



LIVING WITH IBD

Seminar & workshop

DIET AND NUTRITION

All things food and IBD related

with

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Living with IBD: Diet and Nutrition

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Outline

Diet and Nutrition during:

- Active disease
- Disease remission

Questions and answers

What Roles Do Food Play in Your Life?



Roles for Food & Nutrition in IBD

Diet in the pathogenesis of IBD

- * Increasing incidence of IBD
- * Diet is an environmental factor

Food and nutrition for optimal health

- * Management of malnutrition
- * During inflammation
- * During remission
- * Dietary adequacy

DIET & IBD

Diet as a therapy in IBD

- * Exclusive enteral nutrition
- * Food-based strategies for management of IBD
- * Nutrition and diet as adjuvant therapy

Diet in special circumstances

- * Pre and post operatively
- * Strictures
- * Stoma, Short bowel syndrome
- * Pouches

Food and Nutrition As Treatments

Exclusive Enteral Nutrition (EEN)

- 60 – 85% **Crohn's disease** remission rates
- Can be used with adults and children



+ growth
+ weight
+ mucosal healing
+ limited adverse events

- Requires support system
- May not be for all patients



EEN and UC

- Helps reduce symptoms – diarrhoea, pain
- Improves nutrition intake and energy levels
- Might improve response to corticosteroids
- Not yet known if EEN can:
 - reduce inflammation
 - used instead of medication

EEN Mechanisms of Action

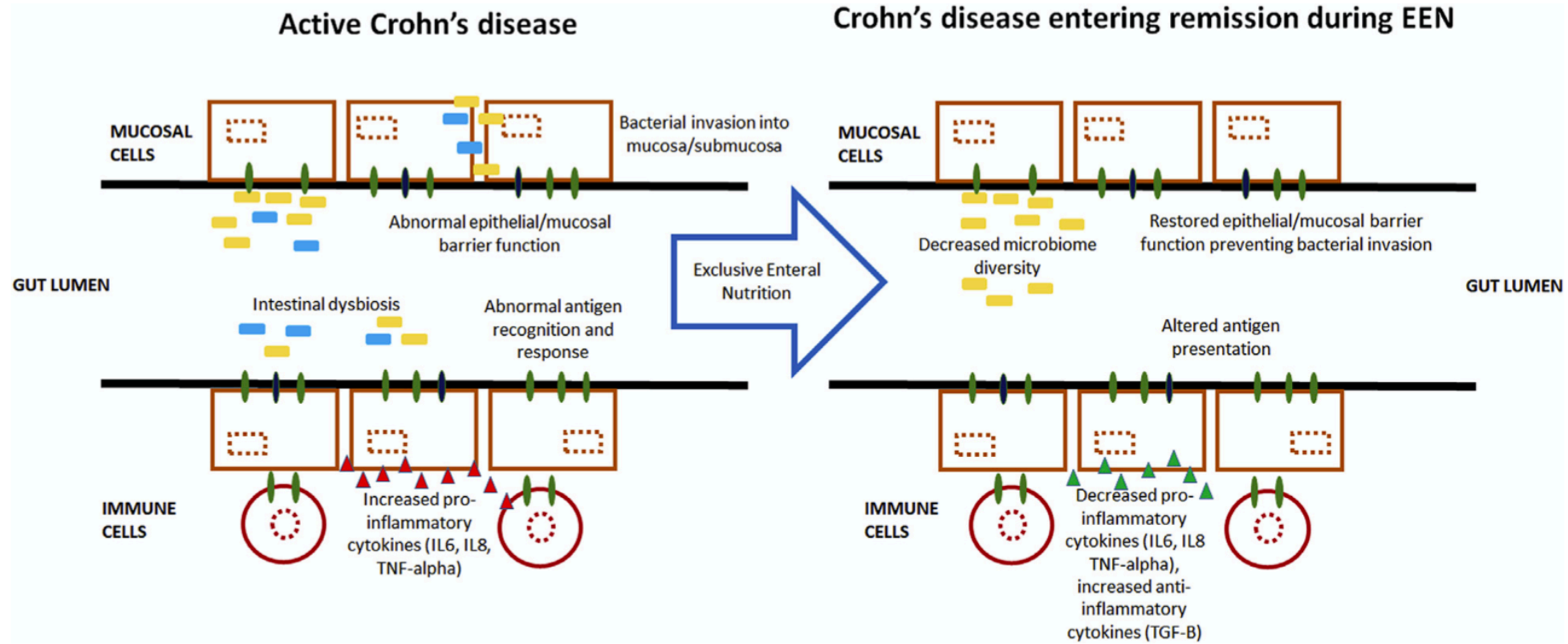
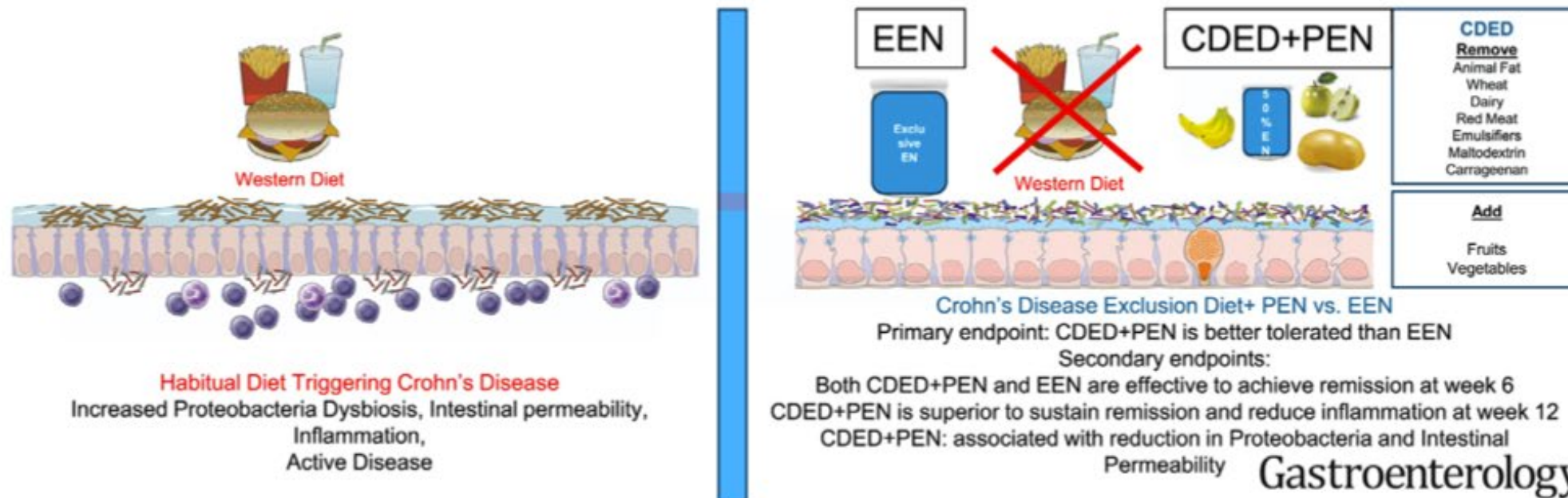


Fig. 1. Summary of mechanisms of action through which exclusive enteral nutrition induces remission in Crohn's disease. Restoration of epithelial barrier function with no invasion of bacteria into the mucosa, reduction in inflammatory response mediated through reduction of pro-inflammatory cytokines and local action of anti-inflammatory cytokines and normalisation of handling of bacteria, with alterations in the composition of the microbiome.

Crohn's Disease Exclusion Diet

Dietary Therapy: Crohn's Disease Exclusion Diet + Partial Enteral Nutrition vs. Exclusive Enteral Nutrition

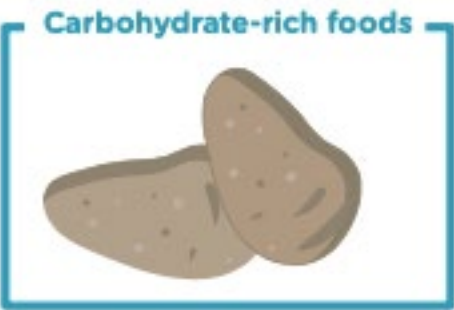


Crohn's Disease Exclusion Diet

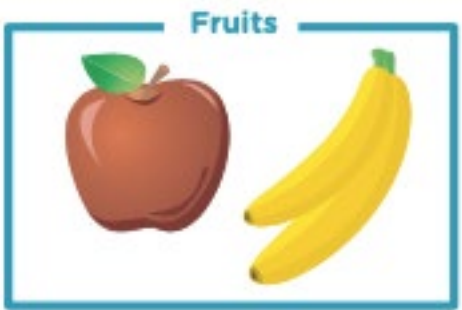
Mandatory foods



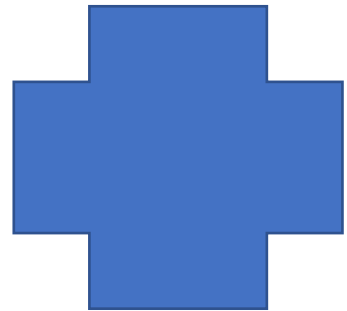
Unlimited intake of fresh **chicken breast** minimum of 150-200g/day
2 eggs/day



2 fresh potatoes/day peeled, cooked and cooled before consumption



2 bananas/day
1 apple/day peeled



Crohn's Disease Exclusion Diet in Adults

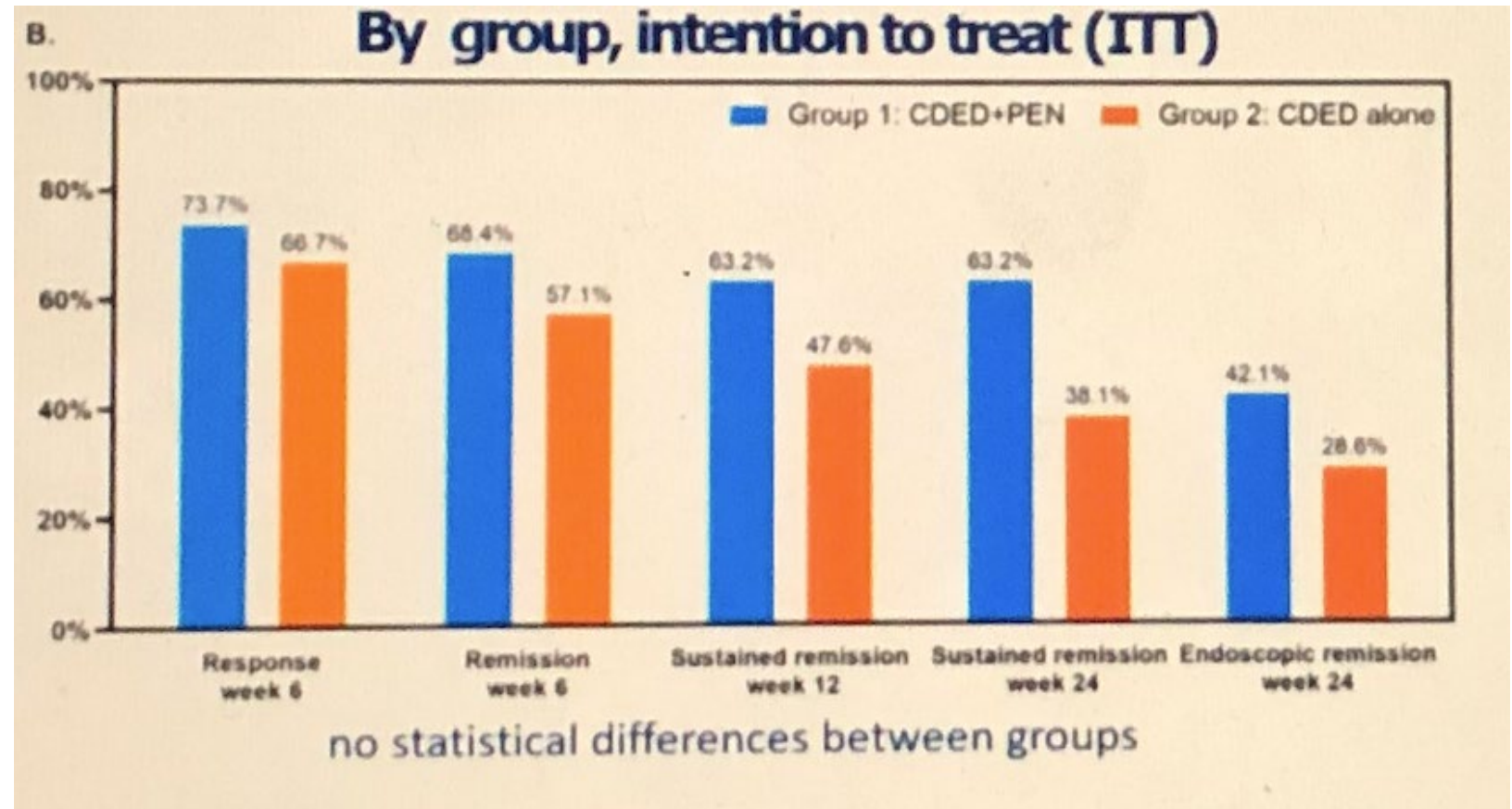
Pilot study in:

- Adults 18-55yrs
- CD > 5 years
- Ileal or caecum only
- Calprotectin > 200 ug/g

Treatments:

CDED+PEN n = 19

CDED only n = 21



Crohn's Disease Exclusion Diet in Adults

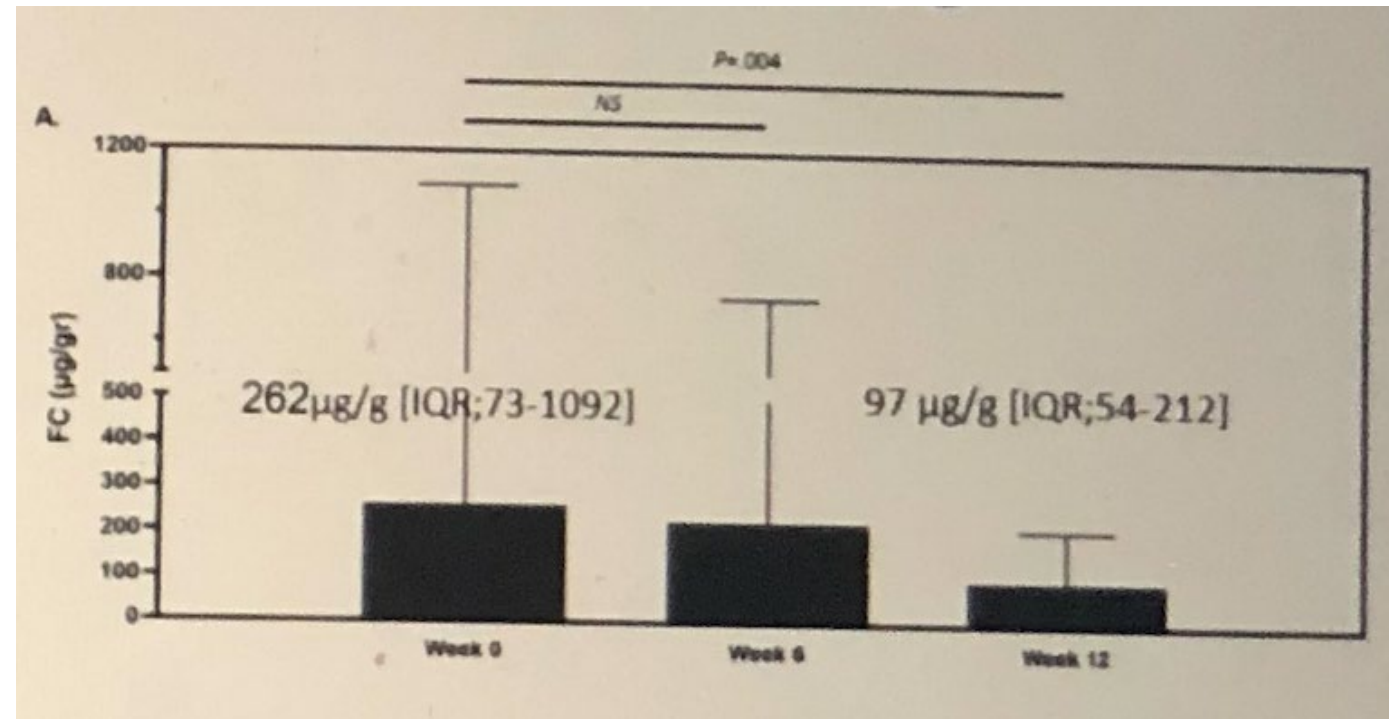
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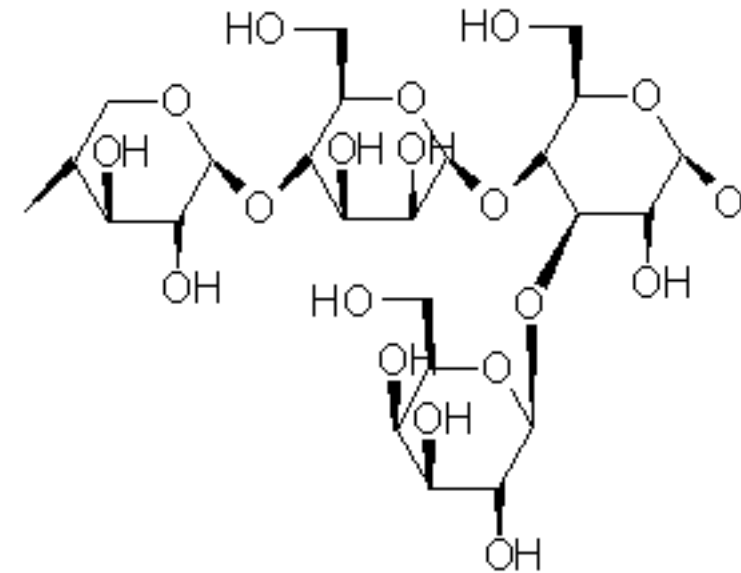
Food-based IBD Treatments

Food-based dietary treatments for CD
SCD diet
Low FODMAP diet
SVD diet
IBD-AID diet
IgG-guided exclusion diet
AIP diet
Mediterranean diet
Food-induced AF stimulation
Elimination diet
CDED diet
CD-TREAT diet
LOFFLEX diet
Palaeolithic diet
High fibre diet
Organic farming diet
Low red & processed meat diet
Low microparticle diet
Low residue diet

Food-based dietary treatments for UC
SCD diet
Low FODMAP diet
SVD diet
IBD-AID diet
IgG-guided exclusion diet
AIP diet
Mediterranean diet
Food-induced AF stimulation
Elimination diet
CMP elimination diet
Low-fat, high-fibre diet
High-fat, high-fibre diet
No-carrageenan diet
Comprehensive diet advice
Salmon diet

Fibre – What Is It?

- Part of plants that cannot be digested in enzymes in the small intestine
- Many types of fibre
- Many functions
 - provide bulk to stool
 - fuel for gut microbiome
 - alter digestion of other food
 - associated with many health benefits



- Xylose - $\beta(1,4)$ - Mannose - $\beta(1,4)$ - Glucose -
- $\alpha(1,3)$ - Galactose

Hemicellulose

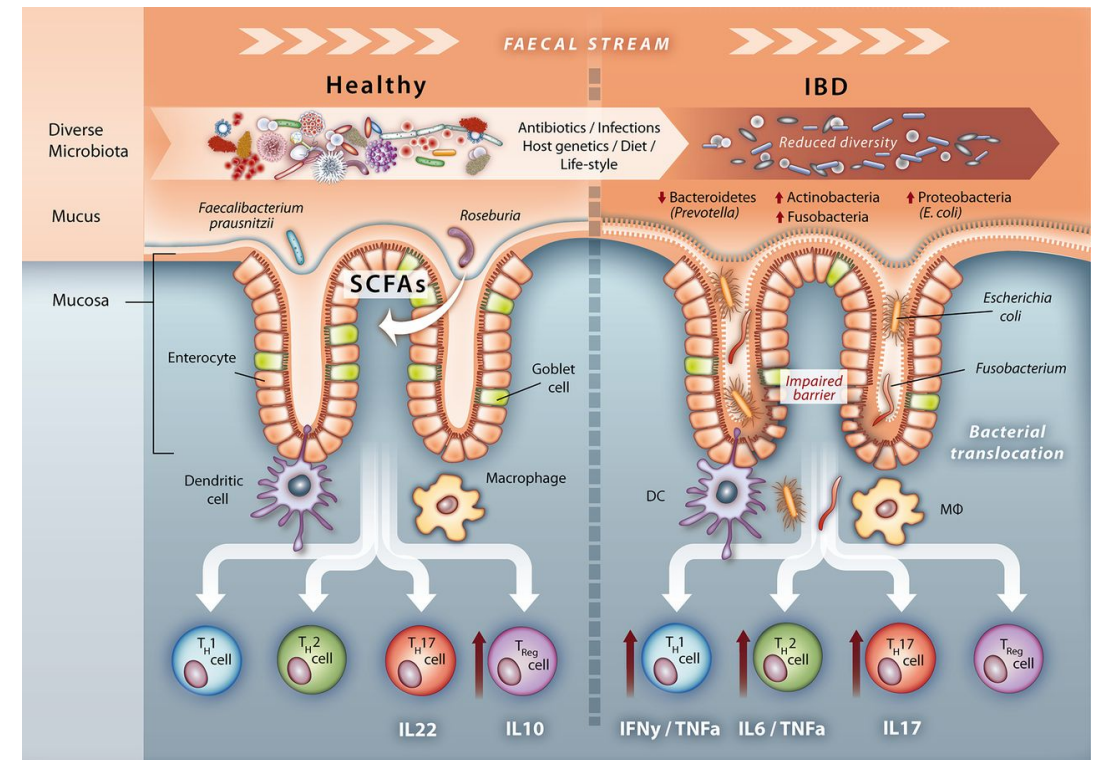
Fibre – Benefits in IBD

- Soluble fibre helps to make a **formed stool**
- High fibre foods = **nutrient dense foods**
- Coloured high fibre foods have **phytochemicals**

- Associated with **greater diversity** of gut microbes
- Microbes that ferment fibre are “**commensal/healthy microbes**”
- Gut microbes produce **anti-inflammatory substances** (short chain fatty acids e.g. butyrate) from fibre breakdown

Fibre – The Bad and The Good

- Lack of fibre – gut microbes change the expression of genes to start to eat the mucus layer of the gut lining
- Less mucous layer = microbes closer to the gut lining.
- Gut microbiome changes quickly
- Increasing fibre changes microbiome composition and function



Fibre – What Much Is Enough?

Your high-fibre day on a plate...

Here's what 30 grams of fibre per day could look like:

1/2 cup
natural
muesli (with
nuts and
seeds) = 7g



1 banana
= 3.6g

**Muesli, yoghurt
and fruit**

1 small sliced
cucumber (100g)
= 1g



1 small
handful of raw
macadamias
(30g) = 1.9g

2 tbsp of
hummus
= 2g

**Cucumber, dip
and nuts**

1 grainy
wrap = 4.3g



Tuna wrap

2 cups of
garden salad
= 3.2g



1 apple
= 3.5g

Apple and coffee

1 cup cooked
brown rice
(100g) = 1.5g



Beef stir fry

1 1/2 cups stir fried
mixed veg = 3g

Discussion / Questions