

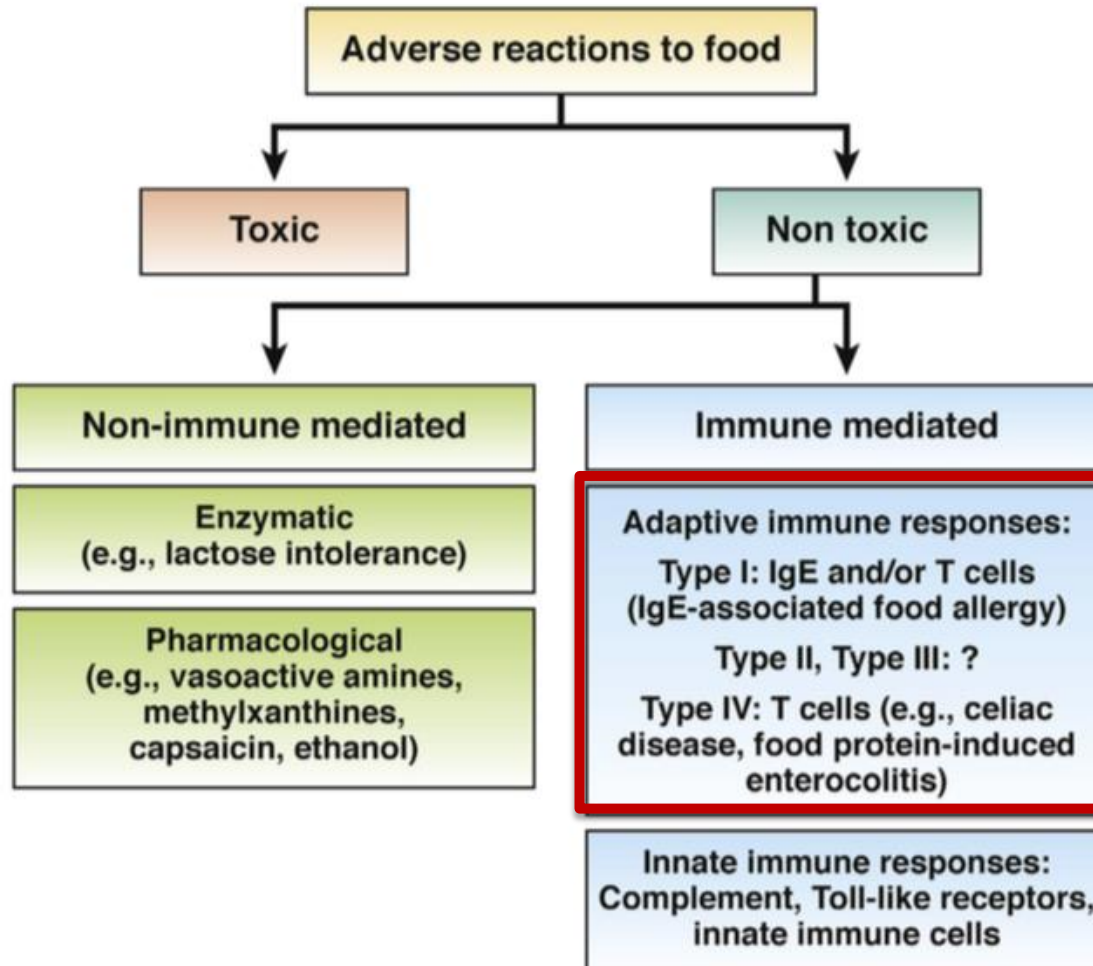


Voedselovergevoeligheid Bij volwassenen



Tom Holvoet, MD, PhD

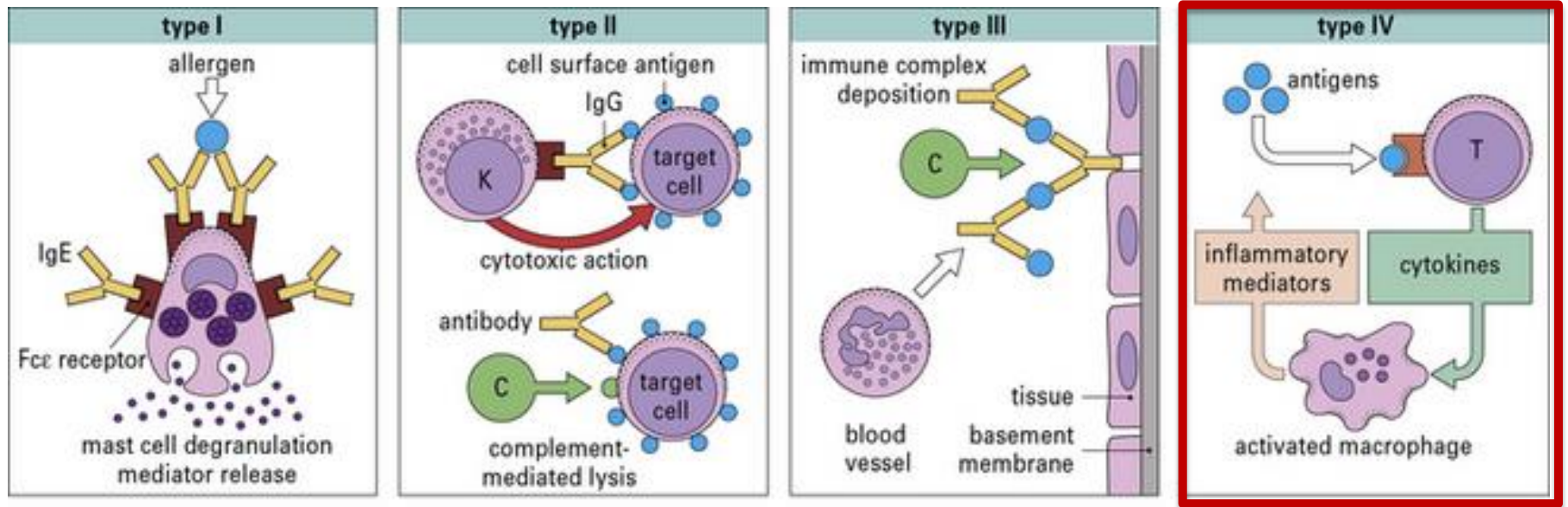
Reacties op voedsel



Voedsel
intolerantie

Voedsel
allergie

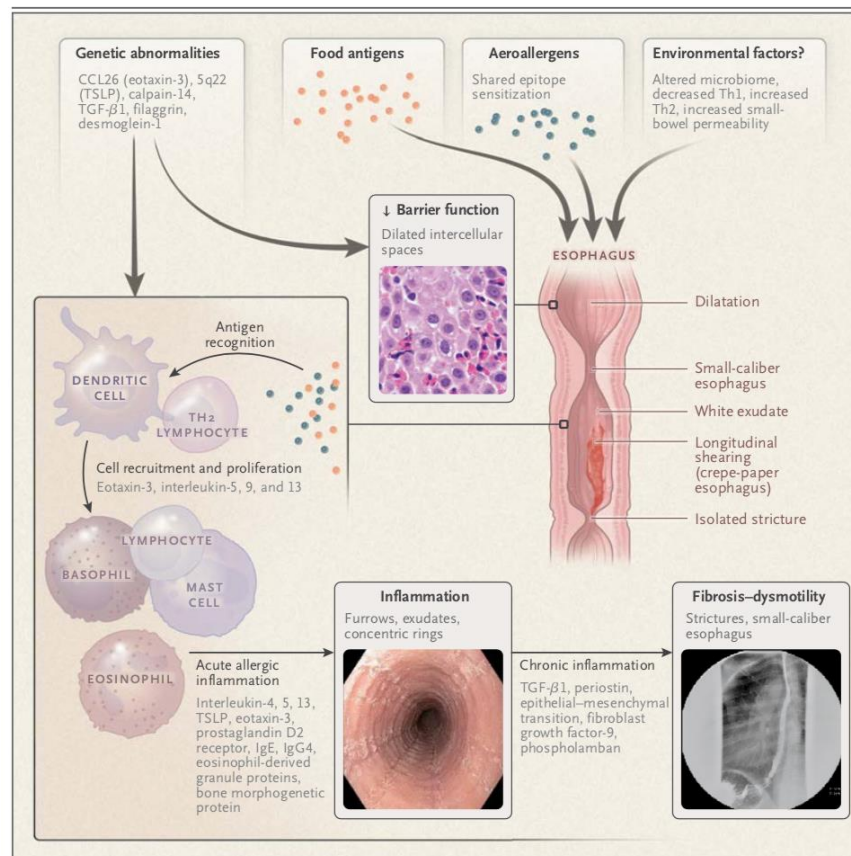
Immuunreacties



- Eosinofiele oesophagitis
- Coeliackie

Eosinofiele oesophagitis

Infiltratie van de oesophagus door eosinofielen



Eosinofiele oesophagitis

Voedselimpactie = vaak onderliggende EoE

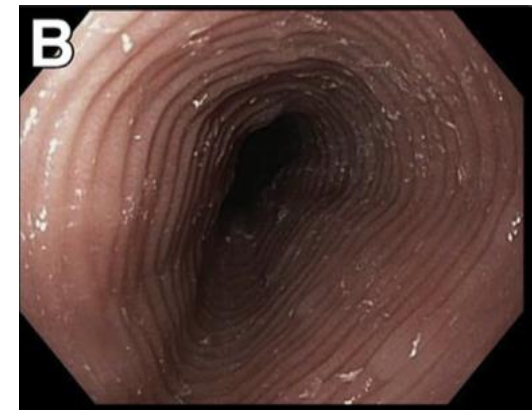
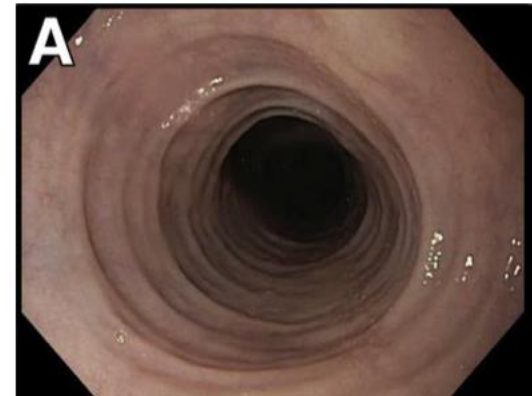
Symptomen

- Dysfagie
- Voedselimpactie
- Pyrosis

Allergische reactie op voedingsstoffen

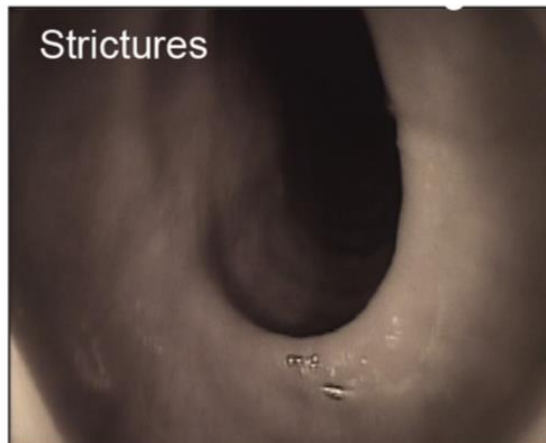
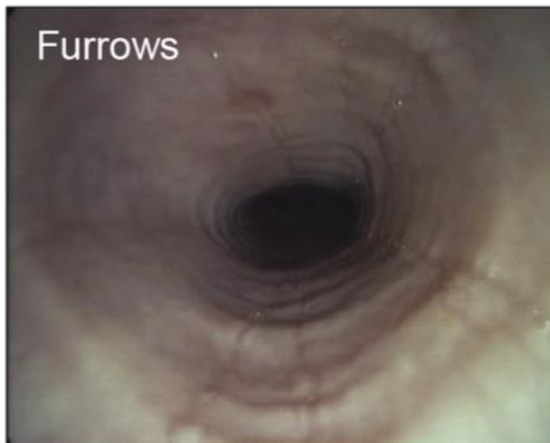
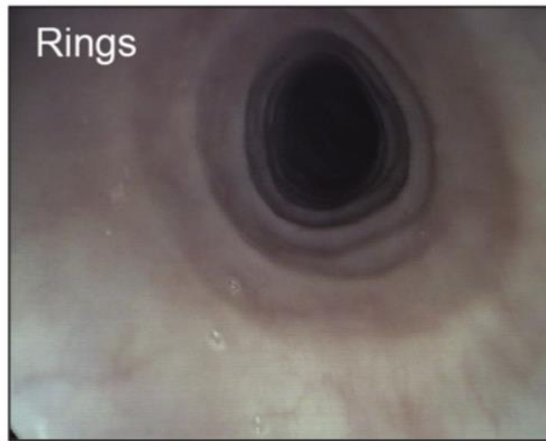
Diagnose

- Endoscopie
- Biopsie
- Geen plaats voor huidtesten



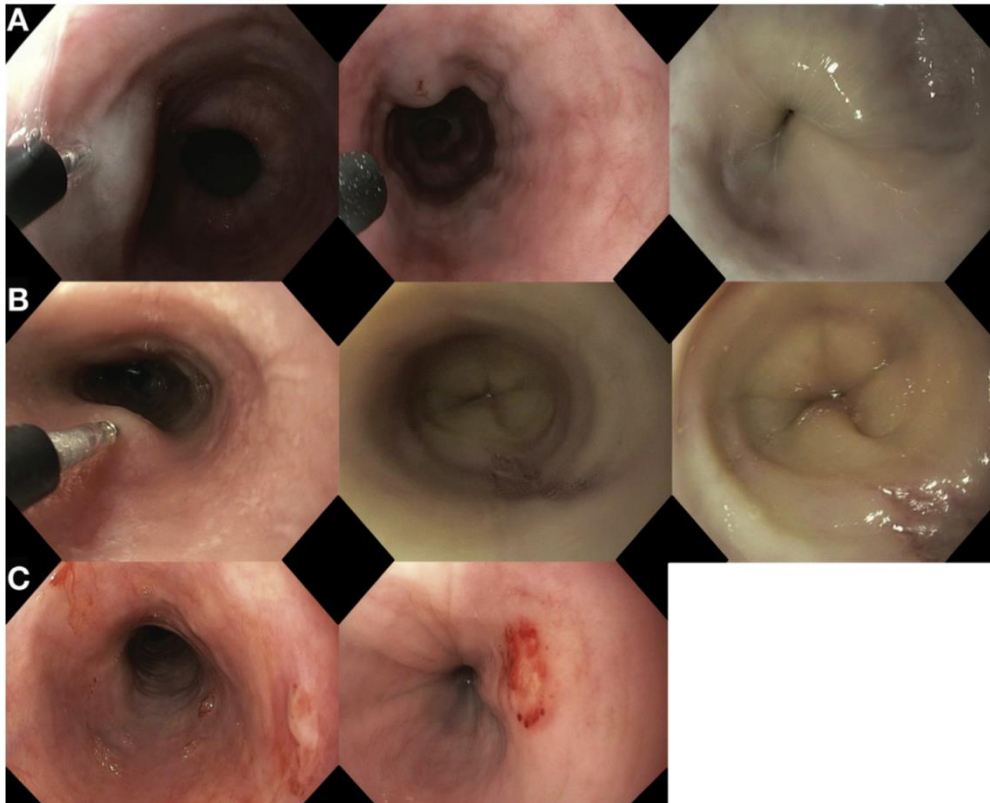
Eosinofiele oesophagitis

EoE = trachealisatie van de oesophagus



Eosinofiele oesophagitis

Slokdarm allergie prik testen



- Sensitiever dan huidpriktesten
- Enkel in studieverband

Eosinofiele oesophagitis

Behandeling

1. Protonpompinhibitoren

2. Lokale corticosteroiden

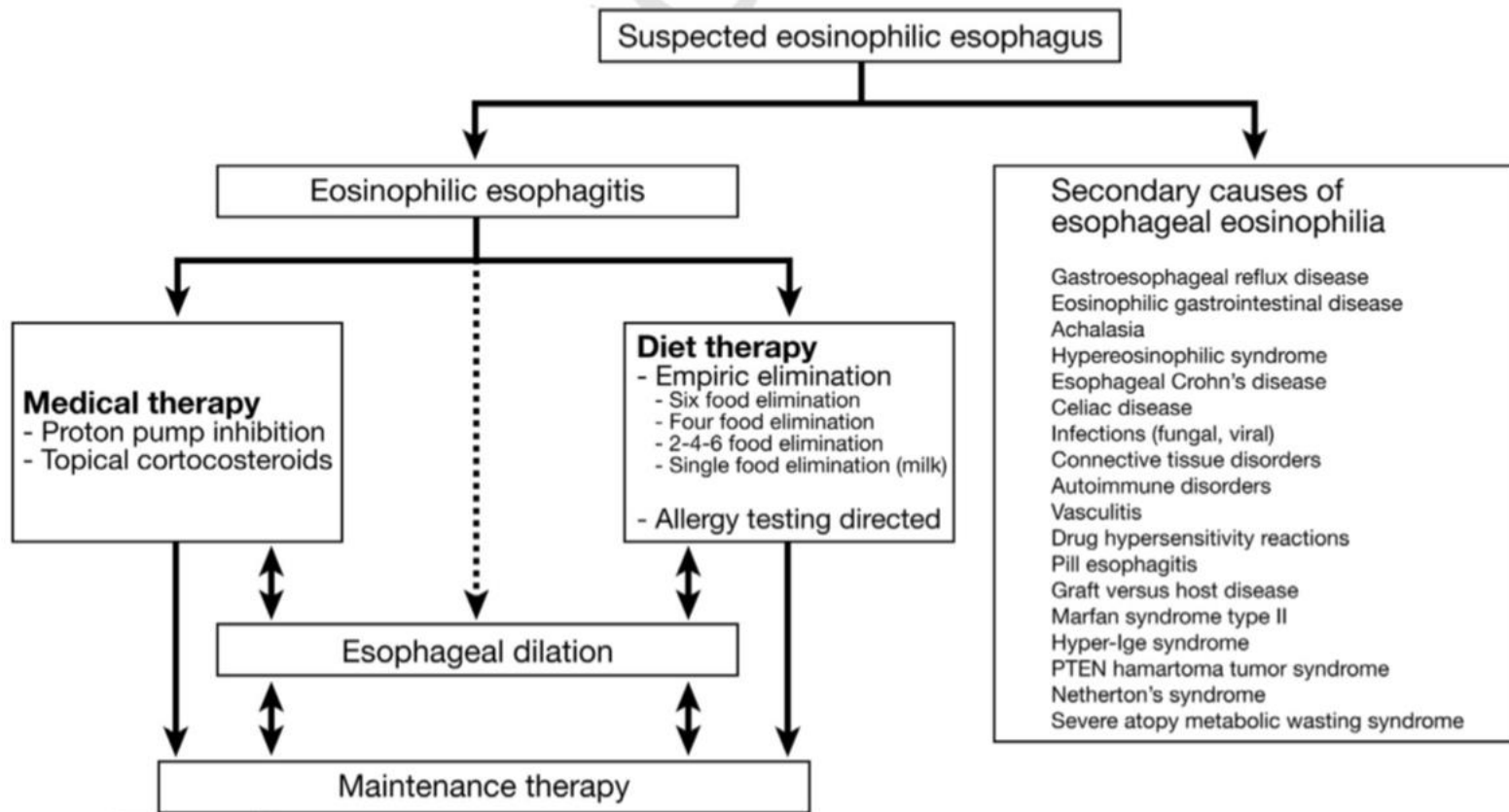
- Budesonide siroop
- Pulmicort inhalator

3. Eliminatie dieet

- Six food
- Four food
- 2-4-6 elimination diet



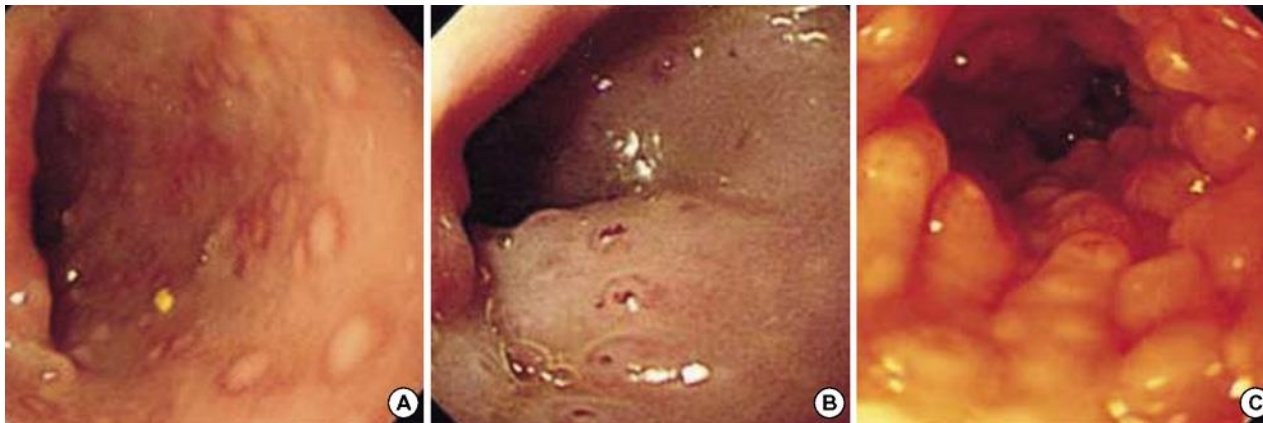
Eosinofiele oesophagitis



Food protein induced enterocolitis

Non IgE allergie op schaaldieren of eieren

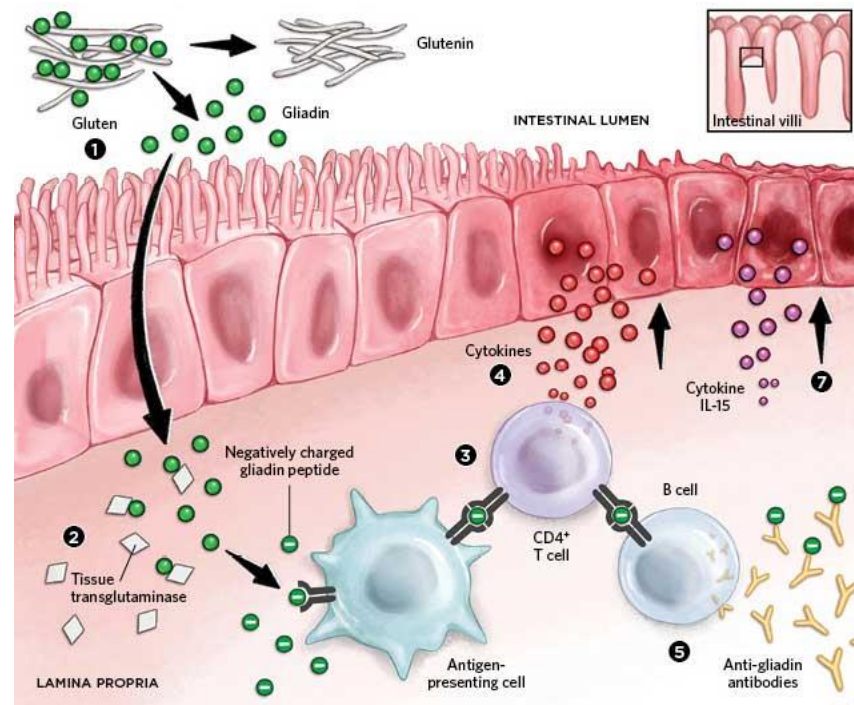
- Zeldzaam bij volwassenen
- Symptomen
 - diarree/braken
 - buikpijn
- 3-4 uur na ingestie



Coeliakie

Auto-immuunreactie op gluten (adaptive immune system)

- Prevalentie rond de 1%
- Gluten
 - Gliadin
 - Hordein
 - Secalin
- 10-20 g gluten/dag



Coeliakie

Wanneer aan coeliakie denken?

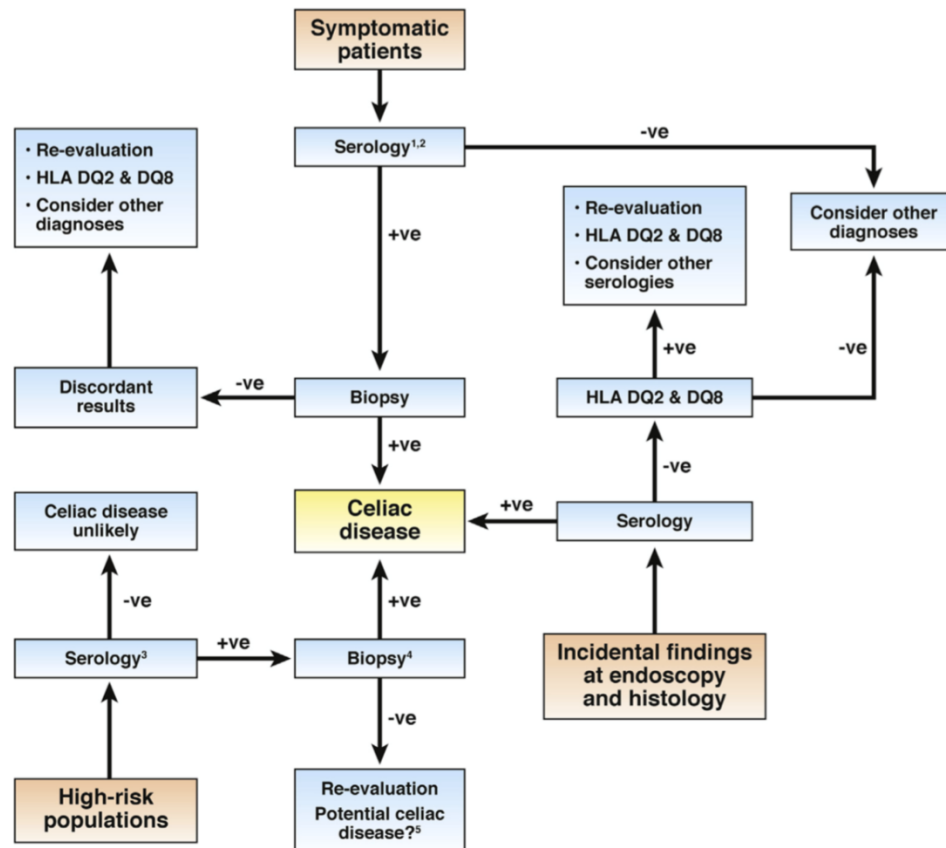
Symptoms and signs

Gastrointestinal	Extraintestinal	Associated conditions
Chronic diarrhea	Iron-deficiency anemia	Family history of celiac disease
Chronic abdominal pain	Other deficiency states (vitamin B12, vitamin D, folate, zinc, vitamin B6)	Type 1 diabetes
Malabsorption	Fatigue	Autoimmune thyroid disease
Bloating	Recurrent aphthous stomatitis	Autoimmune liver disease
Erratic bowel habit (similar to IBS)	Increased hepatic transaminase levels	Selective IgA deficiency
Constipation (more commonly in children)	Short stature	Sjögren syndrome
Failure to thrive/weight loss	Delayed puberty/menarche	Down syndrome
Anorexia	Amenorrhea	Turner syndrome
Vomiting	Early menopause	Williams syndrome
GERD	Dermatitis herpetiformis	
	Osteopenia/osteoporosis	
	Dental enamel hypoplasia	
	Peripheral neuropathy	
	Hyposplenism	

Coeliakie

Hoe coeliakie uitsluiten?

Serologie
Anti-TTG
Anti-DGP



Coeliakie

Hoe coeliakie behandelen?

Gluten-vrij dieet

- Enige behandeling
- 30€/maand terugbetaling

Medicamenteus

	Gut luminal processing	Blocking effects in intestinal epithelium	Processing in lamina propria and elsewhere	Gluten-free diet
Discovery	Gluten-sequestering polymers	Inhibition of slgA-CD71 -mediated gliadin-peptide transport	▪ HLA-DQ2 or HLA-DQ8 blockers ▪ TG2 inhibitors ▪ Blocking B cells and autoantibodies	
Phase I			Vaccine	
Phase II	▪ Glutenase ALV003 ▪ Glutenase STAN1 ▪ Glutenase AN-PEP ▪ Probiotics	Larazotide acetate	▪ CCR9 antagonist ▪ Immune modulation with parasite	
Phase III				
				Approved

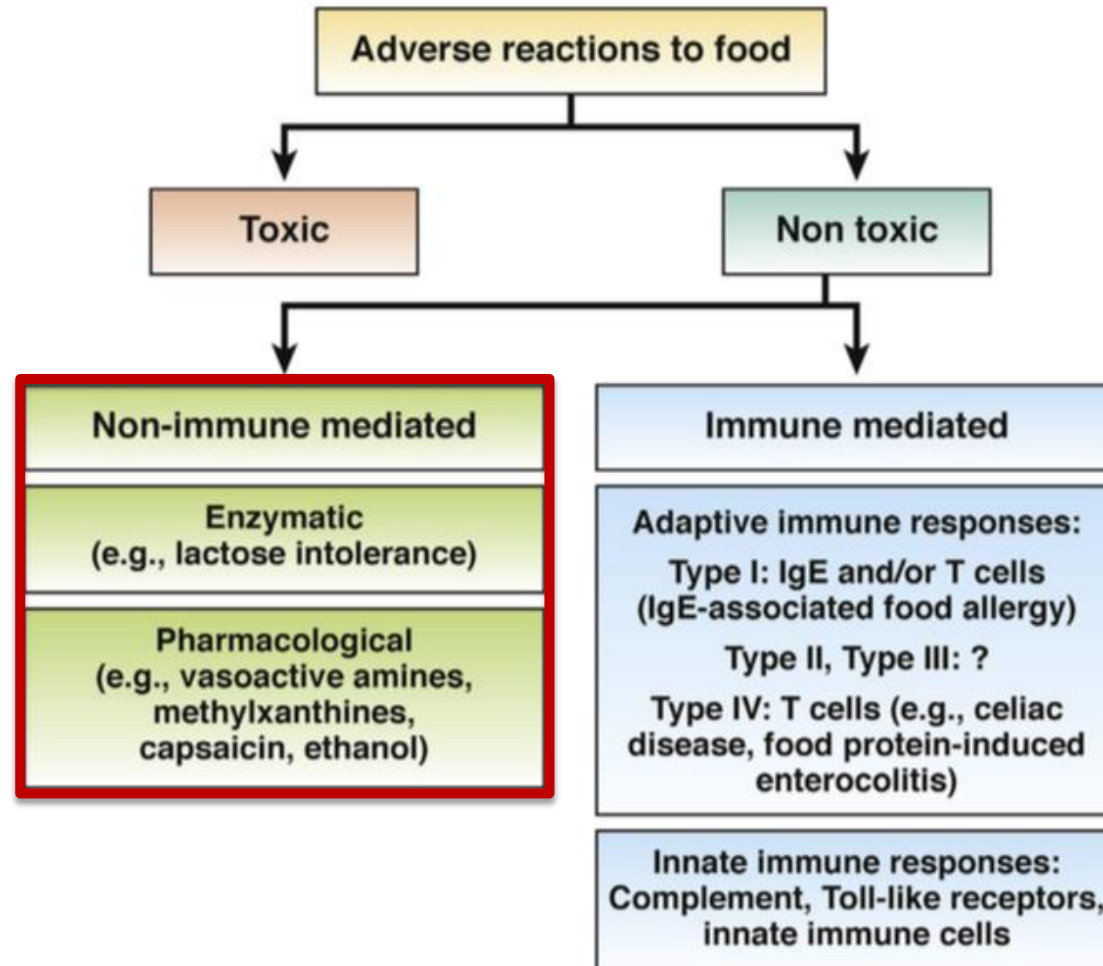


Coeliakie

Hoe coeliakie opvolgen?

Test	Interval	Comments
Clinical evaluation	Annually or if recurrent symptoms	
Serology	Every 3–6 months until normal, then every 1–2 years	Normal titers are insensitive for ongoing gluten exposure or enteropathy Persistently increased or increasing titers indicate significant gluten exposure
Nutritional evaluation	Every 3–6 months until normal, then every 1–2 years	Common deficiencies in iron, 25-OH vitamin D, vitamin B12, folate, and zinc Monitor for weight gain, low fiber intake, and constipation
Bone density	Once within first 2 years	Significant increases in bone density often are observed in the first year after diagnosis, many experts therefore advocate testing for the first time after 1 year on the GFD
Liver transaminase levels	At diagnosis, then every 1–2 years	Increased levels of AST and ALT are a common manifestation of celiac disease Persistent increases or increasing levels indicate a comorbid liver disorder
Thyroid function tests	At diagnosis, then every 1–2 years	Autoimmune thyroid disease is the most common comorbid autoimmune disorder, found in approximately 15%–20% of adults with celiac disease
Duodenal biopsy	Consider 1–2 years after diagnosis	Repeated biopsies, to evaluate healing, frequently are performed; however, it is not clear if this is necessary for patients with well-treated, clinically responsive celiac disease
Cancer screening	As for general population	Although rates of certain cancers are increased, these are not sufficiently common to warrant disease-specific screening

Reacties op voedsel



Voedsel
intolerantie

Voedsel
allergie

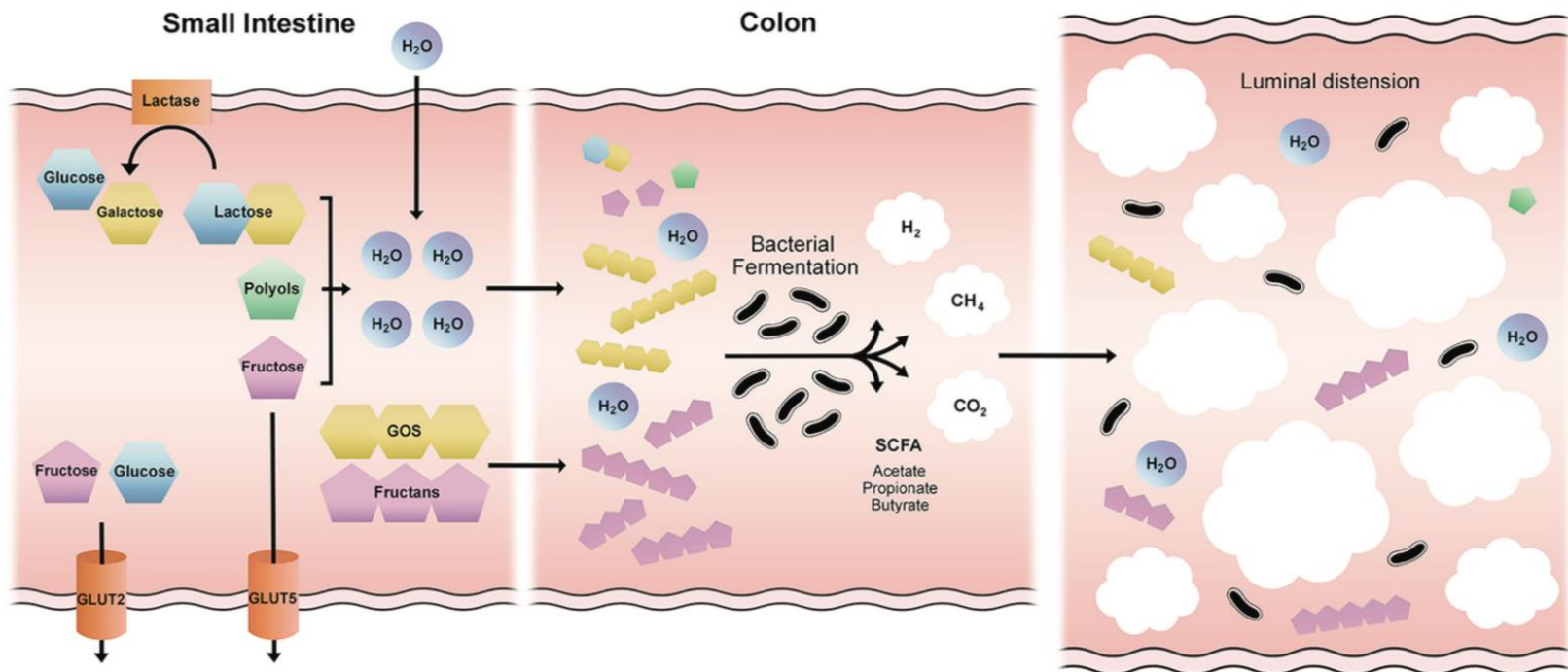
Irritable bowel syndrome

Meest frequente oorzaak van “voedselallergie”

- Meest frequente gastro-intestinale aandoening
- Prevalentie 20-30%
- Verschillende subtypes
- Intolerantie voor verschillende voedingsstoffen

Irritable bowel syndrome

FODMAPS



Fermenteerbare Oligo-, Di- en Monosacchariden en Polyolen

Irritable bowel syndrome

FODMAPS

Foods suitable on a low-fodmap diet

fruit	vegetables	grain foods	milk products	other
fruit banana, blueberry, boysenberry, canteloupe, cranberry, durian, grape, grapefruit, honeydew melon, kiwifruit, lemon, lime, mandarin, orange, passionfruit, pawpaw, raspberry, rhubarb, rockmelon, star anise, strawberry, tangelo Note: if fruit is dried, eat in small quantities 	vegetables alfalfa, bamboo shoots, bean shoots, bok choy, carrot, celery, choko, choy sum, endive, ginger, green beans, lettuce, olives, parsnip, potato, pumpkin, red capsicum (bell pepper), silver beet, spinach, squash, swede, sweet potato, taro, tomato, turnip, yam, zucchini herbs basil, chili, coriander, ginger, lemongrass, marjoram, mint, oregano, parsley, rosemary, thyme	cereals gluten-free bread or cereal products bread 100% spelt bread rice oats polenta other arrowroot, millet, psyllium, quinoa, sorgum, tapioca 	milk lactose-free milk*, oat milk*, rice milk*, soy milk* *check for additives cheeses hard cheeses, and brie and camembert yoghurt lactose-free varieties ice-cream substitutes gelati, sorbet butter substitutes olive oil	tofu sweeteners sugar* (sucrose), glucose, artificial sweeteners not ending in '-ol' honey substitutes golden syrup*, maple syrup*, molasses, treacle *small quantities 

Eliminate foods containing fodmaps

excess fructose	lactose	fructans	galactans	polyols
fruit apple, mango, nashi, pear, tinned fruit in natural juice, watermelon sweeteners fructose, high fructose corn syrup large total fructose dose concentrated fruit sources, large serves of fruit, dried fruit, fruit juice honey corn syrup, fruisana 	milk milk from cows, goats or sheep, custard, ice cream, yoghurt cheeses soft unripened cheeses eg. cottage, cream, mascarpone, ricotta 	vegetables artichoke, asparagus, beetroot, broccoli, brussels sprouts, cabbage, eggplant, fennel, garlic, leek, okra, onion (all), shallots, spring onion cereals wheat and rye, in large amounts eg. bread, crackers, cookies, couscous, pasta fruit custard apple, persimmon, watermelon miscellaneous chicory, dandelion, inulin, pistachio	legumes baked beans, chickpeas, kidney beans, lentils, soy beans 	fruit apple, apricot, avocado, blackberry, cherry, longan, lychee, nashi, nectarine, peach, pear, plum, prune, watermelon vegetables cauliflower, green capsicum (bell pepper), mushroom, sweet corn sweeteners sorbitol (420), mannitol (421), isomalt (953), maltitol (965), xylitol (967) 

Irritable bowel syndrome

FODMAPS

A Diet Low in FODMAPs Reduces Symptoms of Irritable Bowel Syndrome

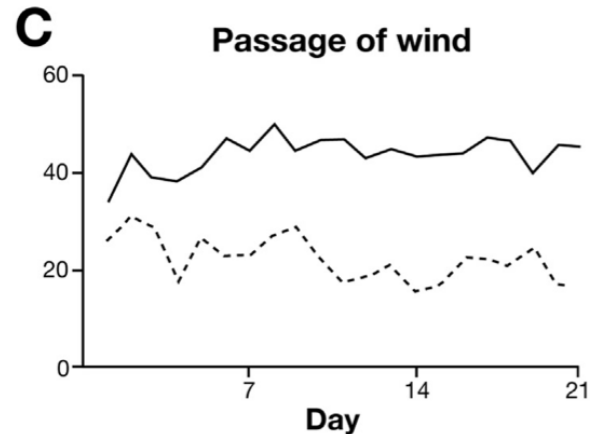
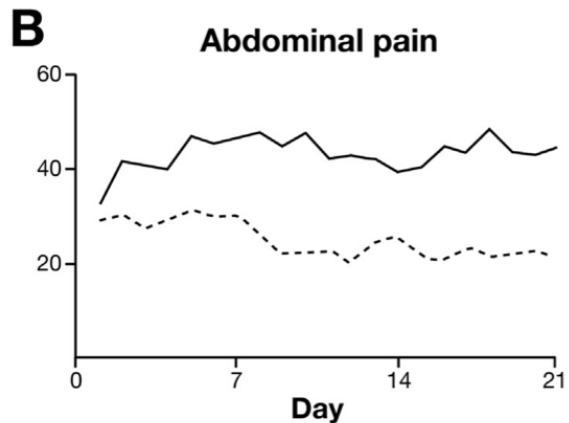
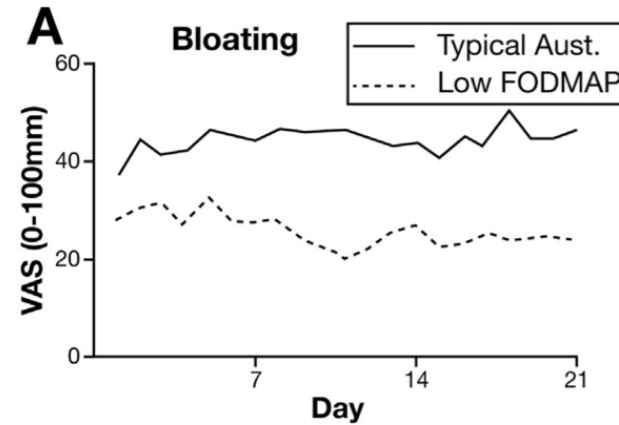
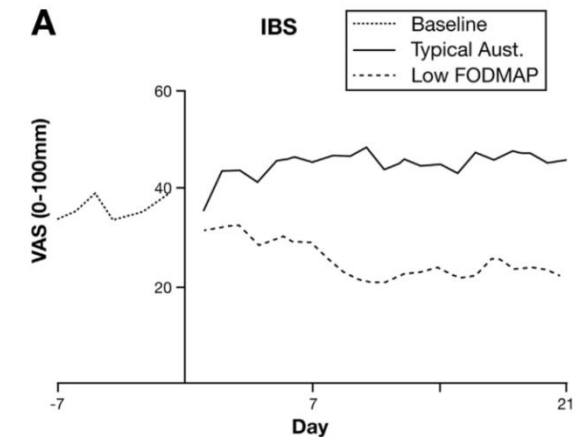
Emma P. Halmos,^{1,2} Victoria A. Power,¹ Susan J. Shepherd,¹ Peter R. Gibson,^{1,2} and Jane G. Muir^{1,2}

- Randomised controlled, single-blinded trial in 30 IBS patiënten
- Cross-over design
- Dieet laag in FODMAPs versus typisch Australisch dieet



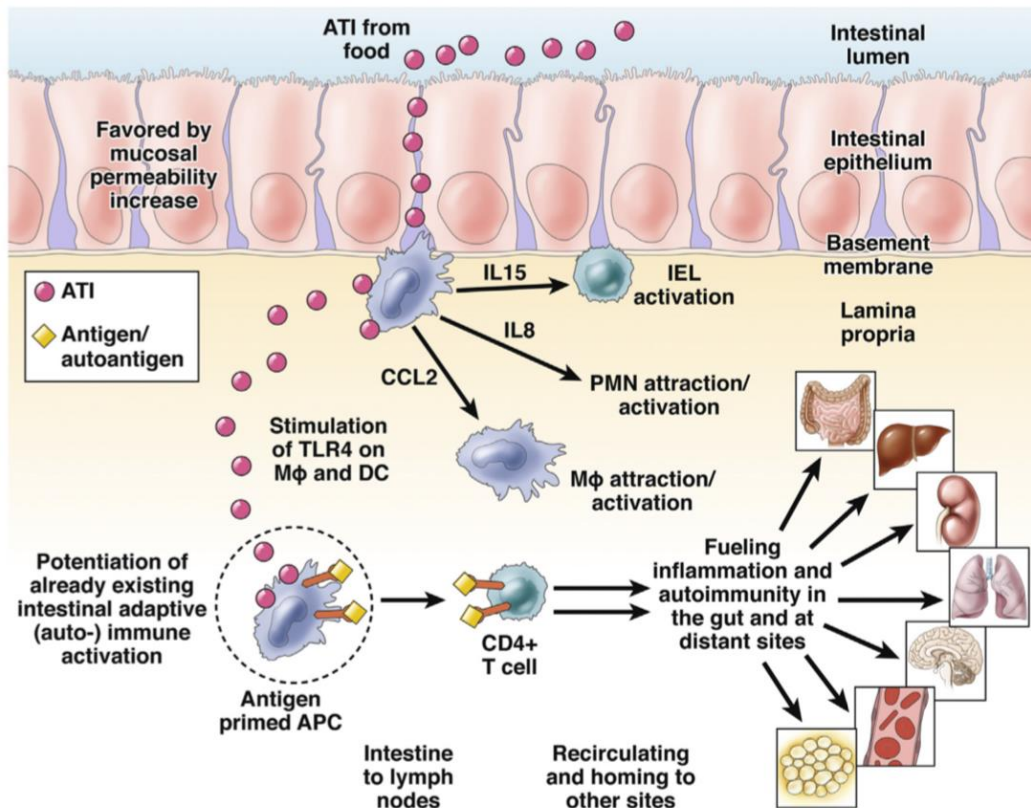
Irritable bowel syndrome

FODMAPS



Non celiac gluten sensitivity

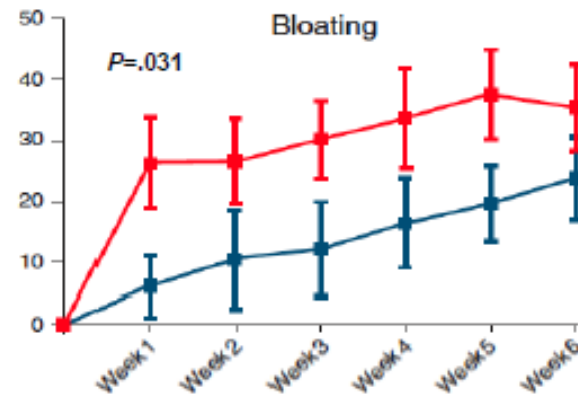
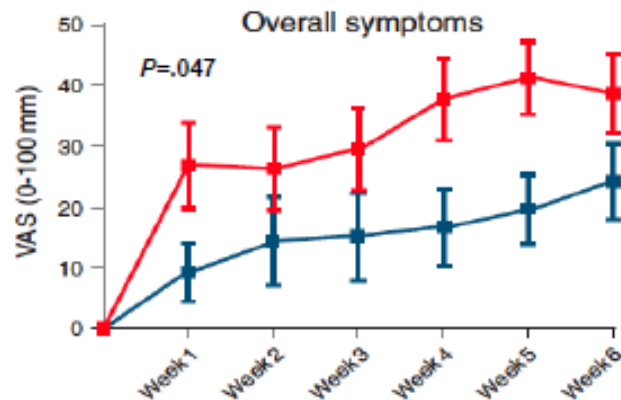
Niet-allergische reactie op gluten



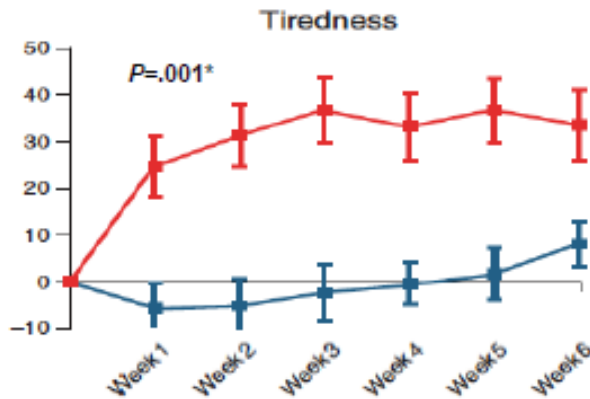
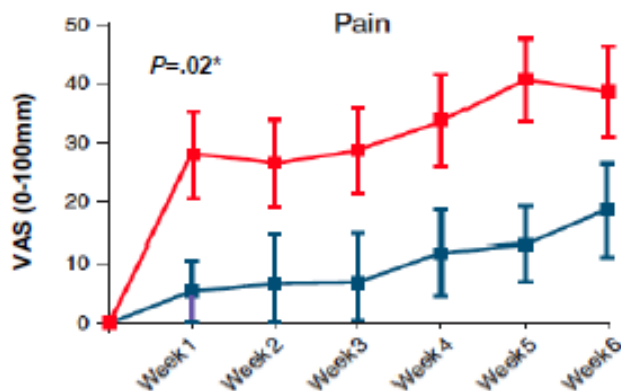
- Innate immune system
- Sterke overlap met IBS
- Onduidelijke definitie
- Rol van FODMAPS?

Non celiac gluten sensitivity

Gluten of FODMAPs?



■ Gluten (n=19)
■ Placebo (n=15)



- RCT
- 34 IBS
- Symptoomvrij op GFD

Non celiac gluten sensitivity

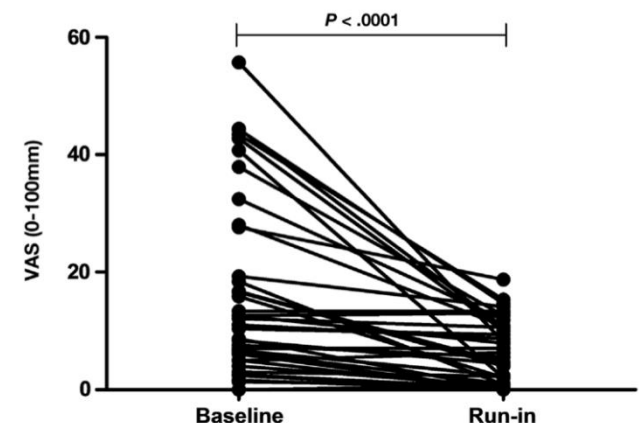
Gluten of FODMAPs?

No Effects of Gluten in Patients With Self-Reported Non-Celiac Gluten Sensitivity After Dietary Reduction of Fermentable, Poorly Absorbed, Short-Chain Carbohydrates

JESSICA R. BIESIEKIERSKI,^{1,2} SIMONE L. PETERS,² EVAN D. NEWNHAM,¹ OURANIA ROSELLA,² JANE G. MUIR,² and PETER R. GIBSON²

¹Department of Gastroenterology, Eastern Health Clinical School, Monash University, Box Hill, Victoria, Australia and ²Department of Gastroenterology, Central Clinical School, Monash University, The Alfred Hospital, Melbourne, Victoria, Australia

- 37 IBS NCGS patiënten
- Low-FODMAPs diet 2 weken
- Daarna rechallenge met gluten of placebo



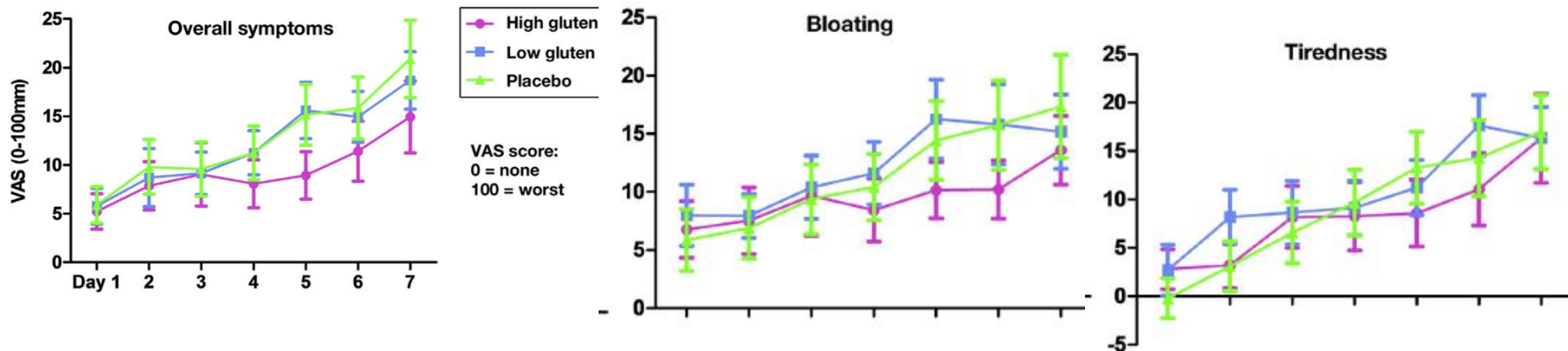
Non celiac gluten sensitivity

Gluten of FODMAPs?

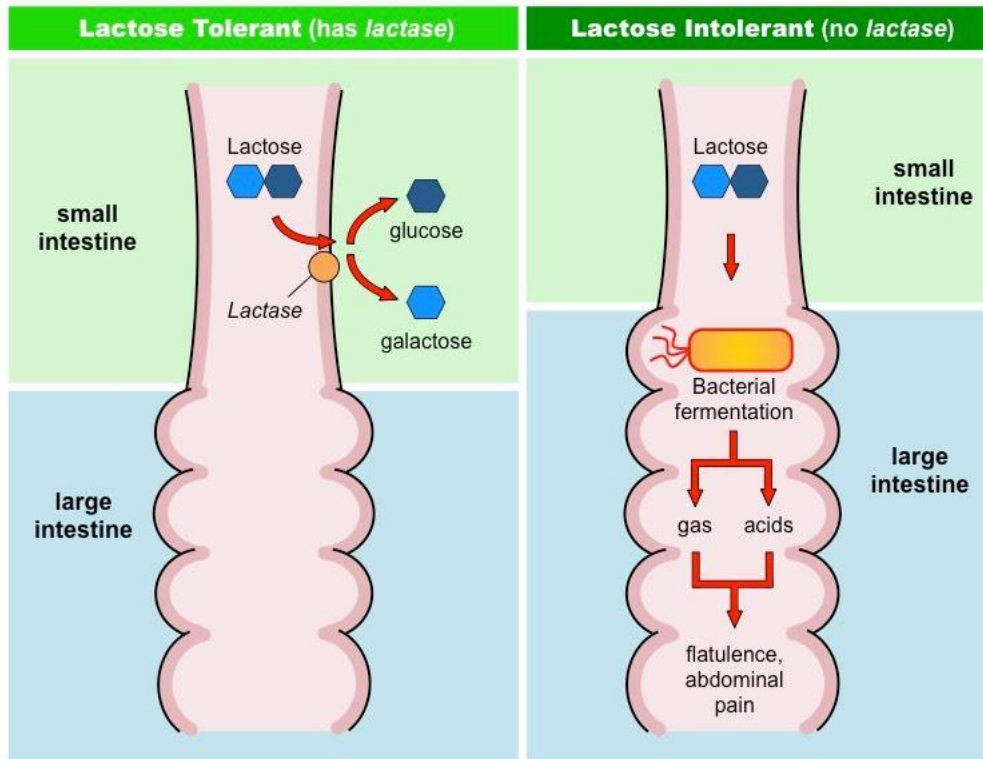
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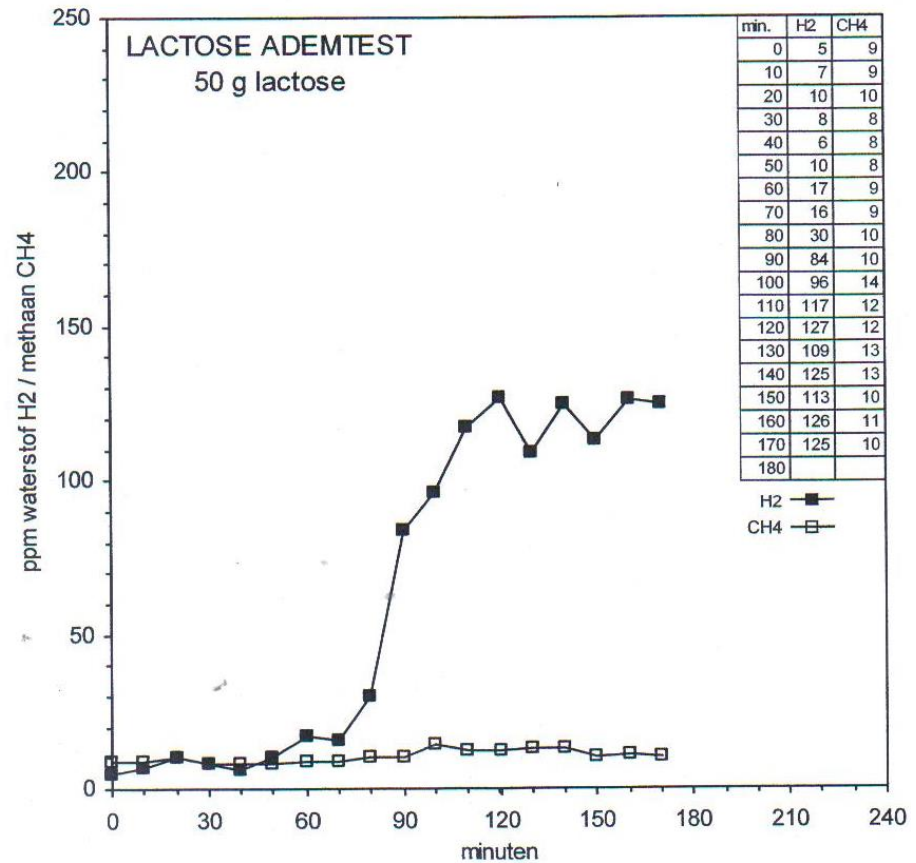
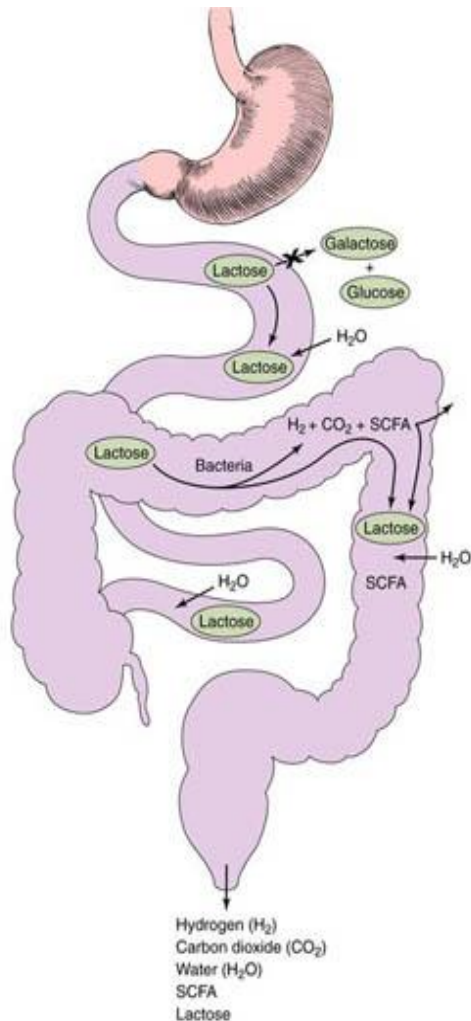


Lactose intolerantie



- Lactase deficiëntie
- 5-10% van de bevolking
- Diagnose: lactose-ademtest
- Behandeling
 - Lactose-arm eten
 - Lactase suppletie

Lactose intolerantie

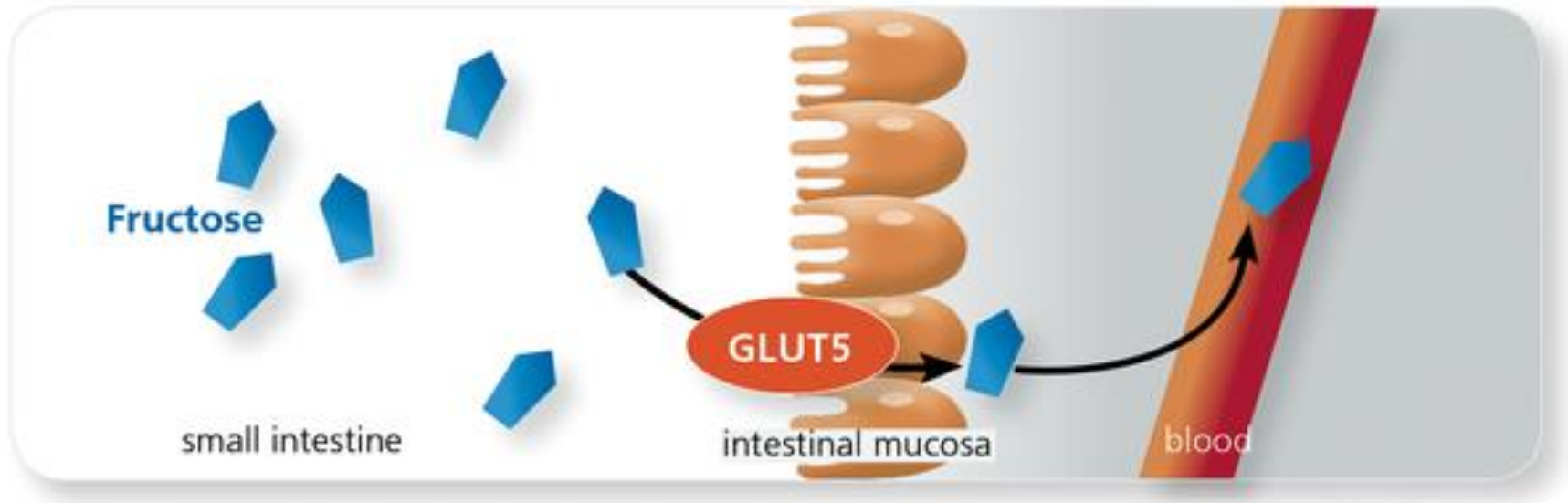


Positieve H_2 test: enkel stijging van H_2 na 80min.

Lactose intolerantie

TE VERMIJDEN	TOEGESTAAN
- Alle melk van dierlijke oorsprong: koe, geit, schaap, paard, ... zowel mager, halfvol als vol - Alle afgeleide producten van melk: melkpoeder, koffiemelk, gecondenseerde melk, (zure) room, ijsroom, smeerkaas, platte kaas, ... - Verzuurde melkproducten: yoghurt, kefir, karnemelk ➔ worden soms beter verdragen - Alle gerechten met melk bv pudding, rijstpap, wafels, pannenkoeken aardappelpuree, melk/roomsauzen, ...	- Lactose arme/vrije melk en yoghurt - Van nature lactosevrije voedingsmiddelen: bv bloem aardappelen, rijst, pasta fruit, groenten, peulvruchten vlees, vis olie, noten water, koffie, thee, frisdrank, fruitsap (calciumverrijkte) sojadrink, sojapudding, sojaroom tofu (calciumverrijkte) rijst-, haver-, kokos-, notendranken ➔ Bereidingen met bovenstaande

Fructose intolerantie



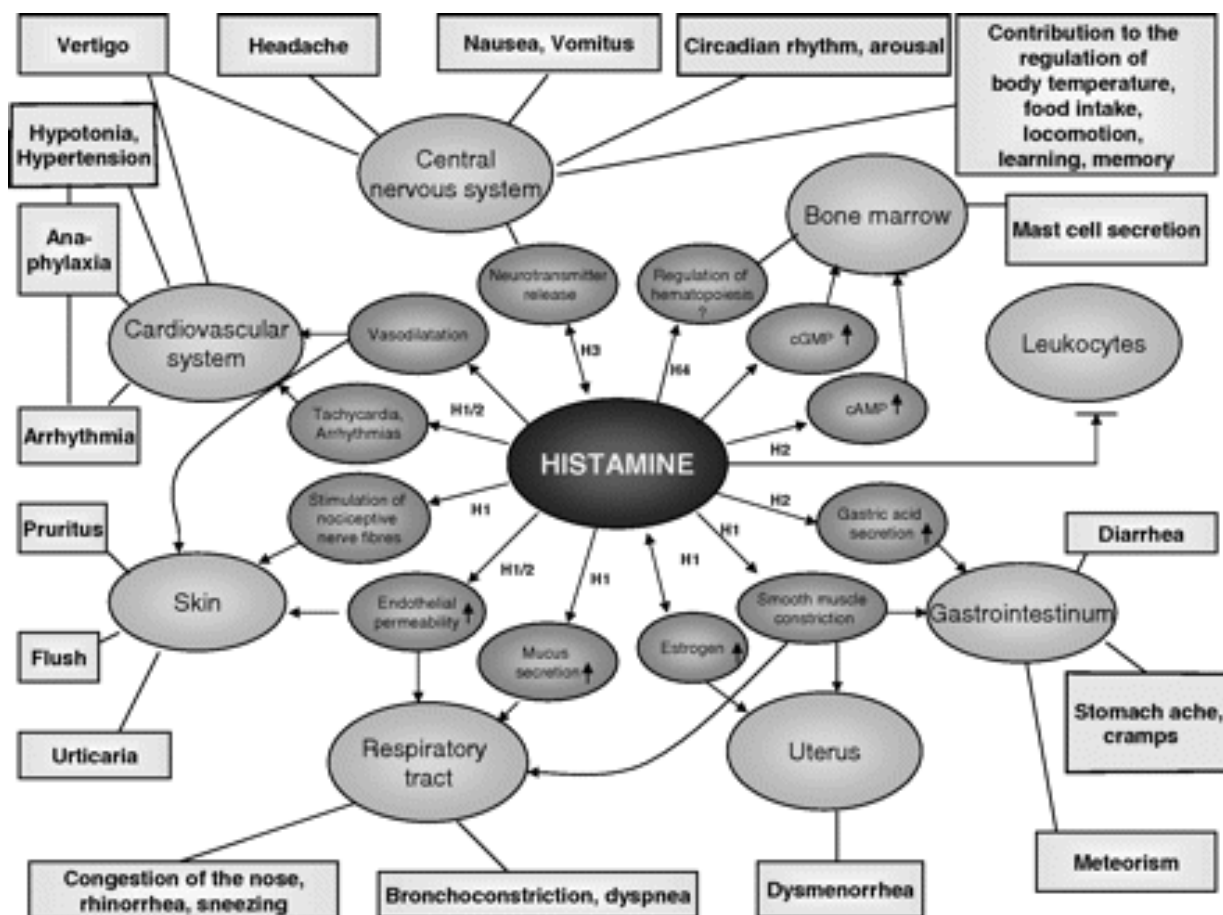
- Verminderde absorptie van fructose
- Symptomen
 - Abdominale bloating
 - Diarree
 - Foliumzuurdeficiëntie/zinkdeficiënties
- Fructose ademtest
- Behandeling: xylose isomerase / FODMAPS

Fructose intolerantie



- > 3 porties/dag van andere fruitsoorten
- Gedroogd fruit, fruitsap
- Ingrediënten: fructose, fructosestroop, fructose-glucosestroop
- Maïsstroop, agavestroop
- Grote porties frisdrank, grote porties suiker

“Histamine” intolerantie



- Niet bewezen
- DAO deficiëntie
- Multiple symptomen
- Uitlokkende voedingsstoffen
 - Vis
 - Noten
 - Papaya
 - Medicijnen