, renal pain
Mushroom	92	92	88	92	92			None
Corn 1	86	88	<u>96</u>	<u>100</u>	88	90	84	Nausea and fatigue, 12 hours
Corn 2	--	--	--	--	--	--	--	--
Corn 3	--	--	--	--	--	--	--	--

Oedema



# Food Allergy

- 2 year history of severe hypertension and oedema on maximum dose of 5 drugs
- 35 kg weight gain over 2 years
- Severe diarrhoea, gas and bloating

# Indicators of Food Intolerance

- Undue fatigue
- Tachycardia
- Bouts of sweating for no obvious reason
- Oedema
- Restless legs
- Excess weight gain
- Food cravings
- High intake of cereal grains in diet-Repetitive Diet
- Diarrhoea, gas, and bloating
- No headaches/migraines
- Not worse in mornings
- Not worse if missed meals

# Examination

- Eczema behind and inside ears
- BP 145/100 on multiple anti-hypertensives
- Pulse 100 bpm
- Massive pitting oedema of legs, hands and face

# Diagnosis and Management Plan

- Suspected food intolerance
- Elimination diet consisting of 26 low risk foods for one week

### ELIMINATION DIET - STAGE I

For 6½ days starting on ..... your diet should be *totally* restricted to the following:

Olive oil	For cooking
Venison	] Grilled or roasted ( <i>hot or cold</i> )
Lamb Lamb's liver and kidneys also permitted	]
Sea Bass	]
Cod	]
Sole	]
Trout	] <i>Only fresh or frozen (not tinned or smoked)</i>
Mackerel	] Grilled, microwaved, steamed or fried in
Hake	] olive oil.
Plaice	]
Haddock	]
Red Snapper	]
Sharon (Persimmon) fruit	
Pears	
Carrots	]
Green Beans	] <i>Only fresh or frozen (not tinned)</i>
Peas	]
Spinach	] Obtainable from many
Chinese Bean Sprouts	] supermarkets all year round, or in frozen
Parsnips	] form out of season.
Turnips	]
Swedes	] Raw, microwaved, boiled, roasted or fried
Marrow	]
Courgettes	]
Cucumber	]
Sweet Potatoes	] Boiled, roasted or cut into penny slices and microwaved/deep fried in olive oil until brown.
Still or Sparkling Bottled Water	<i>Malvern, Perrier, Evian, Volvic or any other spring waters are obtainable from supermarkets or off-licences</i>

Nb: Sweet potato crisps & golden parsnip crisps can be found in some supermarkets.  
(They do contain sunflower oil which is almost as low risk as olive oil)

A pear or fruit juice drink can be made by removing the skin and liquidising the fruit with  
bottled water.

Use only sea salt.

*Continued overleaf ...*

# Follow up and Progress

- Day 1: No significant changes noted by patient
- Day 2: Significant reduction in oedema reported; Very tired and short-tempered
- Day 3: On-going reduction in oedema; mild arthralgia;  
**STOPPED DIURETICS**
- Day 4: Very faint; BP 80/40; **STOPPED ALL ANTI-HYPERTENSIVES**
- Days 5-7: Well with BP within normal limits off all anti-hypertensives

# Follow up at Day Seven

- Weight loss of over 11 lbs (5 kg) in seven days
- Waist size reduced from 46 to 42 inches
- Blood pressure in clinic off all medications:
  - 137/70
  - 124/70
- Felt energetic

# Stage 2 Elimination Diet

- Re-introduction of low risk foods into diet
- One food at a time
- Over a period of 4-6 weeks
- Food diary
- Diary of any symptoms and signs such as weight and blood pressure, swelling, GI symptoms



# Reactions to Foods Re-introduced in Phase II Diet

- Oats:
  - Peripheral and facial oedema 2 hours after ingestion
  - Clicking sounds in knees
  - Dermatitis
- Corn:
  - Oedema after 5 hours
  - Diarrhoea
- Wheat:
  - BP went from 120/70 up to 160/90
  - Oedema++++
- Rye: identical reaction as wheat

# Reactions (continued)

- Cow's Milk/Butter:
  - BP went up to 130/60 from 114/60
- Cheddar:
  - BP went up to 142/81 from 117/69
- Chocolate:
  - Severe headache
  - BP 153/73
- Monosodium glutamate:
  - Severe headache
  - BP 144/84

# Reactions (continued)

- Tuna:
  - ‘Upset stomach’
- Sardines:
  - Oedema
- All reactions also were accompanied with tachycardia

## **SECTION B: FUNGAL TYPE DYSBIOSIS**

1. Have you taken many **antibiotics** in the past? \_\_\_\_\_
2. If the answer to (1) is yes, how many courses a year on average? \_\_\_\_\_
3. Do antibiotics upset you in any way?
  - i. give you an allergic rash \_\_\_\_\_
  - ii. generally make you feel ill \_\_\_\_\_
4. Have you ever taken cortisone tablets by mouth? \_\_\_\_\_
5. Do you ever suffer from thrush? If so, how frequently? (Vaginal thrush or Oral thrush in females: penile thrush or Oral thrush in males) \_\_\_\_\_
6. Do you suffer from excessive wind or bloating? \_\_\_\_\_
7. Do you have problems with indigestion in the upper part of your abdomen? \_\_\_\_\_
8. Do you suffer from constipation? \_\_\_\_\_
9. Do you suffer from diarrhoea? \_\_\_\_\_
10. Do you have constipation alternating with diarrhoea? \_\_\_\_\_
11. Do you have an irritation around the anus at times? \_\_\_\_\_
12. Do you suffer from fungal infections of the skin, like athlete's foot? \_\_\_\_\_
13. Do you suffer from an itching scalp? \_\_\_\_\_
14. Do you suffer from itching inside your ear? \_\_\_\_\_
15. Do you have problems with memory or concentration? \_\_\_\_\_
16. Are you clumsy and have general problems with co-ordination? \_\_\_\_\_
17. Do you crave sugar? \_\_\_\_\_
18. Do alcoholic beverages upset you? \_\_\_\_\_
19. Are you worse when the weather is damp? \_\_\_\_\_

### **For Females Only**

1. Do you experience premenstrual tension, depression, headaches, water retention, breast tenderness, painful or heavy periods, changes in your body hair?  
\_\_\_\_\_
2. Have you ever taken the **contraceptive pill** (if so, when and for how long?) \_\_\_\_\_
3. If the answer to (2) is yes, did it upset you when you took it? \_\_\_\_\_
4. Have you ever taken **hormone replacement therapy**? \_\_\_\_\_
5. Have you ever undergone **fertility treatment**?  
\_\_\_\_\_

# FRDQ-7

TABLE 1 *Questionnaire FRDQ-7*

	No	Yes
1 Have you, at any time in your life, taken 'broad spectrum' antibiotics?	0	3
2 Have you taken tetracycline or other broad spectrum antibiotics for 1 month or longer ?	0	3
3 Are your symptoms worse on damp, muggy days or in mouldy places?	0	3
4 Do you crave sugar?	0	3
5 Do you have a feeling of being 'drained'?	0	
occasional or mild		1
frequent or moderately severe		2
severe or disabling		3
6 Are you bothered with vaginal burning, itching or discharge (do you have similar symptoms from the penis)?	0	
occasional or mild		1
frequent or moderately severe		2
severe or disabling		3
7 Are you bothered by burning, itching or watery eyes ?	0	
occasional or mild		1
frequent or moderately severe		2
severe or disabling		3

**SECTION D: DENTAL HISTORY**

1. Have you ever had mercury amalgam (silver coloured) fillings in your teeth (If so, how many) \_\_\_\_\_
2. Have you had any orthodontic treatment including metal braces? \_\_\_\_\_
3. Do you have any root fillings (if so, how many)? \_\_\_\_\_
4. Do you have any crowns, implants, bridges (please specify)? \_\_\_\_\_
5. Do you ever suffer with tooth abscesses? \_\_\_\_\_
6. Do any of your symptoms worsen after dental treatment? \_\_\_\_\_
7. Do you ever have an 'acid taste' in your mouth? \_\_\_\_\_
8. Do you grind your teeth when asleep? \_\_\_\_\_
9. Do you suffer from bleeding gums? \_\_\_\_\_
10. Do you have any composite (white) fillings? \_\_\_\_\_
11. Have you had any wisdom teeth extracted? \_\_\_\_\_

**SECTION F: POTENTIAL TOXIC EXPOSURES:**

Have you been/are exposed to any of the following? (Y/N)

Moulds	_____	Heavy metals (dental/occupational)	_____
Painkillers	_____	Radiation	_____
Recreational drugs	_____	Tick Bites	_____
Diet drinks and foods	_____	Silicone implants or Botox	_____
Artificial Sweeteners	_____	Electrical/Magnetic fields	_____
Pesticides	_____	DIY/paint scraping	_____
Household Chemicals	_____	Art work materials/chemicals	_____
Occupational Chemicals	_____	High fish intake	_____
Frequent Flyer	_____	Metal implants, pins, plates, coils	_____
Pacemaker	_____	Piercings	_____
Cosmetics	_____		

**Thank you**

# Oral/Dental Health and Gut

- Cases of auto-immunity after dental interventions:
  - Orthodontic braces:
    - Type 1 Diabetes
    - Crohn's Disease
  - Wisdom teeth extraction
    - Antibiotics linked to presentation of Crohn's Disease
- TMJ problems
  - Poor digestion

**SECTION C: BIOLOGICAL INHALANT SENSITIVITY**

1. Does contact with various inhaled allergies affect you in any way? \_\_\_\_\_

If yes, list which symptoms occur after contact with the following:

Household dust \_\_\_\_\_

Marshy areas \_\_\_\_\_

Feathers \_\_\_\_\_

Mildew \_\_\_\_\_

Wooded areas \_\_\_\_\_

Wool Clothes/Carpets \_\_\_\_\_

Moulds \_\_\_\_\_

Potted Plants \_\_\_\_\_

Animals such as cats, dogs, horses, etc. (please specify) \_\_\_\_\_

2. Do these symptoms occur:

In certain rooms \_\_\_\_\_

When house cleaning \_\_\_\_\_

In certain localities \_\_\_\_\_

When too hot \_\_\_\_\_

When too cold \_\_\_\_\_

Worse in the daytime \_\_\_\_\_

Worse at night \_\_\_\_\_

All year long \_\_\_\_\_

When cutting grass \_\_\_\_\_

When raking leaves \_\_\_\_\_

In humid/windy weather \_\_\_\_\_

In Spring \_\_\_\_\_

In Summer \_\_\_\_\_

In Autumn \_\_\_\_\_

In Winter \_\_\_\_\_

3. Do you have any household pets? \_\_\_\_\_

4. Do you feel better in any way in hot, dry climes (e.g. Spain or the Mediterranean Islands)? \_\_\_\_\_

5. Do you have any history of:

1. Hayfever \_\_\_\_\_ Onset time: \_\_\_\_\_

2. Asthma \_\_\_\_\_

3. All year round nasal catarrh \_\_\_\_\_

6. Have you been tested for allergies in the past? \_\_\_\_\_

7. If the answer to (6) is yes, please detail \_\_\_\_\_



# Cross Reactions between Gut and Biological Inhalants

- Oral Allergy Syndrome
- Moulds, fungi, and yeasts

# Symptom Severity in 15 Brittle Asthmatics before and after food exclusion & challenge



# Examination

- Systemic:
  - Stigmata of poor nutrition
  - Dysbiosis
  - Toxic exposure
  - Stigmata of liver disease
- Abdominal examination
- Evidence of infection:
  - Oral thrush
  - Eczematous changes to skin, excoriation

# Functional Gastrointestinal Disorders

# IBS

- Chronic, relapsing, remitting
- 10-20% prevalence
- Aetiology:
  - Visceral hypersensitivity due to altered central pain processing?
  - Dysbiosis
  - Increased intestinal permeability

# Check the Basics

- Dietary History
- Alcohol Consumption
- Risk Factors for Dysbiosis
- Allergic symptoms
- Medications
  - Oral contraceptives
  - Steroids and NSAIDs
  - Antibiotics
  - Opiates

# Conditions Mimicking IBS

- Cancer
- Thyroid dysfunction
- Coeliac and non-coeliac gluten intolerance
- SIBO or fungal dysbiosis; parasites
- IBD or microscopic colitis
- Exocrine pancreatic insufficiency
- Bile acid malabsorption (up to a 1/3<sup>rd</sup> of IBS patients Gracie DJ et al 2012)

# Judicious Investigation

- Systematic Review of the Yield of Investigations in Subjects Meeting Diagnostic Criteria for IBS
  - TFTs abnormal: 4.2%
  - Colonic imaging abnormalities 1.1%
  - Lactose H<sub>2</sub> breath testing positive 35%
- Odds of biopsy-proven Coeliac's in IBS 2.94 (Ford et al 2009)



# NICE IBS Guidelines for GPs - 2015

- Beware of Red Flags: anaemia, PR bleeding, weight loss, abdominal or rectal mass, raised inflammatory markers
- NICE did NOT address Faecal Calprotectin
- Necessary investigations: FBC, ESR, CRP, EMA or TTG
- NOT necessary:
  - Ultrasound, Colonoscopy or barium enema
  - TFTs
  - FOB, Stool analysis, Faecal microscopy for ova or parasites
  - Hydrogen breath tests for lactose intolerance or SIBO

# Constipation

## Gastroenterology

- Normal Transit
  - Lifestyle advice
  - Simple laxatives and softeners
  - Linaclotide
- Slow Transit
  - Prucalopride
  - Movicol, senna, dulcolax
  - Suppositories and enemas
- Rectal Evacuatory Dysfunction
  - As above plus biofeedback

## Ecomed

- Assess and Tx microbiota
  - Appropriate dietary change
  - Probiotics or anti-microbials
- Increase fibre, fluids
- Food Exclusion
- Vitamin C
- Magnesium
- Slippery Elm, Flax Tea & other herbal preparations
- Digestive Enzymes
- Enemas, colon hydrotherapy

# Diarrhoea

## Rule Out

- Lactose Intolerance with hydrogen breath test
- SIBO with glucose/lactulose hydrogen breath tests
- Coeliac's, thyroid and pancreatic disease
- Alcohol Abuse
- Malabsorption

## Consider

- Non-coeliac gluten sensitivity
- Dysbiosis
- Infection
- Food Allergy
- Dietary specifics
- Histamine sensitivity (MCAS)
  - Overlap with atopy, migraine, flushing, post-prandial diarrhoea
  - Treat with low histamine diet and mast cell stabilisers eg Nalcrom

# Abdominal Pain

## Underlying Symptoms

- Constipation
- Steatorrhoea
- Bloating
- Visceral hypersensitivity

## Underlying Factors

- SIBO
- Fungal dysbiosis
- Bacterial dysbiosis
- Infections
- Infestations
- Food intolerance/allergy
- Allergens
- Toxicity
- Autoimmunity

# Bloating

## Underling factors


- SIBO
- Fungal Dysbiosis
- Parasitic infections
- Food Allergy
- Food Intolerance
- Histamine Intolerance
- Antibiotic use

## Investigation and Treatment

- Comprehensive Stool Analysis
- Urinary Microbial Organic Acids Tests
- Allergy Tests
- Breath tests:
  - Lactulose, glucose
  - Lactose, Fructose
  - H pylorii urea breath test
- Food Exclusion
- Sugar and Yeast Free diet
- Low FODMAPs diet
- Paleolithic diet/rotation diet
- Anti-microbials
- Digestive support and supplements

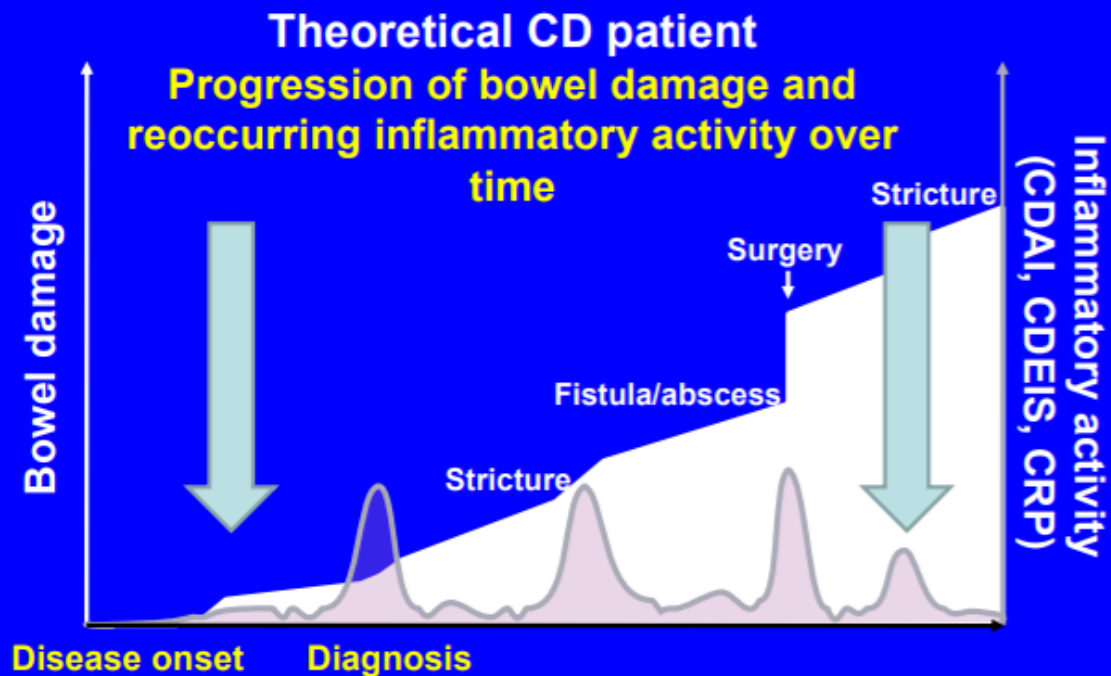
# Inflammatory Bowel Disease

# Red Flags for IBD

- Family History
- Diarrhoea
  - Nocturnal
  - Bleeding
  - Incontinence
- Systemic symptoms
  - Weight loss
  - Extra-intestinal manifestations
- Abnormal bloods
  - Low Hb/high platelets
  - Low Albumin
  - Raised markers of inflammation
    - CRP
    - ESR
  - Stool inflammatory markers:
    - Calprotectin
    - Lysozyme/  WCC
    - Lactoferrin

INFLAMMATION MAY BE  
ASYMPTOMATIC

## Potential progressive course of Crohn's disease





# Non-Inflammatory Symptoms in IBD

- IBS and other functional symptoms
- Bacterial overgrowth
- Fungal Dysbiosis
- Food Intolerance
- Changes in quality of mucus
- Strictures
- Bile Salt Malabsorption
- Infections (especially in relapse)
- Nutritional issues

# Infections in active IBD

- 10-20% of IBD patients have an intercurrent infection during active flares
- Clostridium difficile is the most common organism
- Must exclude other common gut pathogens
  - Microbial
  - Parasitic
  - Viral
  - Fungal

# Goals of Treatment

- Relieve symptoms
- Steroid-free remission
- Mucosal healing
- Reduced hospitalisation and surgery
- Prevent disability
- Improve nutritional status