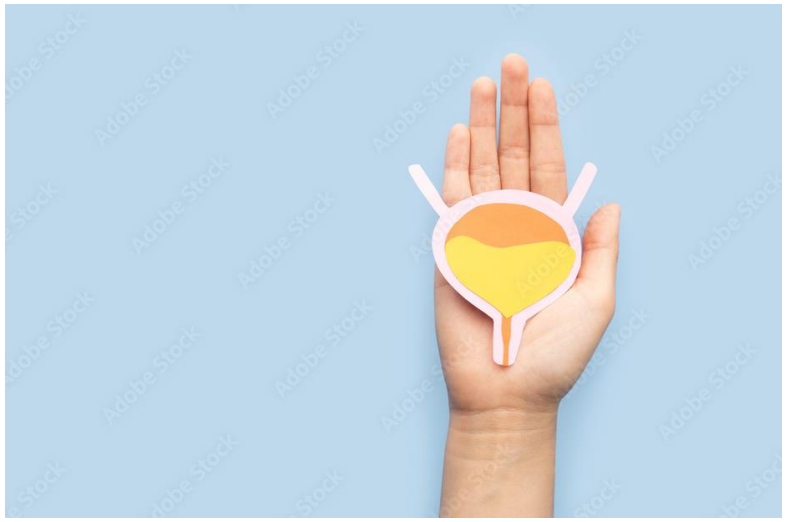

Bionutri®

Nutritional Support for the Bladder

Rosie Rayner, ND, mANP, mBANT

March Webinar 2024

www.bionutri.co.uk

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Bladder Facts

- Is a triangular muscular sac
- It's a hollow organ that sits in the pelvis, just above and behind the pubic bone
- In children, the bladder is located in the abdomen and does not completely descend into the pelvis until puberty
- When empty, the bladder is about the size and shape of a pear.
- It is held in place by ligaments that are attached to other organs and the pelvic bones

Science Photo Library

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The Urinary System

- The urinary bladder is a complex organ
- Its primary functions are to store urine under low and stable pressure and to allow for urination (micturition).
- Many conditions can cause poor bladder compliance, reduced capacity, and incontinence
- Kidneys filter around 140-200L of fluid per day
- Every 10-15 seconds, urine is drip fed into the bladder via the ureters

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Urinary Tract Anatomy

Ureters

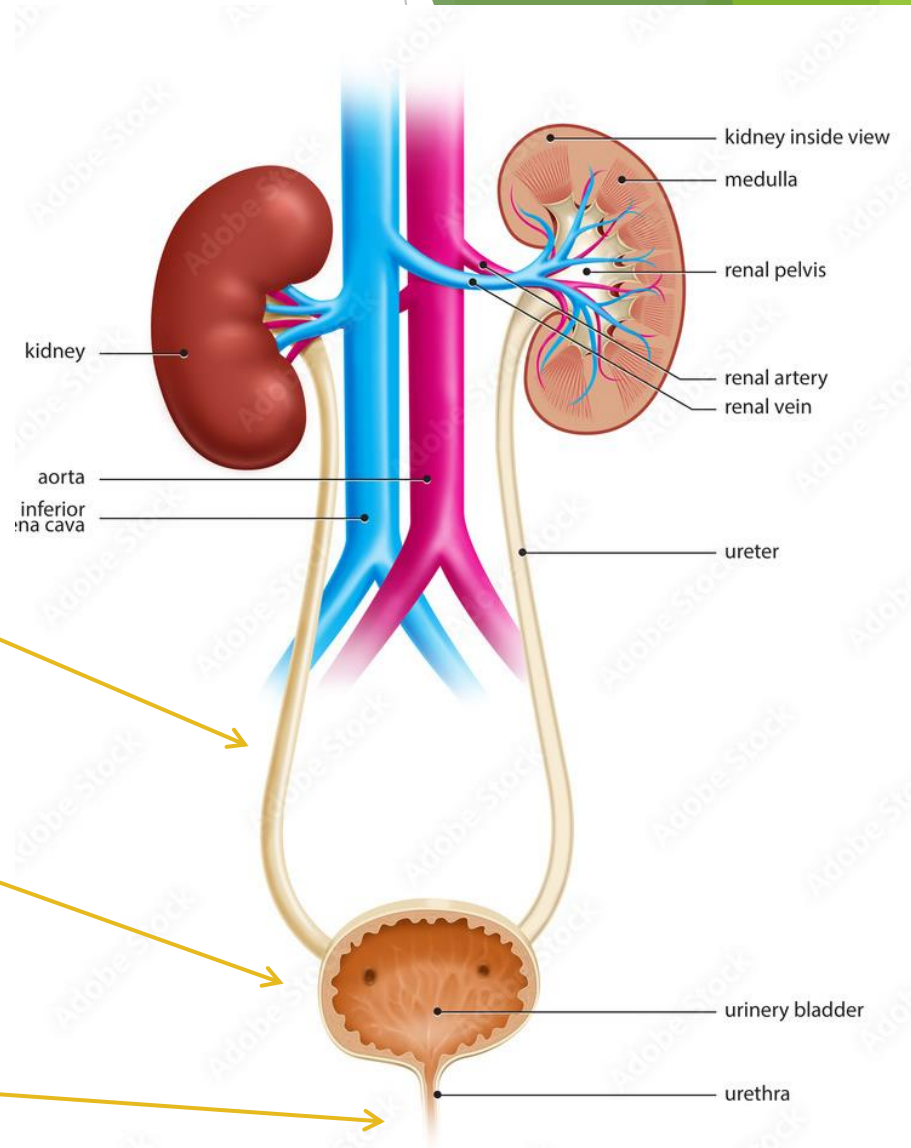
- Each are 30cm long
- Important organs
- Send urine from kidneys to bladder
- Made of special muscular tissue to help regulate flow of urine
- Contracts to allow movement of urine

Bladder

- Holds around 300-700ml urine
- Special muscles allow for expansion and contraction

Urethra

- Communicates to whole system – modulates mucus
- Holds lactobacillus to stay healthy



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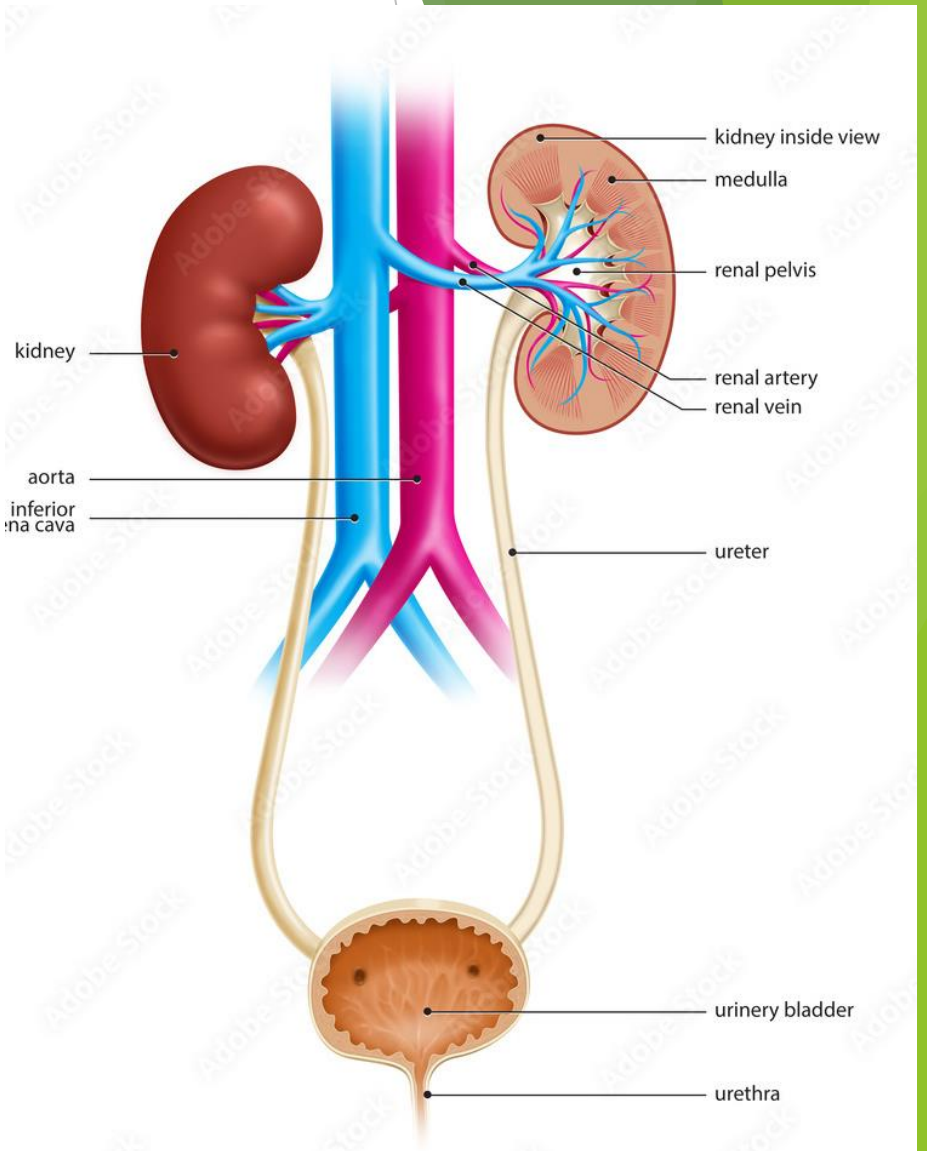
Urinary Tract Anatomy

- The bladder sits in a unique position inferior to the peritoneum (the membrane that lines most of the abdominopelvic cavity)

- Due to its position, the outermost layer of the superior urinary bladder is made of serous membrane, continuous with the peritoneum



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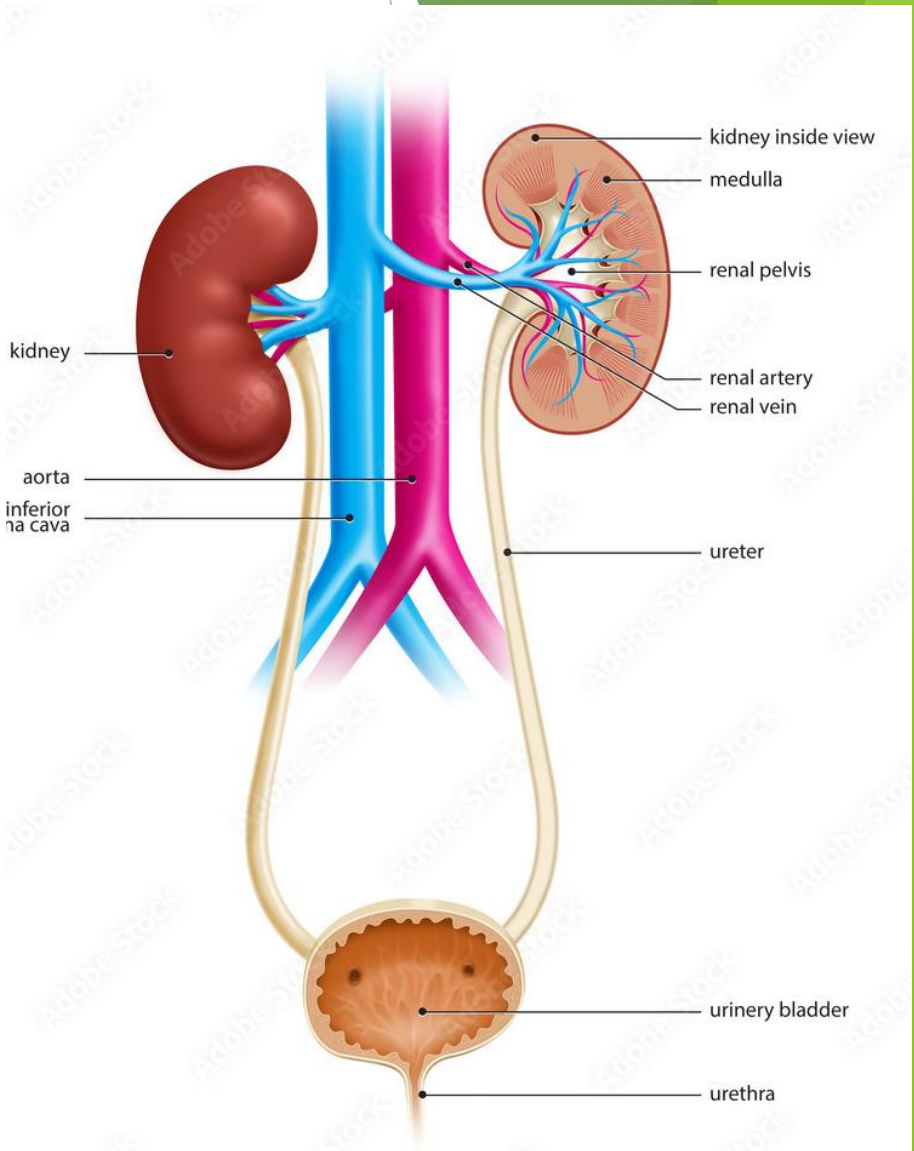
Urinary Tract Anatomy

- Two sphincter muscles. These circular muscles help keep urine from leaking, by closing tightly like a rubber band around the opening of the bladder

- Nerves in the bladder alert a person when it is time to urinate

- The brain signals the bladder muscles to tighten, which squeezes urine out of the bladder. At the same time, the brain signals the sphincter muscles to relax to let urine exit the bladder through the urethra. When all the signals occur in the correct order, normal urination occurs



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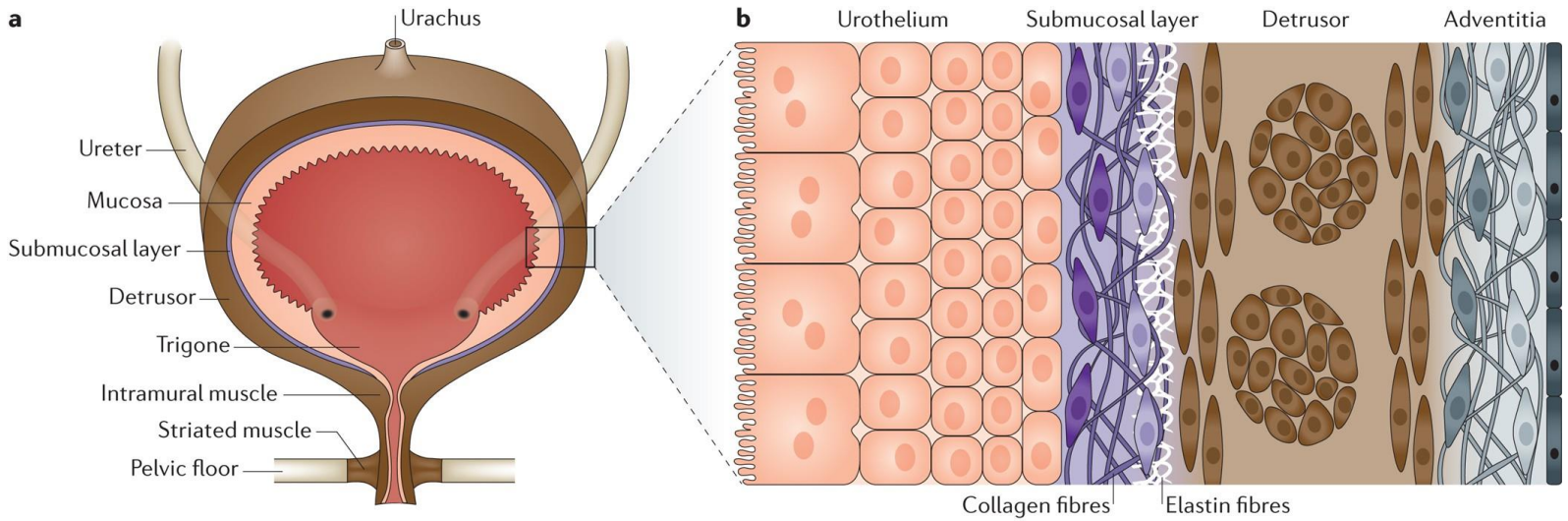
Urinary Tract Anatomy: epithelial tissue



The detrusor muscle is the primary muscle of the bladder and is arranged as three layers.

This muscle is smooth muscle composed of transitional epithelium or urothelium. Transitional epithelium is stratified epithelium, and its cells can change shape. When the bladder is empty, the cells of the urothelium are round and large. When full, the cells transition into flatter cells to accommodate more urine. The detrusor muscle wall contains muscarinic (M3) receptors, regulated under parasympathetic control.

It also contains beta-adrenergic receptors for sympathetic regulation.

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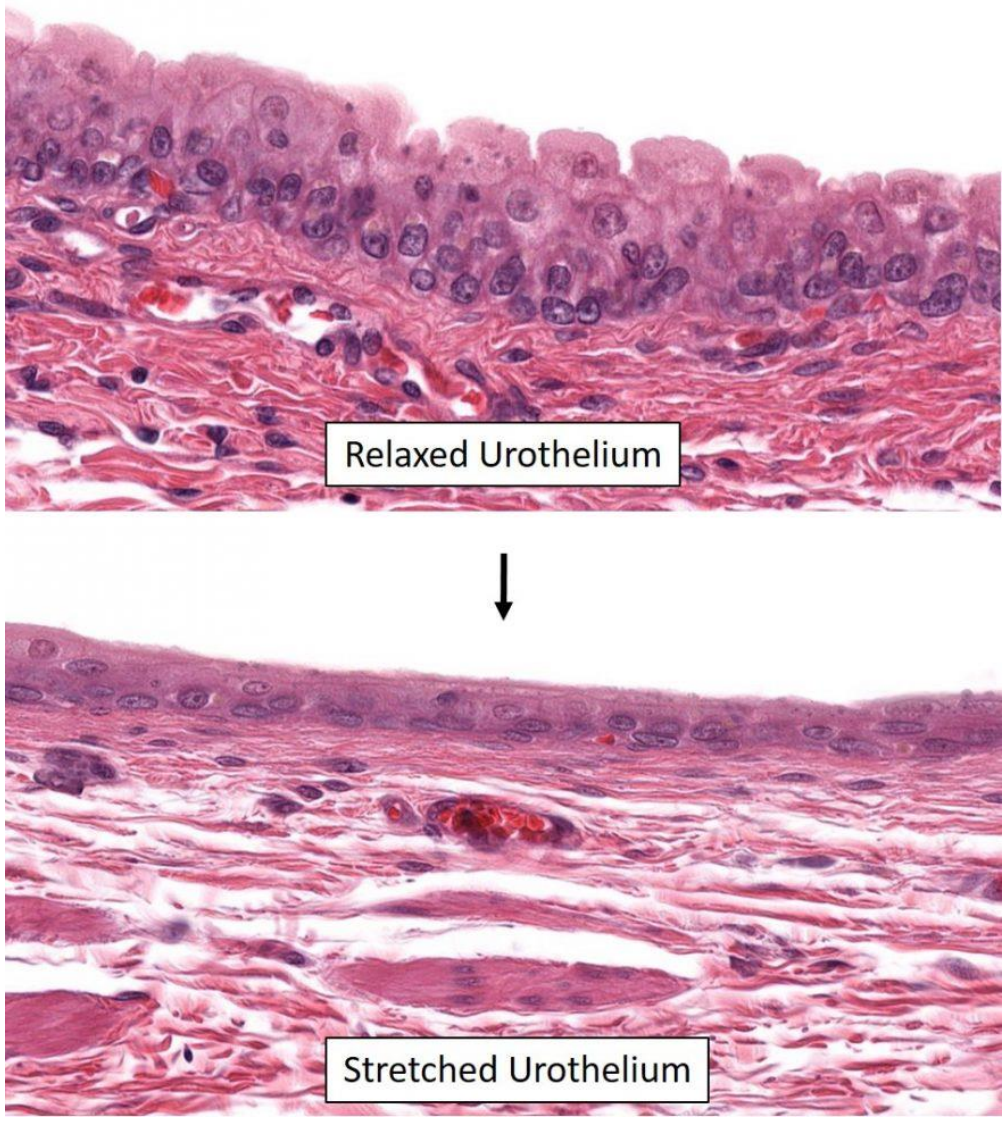
Urinary Tract Anatomy: epithelial tissue



Urothelium lines the ureters, bladder, and the urethra. The urothelium is also referred to as transitional epithelium because it can transition from a plump rounded epithelium in a contracted bladder to a flattened epithelium in a distended urine-filled bladder

https://ohiostate.pressbooks.pub/vethisto/chapter/11-urine-elimination/

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Glycosaminoglycans (GAGs)

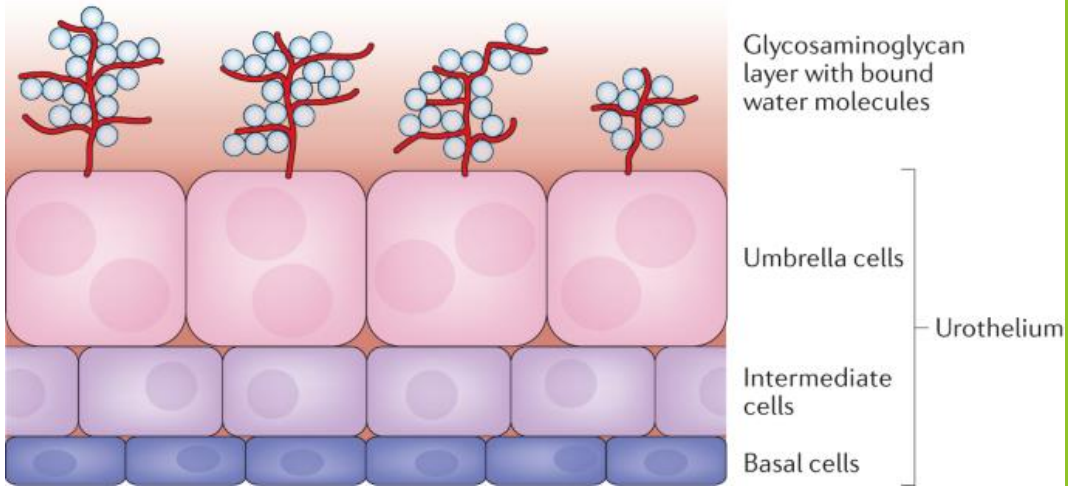
Glycosaminoglycans/GAGs (formerly known as mucopolysaccharides), are long chains of modified disaccharides.

Glycosaminoglycans (GAGs) in the urothelium of the bladder prevents bacteria from sticking to the bladder wall and they secrete mucous that forms a barrier between the urine and bladder wall.

Dysfunction with the GAGs allows the bladder wall to absorb urea and potassium, which in turn affects nerves in the bladder wall and release of mast cells which cause inflammation.

https://www.nature.com/articles/s41585-020-0350-8

Over time this can cause chronic cystitis and Interstitial Cystitis



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Glycosaminoglycans (GAGs)

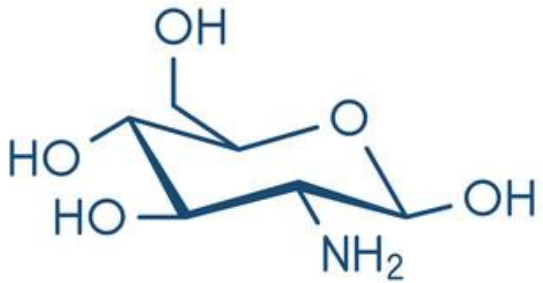
They are the main component of proteoglycans (shock absorbers and attract water).

There are 6 types of GAGS. 4 are involved in connective tissues (chondroitin sulphate, dermatan sulphate, heparin sulphate, keratan sulphate).

Glucosamine, a key component of cartilage, is vital for the synthesis of GAG's and proteoglycans.

Glucosamine's ability to maintain joints, cartilage and collagen is well documented.

Glucosamine Hydrochloride provides a highly available source of glucosamine.



glucosamine

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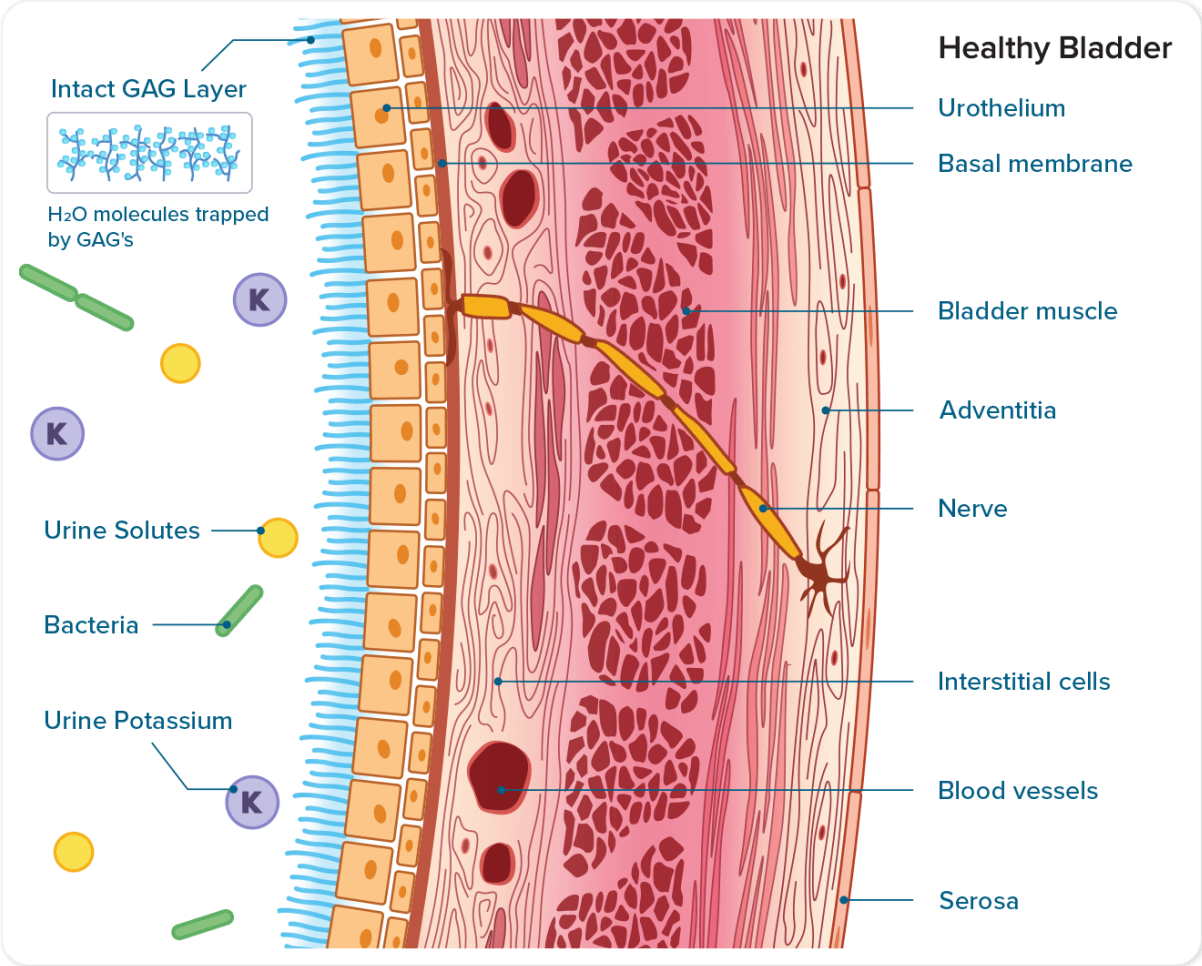
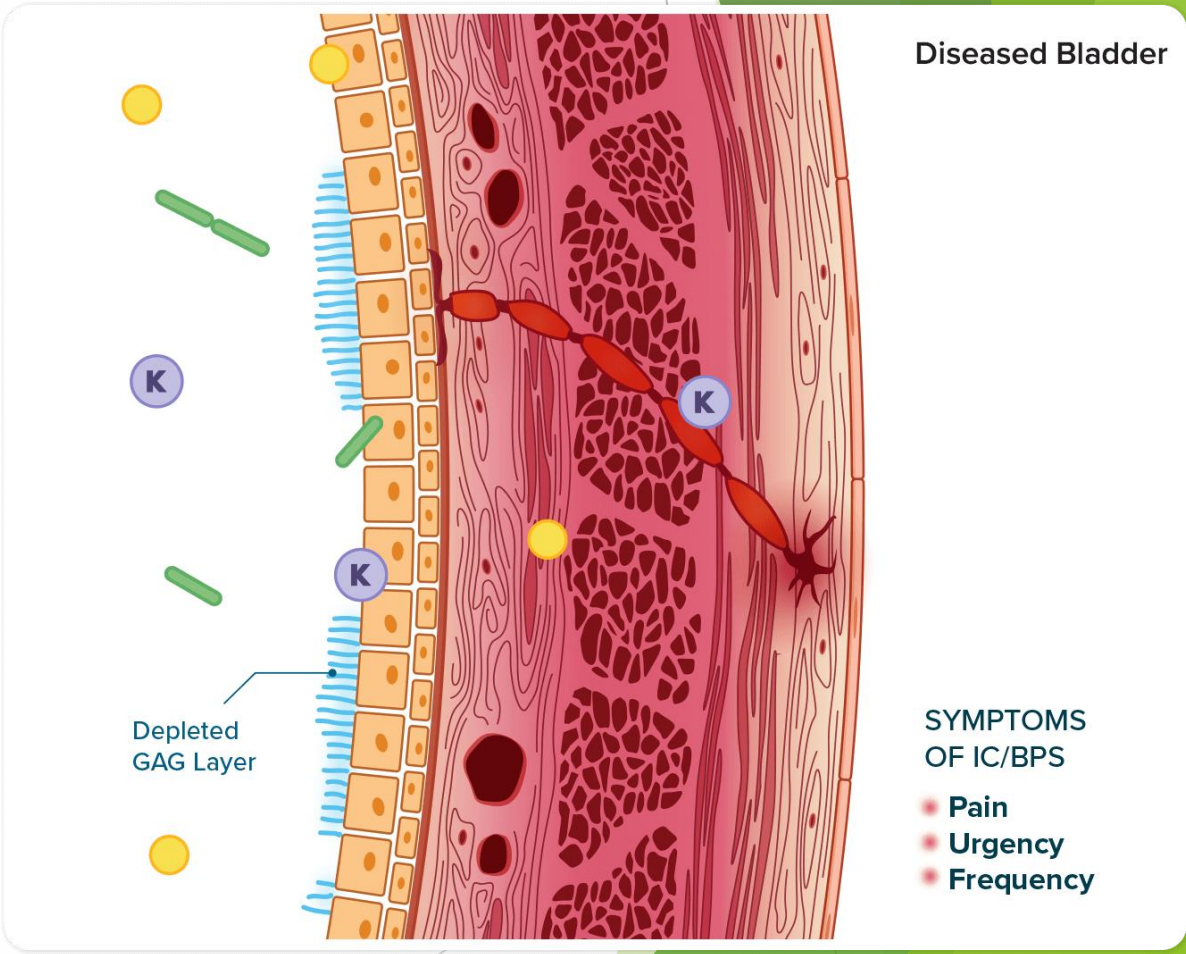
Glycosaminoglycans (GAGs)





https://vaneltix.com/therapies/ic-bps/

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Common Bladder issues

Children:

- Bed wetting

Young adults:

- Cystitis
- Urinary Tract Infections (UTIs)

Mature Adult:

- Urinary Tract Infections (UTIs)
- Incontinence
- Prostate issues
- Interstitial Cystitis (IC)
- Overactive bladder

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Red Flags

- ✓ On-going or acute pain
- ✓ Smelly, sweet or cloudy urine
- ✓ Frequent Urination (every 1-2 hours)
- ✓ Dark urine or blood in urine

- ➢ Kidney Stones
- ➢ Infection – bladder or kidneys
- ➢ Obstruction
- ➢ Cancer – bladder, kidney, prostate

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Foods that can be triggering

- Coffee
- Alcohol
- Fizzy drinks
- Sweeteners – aspartame, saccharin, sugar alcohols,
- Lemon/lime (citrus)
- Nightshades – white potato, tomato, aubergine, chilli
- High histamine foods – cacao, nightshades, aged meats and cheese, fermented foods
- Damp-forming foods – dairy, wheat, refined sugar, bad fats, UPFs

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Clinic: Bedwetting in children (Enuresis)

15% of 5-7 year olds regularly wet the bed at night

3% of 12 year olds wet the bed

Not always a cause for concern but can be a sign of:

- Diabetes
- Infection

- Anxiety
- Food allergies or intolerances
- Gut issues inc Coeliac, IBS
- Thyroid imbalances

<u>Nutrients that may be of use:</u>

- ✓ Omega 3 (frequent urination can be a sign of low omega 3)
- ✓ Magnesium (prevent spasms and support nervous system)
- ✓ Vitamin D (low levels linked to UTI risk) https://pubmed.ncbi.nlm.nih.gov/37375601/

Avoiding caffeine and soft drinks

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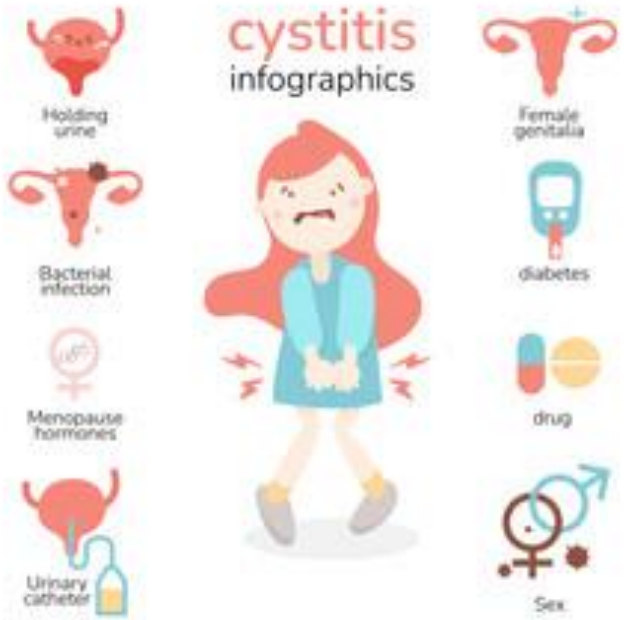
Clinic: Cystitis/UTIs



Cystitis is an infection in the bladder.

A UTI is an infection anywhere in the urinary tract.

- Most are bacterial - often by E. coli
- More common in women
- 50-60% women will have a UTI in their lives
- 25% of women will suffer with chronic UTIs
- 1 in 2,000 men will develop a UTI annually (NHS 2019)
- Mild cystitis doesn't always need antibiotics

Risk factors: sexual activity, spermicide use, diabetes, low oestrogen

Recurrent UTIs = 3 or more in 12 months

Infectious symptoms categorised:
100,000 organisms per mL mid stream

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Clinic: Cystitis/UTIs

The bladder is lined with a mucous membrane and coated with a protective protein layer = usually highly resistant to infection or irritation.

Occasionally infections come from neighbouring organs such as the kidneys, the vagina and urethra, and urethra/prostate gland.

Other conditions such as obstructions, tumour growths, physical injuries, and bladder stones can disrupt the bladder and leave it more vulnerable to infections.

In very young males - an underlying structural abnormality of the genitourinary system should be suspected.

Important to get a diagnosis from GP (dip stick or for chronic/recurrent cases, a lab test)

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Clinic: Overactive Bladder (OAB)

Feeling a sudden urge to urinate, that's difficult to control

Urinate frequently, usually 8+ times in 24 hours (ever 1-2 hours)

Wake up 2+ times in the night to urinate (nocturia).

<u>Urinary incontinence:</u>

- Affects 13% of women and 5% of all men at some stage in their lives.
- Most prevalent in those who are pregnant, aged 60+, and research finds that it is twice as prevalent in older women.
- Urinary incontinence was highest amongst Hispanic women

(https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1557354/)

Estimated 3 - 6 million people in the UK have urinary incontinence.

(NHS data 2021)

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Clinic: Overactive Bladder (OAB)

Involuntary bladder contractions:

Overactive bladder happens when the muscles of the bladder start to contract on their own, even when the volume of urine in the bladder is low (involuntary contractions).

Several conditions may contribute to overactive bladder:

- Neurological disorders – stroke, multiple sclerosis, Alzheimer's
- Diabetes
- UTIs that can cause symptoms like those of an overactive bladder
- Low oestrogen - postpartum and post-menopause can both cause pelvic muscles to become weaker
- Tumours or bladder stones
- Obstructions to bladder - enlarged prostate, constipation or scar tissue/surgery

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Clinic: Overactive Bladder (OAB)

Other causes:

- Medications e.g. diuretics, ACE-inhibitors, beta-blockers, calcium channel blockers
- Drinking too much caffeine or alcohol
- Irritant foods e.g. citrus, sweeteners, wine
- Ageing - declining cognitive function may make it more difficult for the bladder to understand the signals it receives from the brain
- Incomplete bladder emptying - may lead to symptoms of overactive bladder
- Hypertonic Pelvic Floor / Pelvic Floor Dysfunction
- Pelvic Organ Prolapse – cystocele

Estimated 3 - 6 million people in the UK have urinary incontinence.
(NHS data 2021)

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Clinic: Overactive Bladder (OAB)

Naturopathic Support

- Avoiding irritant foods
- Staying hydrated
- De-stressing
- Magnesium
- Herbs – chamomile, marshmallow
- Keep bowels moving

- ➢ Referral to women's health/pelvic physio
- ➢ Stretching
- ➢ Yoga
- ➢ Pilates

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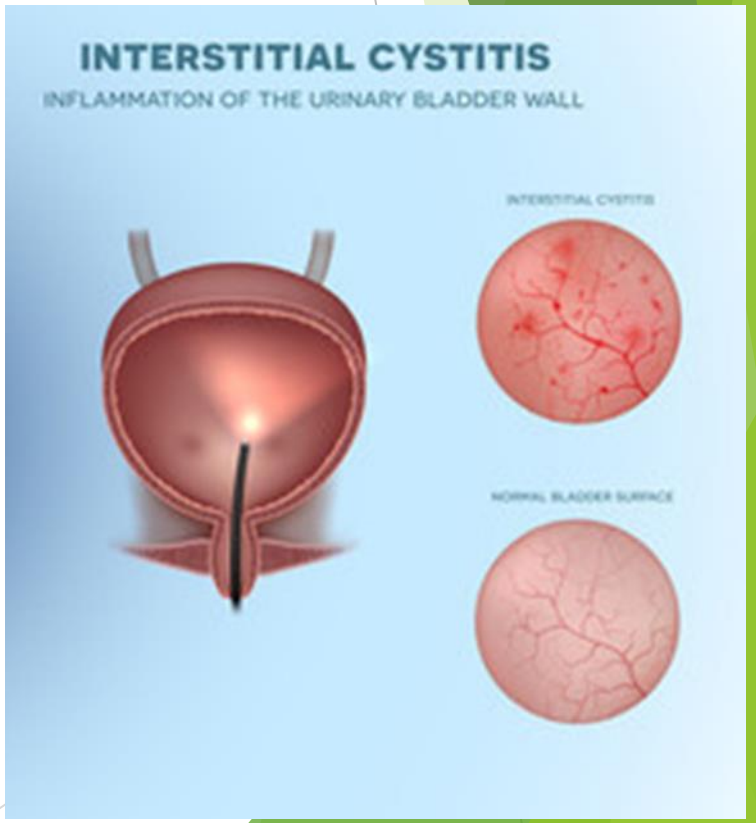
Clinic: Interstitial Cystitis / Painful Bladder Syndrome

- Interstitial cystitis affects 400,000 people in the UK, 90% are women
- The average age of people affected by IC is 40 years old

<u>Associated with other chronic pain conditions:</u>

- Fibromyalgia
- Chronic Fatigue Syndrome (CFS)
- Irritable Bowel Syndrome (IBS)
- Vulvodynia
- Pelvic Floor Dysfunction

Low grade infections, or partially treated infections, are often missed and left to linger, causing chronic low-grade cystitis-type symptoms.



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Clinic: IC / PBS

Symptoms

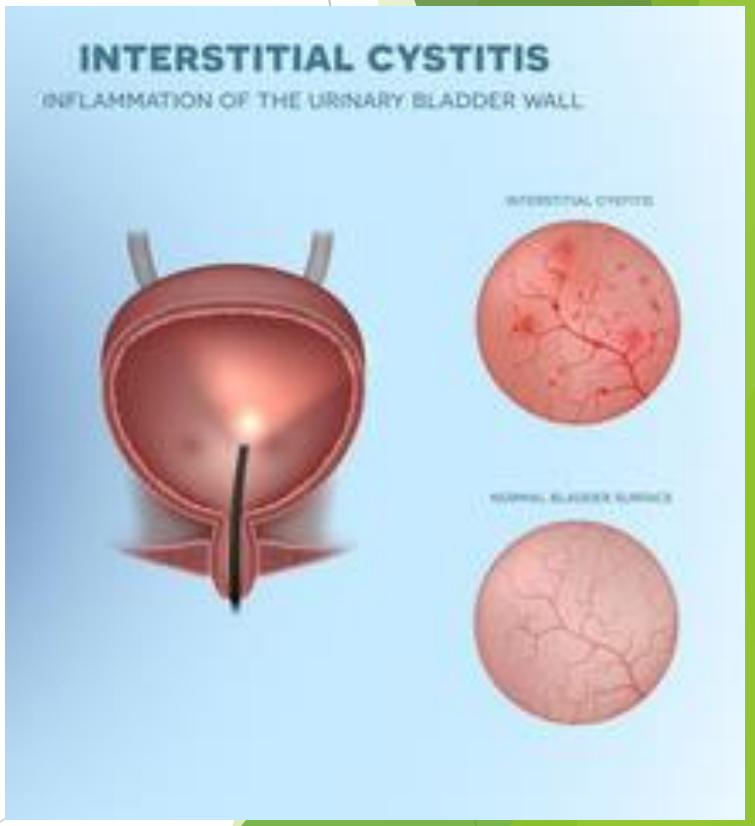
- On-going pain/discomfort/fullness with bladder filling and relief with emptying bladder
- Frequency
- Urgency
- Nocturia

(Cash & Glass, 2014)

Other Signs and Symptoms

- Pain during vaginal intercourse
- Low back pain with bladder filling
- Increase in symptoms during menstruation
- Pain/pressure/discomfort of suprapubic area, urethra, vulva, vagina, rectum, lower abdomen, and back

(Cash and Glass, 2014 & Goroll and Mulley, 2014 & Rovner, Goudelocke, and Ellett (2015)



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Clinic: IC / PBS

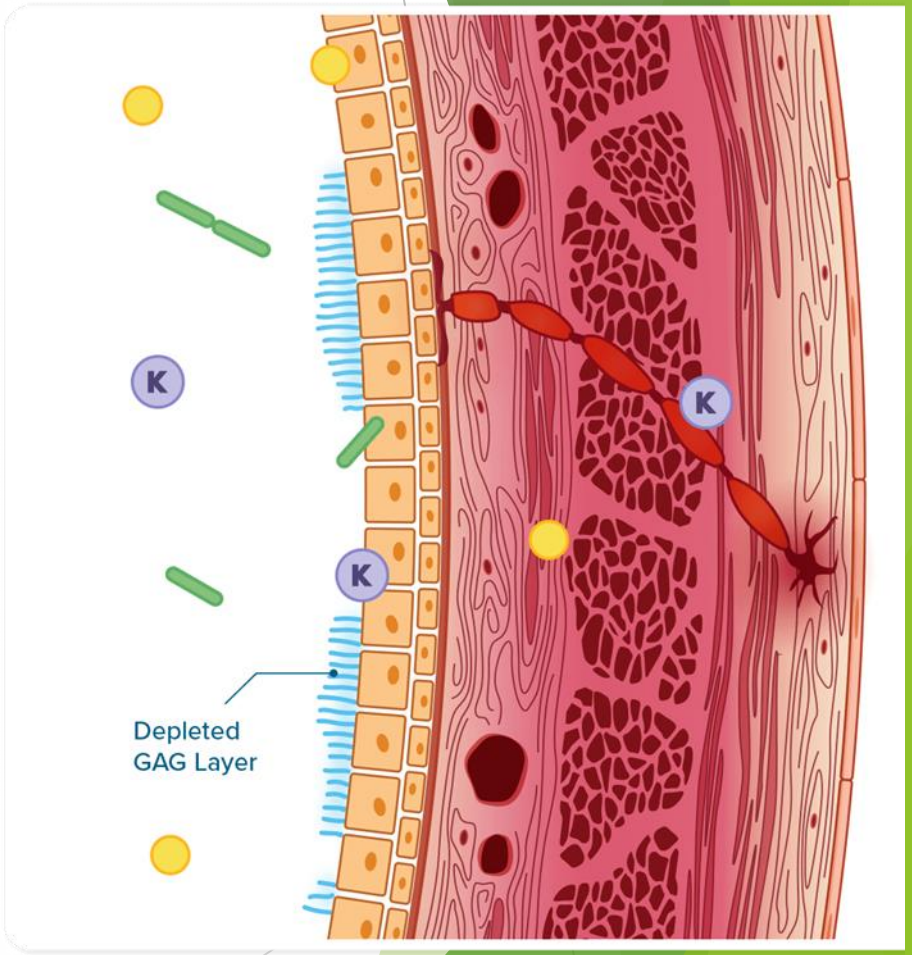
- The pathophysiology of IC/BPS is poorly understood, and theories include chronic inflammation, autoimmune dysregulation, bacterial cystitis, urothelial dysfunction, deficiency of the glycosaminoglycan (GAG) barrier and urine cytotoxicity

- Bacteria often present in IC: Enterococcus, Streptococcus and Staphylococcus

- Often, people with urinary issues have a history of taking many antibiotics

- Stress is a common trigger for IC as cortisol can increase inflammation

- There are multiple systems involved, not just urinary. Inflammation is a huge driver – need to find out where and why inflammation is excessive



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A note on Pelvic Pain

Pelvic pain has many causes:

- Reproductive
- Digestive
- Urinary
- Muscular
- Connective Tissue
- Nerve
- Circulation

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Clinic: IC / PBS

Red Flags
Bladder cancer
(smoking history)
Spinal tumour
(incontinence, muscle weakness, loss of sensation)

Case History is crucial

- Any surgeries, pregnancies or births?
- History of UTIs, antibiotics, urinary retention, or urinary tract stones?
- Other health issues - IBS, CFS, fibromyalgia, autoimmunity, SIBO, diabetes

Differential diagnosis to be aware of:

- Acute UTI
- Irritable Bowel Syndrome (IBS)
- Endometriosis or Fibroids
- Vulvodynia / Pelvic Floor Dysfunction (PFD)
- Pelvic Organ Prolapse (POP)
- Benign Prostate Hyperplasia (BPH)
- Chronic prostatitis
- Pelvic Congestion Syndrome

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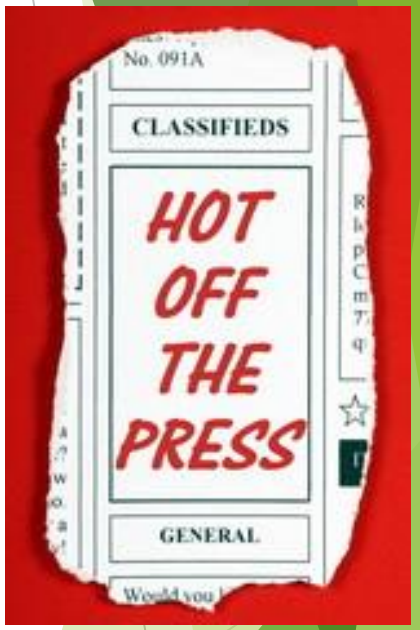
Feb 2024 Review: key findings on IC/PBS

Studies suggest that various molecular pathways are involved in IC/PBS, including the JUN N-terminal kinase (JNK) pathway, transient receptor potential (TRP) channels, activated mast cells, mucosal signaling, circadian rhythm regulation, inflammation and neural dysregulation

Reactive oxygen species (ROS) are a common factor in different molecular pathways and channels implicated in IC/PBS

As IC/PBS might be multifactorial, future research should target different implicated pathways simultaneously and study the role of reactive oxygen species as a root cause in IC/PBS

https://www.nature.com/articles/s41585-023-00850-y



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Clinic: IC / PBS

<u>Naturopathic Support</u>

- ✓ Hydration
- ✓ Anti-inflammatory foods – consider avoiding nightshades
- ✓ Hormone Support
- ✓ Gut support – probiotics, anti-fungal, anti-microbial
- ✓ Stress support – B vitamins, vitamin C, magnesium
- ✓ Looking at possible SIBO
- ✓ Herbs – anti-inflammatory, demulcent
- ✓ Epithelial support

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A note on Fungus

Fungus and mycotoxins will create inflammation in the body through it's influence on the immune system at the gut wall. It will also lower immunity.

If a urine test finds mycotoxins in the bladder, it got there from elsewhere. It is a big driver in IC and chronic cystitis.

They can cause ulcerations in the lining of the bladder – bacteria can then cause more infections

Mycotoxins need sorting – detoxification, herbs, elimination and biofilm disrupter

Thrush and cystitis can occur alongside each other

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A note on Fungus

A 2016 study on IC flares found…

“Among women with urological chronic pelvic pain syndrome the prevalence of fungi (Candida and Saccharomyces sp.) was significantly greater in those who reported a flare compared to those who did not”.

https://pubmed.ncbi.nlm.nih.gov/26410734/

Thrush and cystitis can occur alongside each other

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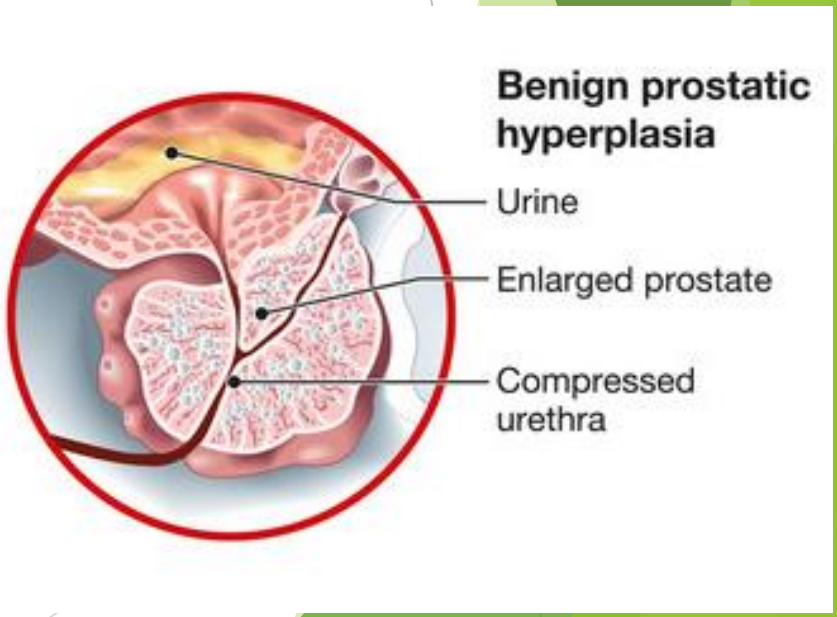
Clinic: Prostate Issues – Benign Prostate Hyperplasia (BPH)

- ✓ 3 million men affected in the UK – 90% over 80 years old
- ✓ The prostate gland grows with age – compresses the urethra, interfering with the flow of urine
- ✓ Non-cancerous (symptoms similar to cancer)

<u>Symptoms:</u>

- Difficulty passing urine
- Weak flow of urine that sometimes starts and stops
- Dribbling of urine before or after urinating
- Feeling of incomplete emptying of bladder after passing urine
- Frequent or urgent need to pass urine
- Needing to get up several times in the night to pass urine



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Clinic: Prostate Issues - BPH

Aetiology:

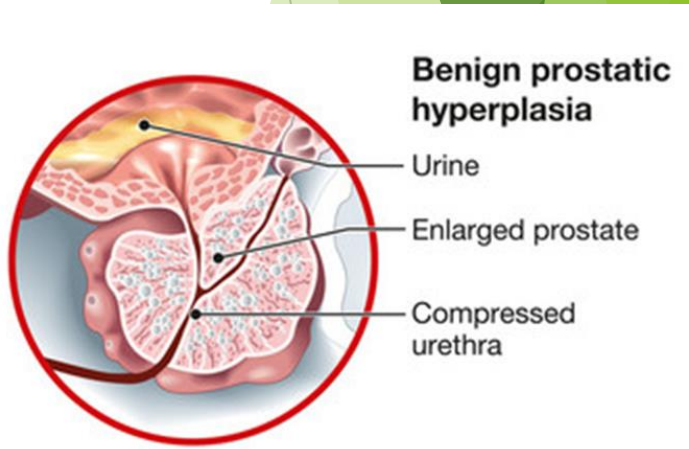
1. The urethra is pressurised because of physical enlargement of the prostate due to overgrowth of the prostatic epithelium.

Androgens (especially dihydrotestosterone (DHT)), play a permissive role allowing prostate cell proliferation. Normally this proliferation is balanced against apoptosis, but with age the process becomes imbalanced and prostate growth results.

Drug therapy for BPH often targets the inhibition of 5-alpha-reductase (5-AR), the enzyme responsible for converting testosterone into DHT, thereby limiting cell proliferation.

2. There is a dynamic element, which appears to be linked to sympathetic nervous system activation and noradrenaline concentrations, which influence prostate contractility. This aspect is therefore strongly associated with the catecholamine pathway and the stress response resulting in a worsening of lower urinary tract symptoms.

The prostate's primary function is to produce the fluid that nourishes and transports sperm (seminal fluid)



Nutrition Practitioner Vol 13,issue 1,
Dietary Factors in Prostate Health: Research Update: (23--27)Chamberlain

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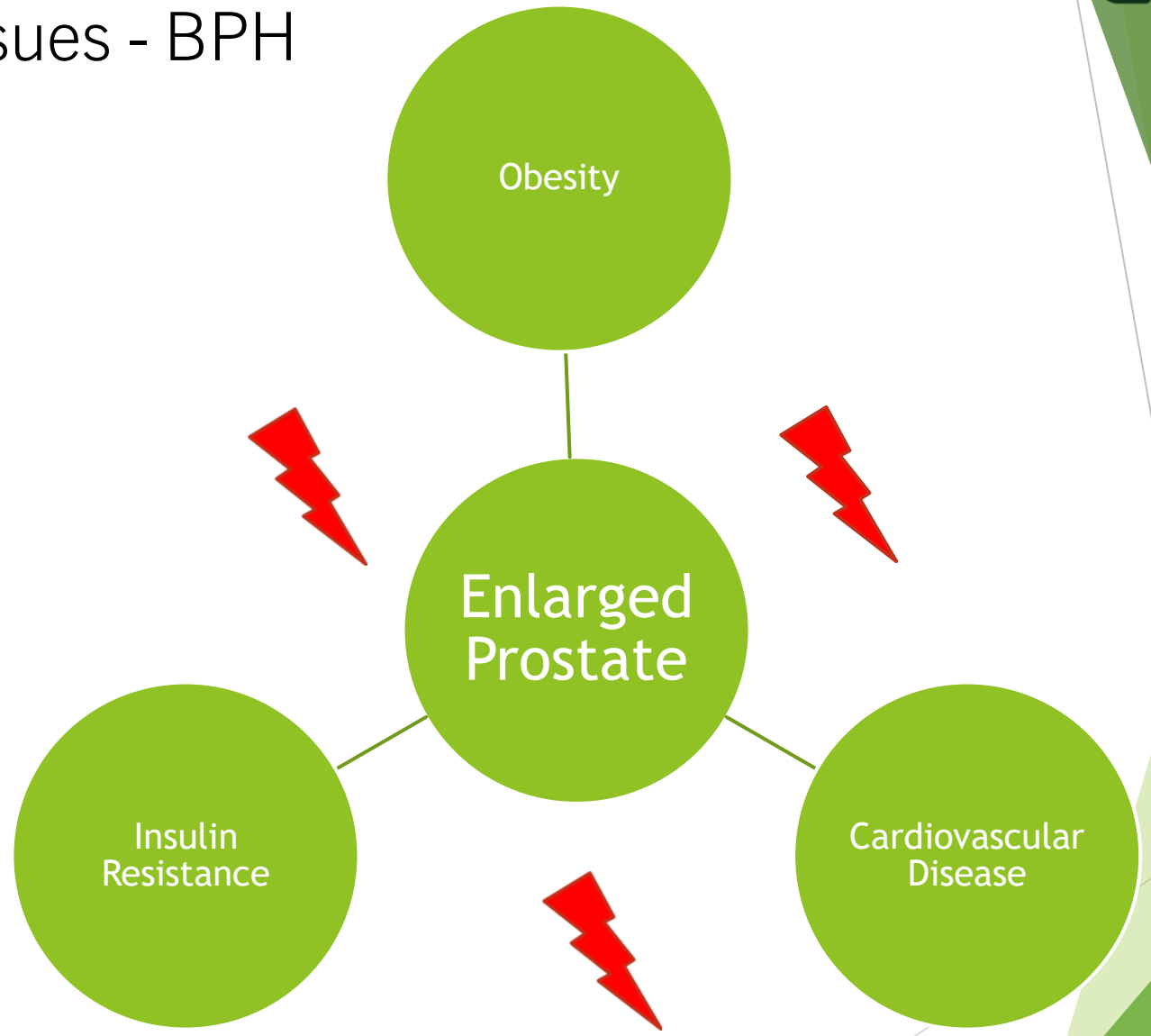
Clinic: Prostate Issues - BPH

Metabolic syndrome appears strongly linked with increased risk of BPH.

Waist to hip ratio (evidence of abdominal fat accumulation) test results indicating dyslipidaemia and insulin imbalance should be considered not only for their risk relating to development of type II diabetes and cardiovascular issues, but that they may also be indicative of risk for prostate dysfunction



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Inflammation & obesity/excess weight

Excess of macronutrients in the adipose (fat) tissue stimulates them to release inflammatory mediators like TNF-α and IL-6.

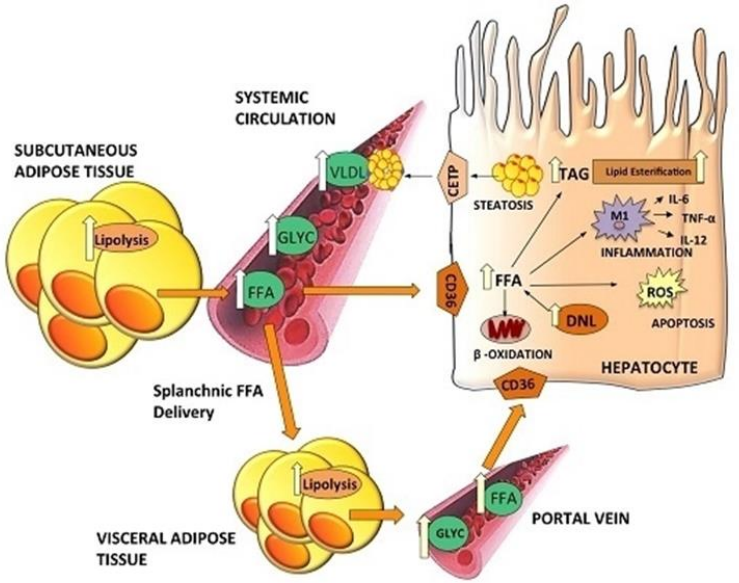
This reduces production of adiponectin, predisposing to a pro-inflammatory & insulin resistant state and oxidative stress.

The increased level of IL-6 stimulates the liver to synthesise and secrete C-reactive protein.

Systemic Inflammation

75% of people 45-74years are overweight or obese

Adiponectin is a hormone your adipose tissue releases that helps with insulin sensitivity and inflammation



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Clinic: Prostate Issues - BPH

Conventional Treatment

Drugs

- Alpha Blockers
- Anticholinergics
- 5-alpha reductase inhibitors
- Diuretics
- Desmopressin

Surgery

- TURP (remove part of prostrate via urethra)
- Holmium Laser (via urethra – avoids cutting)
- Water ablation (pressurised water can remove part of prostate)
- Green Light XPS (less side effects but as effective as TURP)
- Prostatotomy– abdominally or laparoscopically

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Clinic: Prostate Issues - BPH

Naturopathic Support

- Reducing inflammation
- Eating organically
- Increase omega 3
- Increasing fruit intake
- Increase plant intake
- Nutrients to help reduce effect of 5AR – saw palmetto, nettle root, pumpkin seed oil, lignans, zinc, green tea

- ❖ Reducing caffeine and fats
- ❖ Reduce highly processed foods, especially fats (inc. butter) and sugar
- ❖ Reduce weight

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Key Nutrition – Plant Oestrogens

Lignans

They can have oestrogen-like effects which can be protective. It could be a reason why Japan has lower issues around BPH, menopause and longer longevity in both men and women.

Lignans are associated with the normal homoeostasis of sex hormones of both men and women.

The lignan in flaxseed is called secoisolariciresinol diglucoside (SDG). SDG is a polyphenol. In the early 1980's investigators reported that the level of lignans in the body were lower in patients with breast cancer than in tumour-free patients.

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Phyto-oestrogens

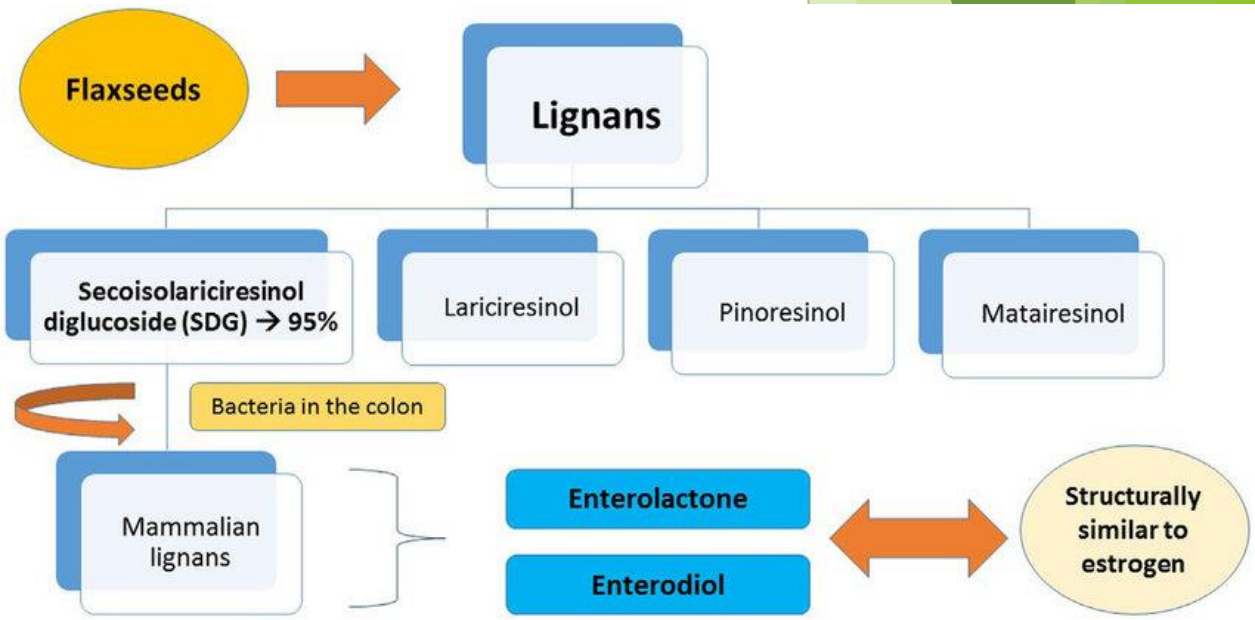
Lignans are not only present in plants, but our bodies can make them through a conversion process in the colon.

In humans they are called "mammalian lignans."

Lignans are not oestrogenic themselves but when the plant lignan SDG (from flaxseed hull) is ingested, it is converted in the colon by gut microflora to the mammalian oestrogenic lignan compounds enterodiol (ED) and enterolactone (EL).

Many studies have shown the important health benefits that exist due to this conversion of flax lignan in the body.

(Setchell & Adlercreutz, 1988).



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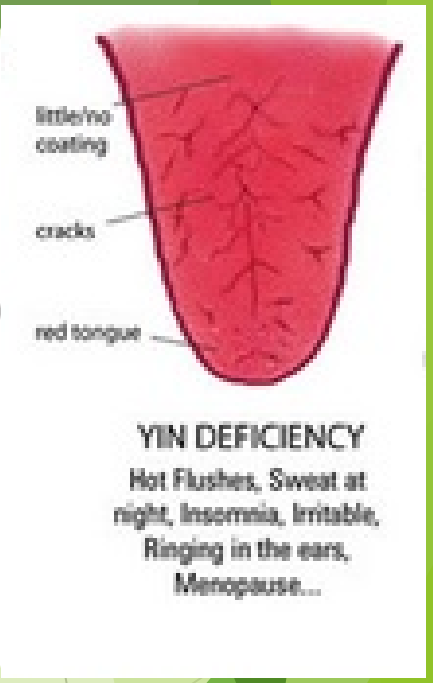
TCM approach to bladder health

Bladder & kidneys are water elements – associated with fear

- Chronic urinary issues can be caused by kidney imbalances
- Kidney issues mostly manifest as deficiencies
- Yin or yang kidney deficiency is common



<u>Kidney Yin Deficiency:</u>

- Kidneys aren't supplying adequate yin fluids
- All organs affected but especially the liver, heart and lungs
- A liver excess (very common) can take the cooling yin from the kidneys
- Symptoms: tinnitus, dizziness, dry mouth, low back ache, weak legs, thin & fast pulse, red tongue

<u>Foods to support kidney yin deficiency:</u>

✓ Millet, barley, tofu, mung and kidney beans, blackberry, mulberry, blueberry, micro-algae, sardines, cheese and eggs (avoid heating foods – coffee, alcohol, ginger, cinnamon)

✓ <u>Herbs</u>: marshmallow root, asparagus root, aloe vera

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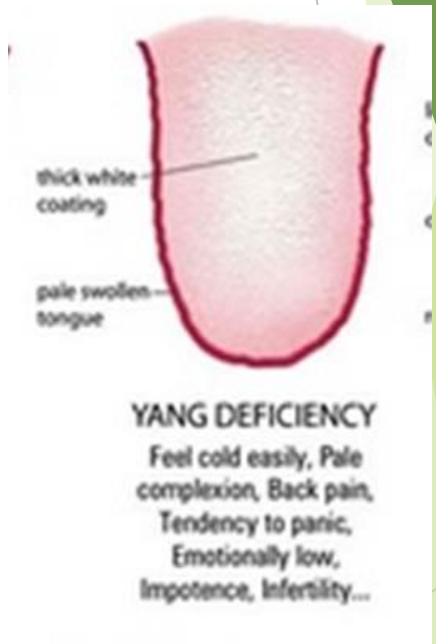
TCM approach to bladder health

Bladder & kidneys are water elements – associated with fear

Kidney Yang Deficiency

- Lack of energising fire
- Can be caused by spleen deficiency – need to increase digestive fire too
- Symptoms: cold extremities, cold aversion, pale skin, mental tiredness, lack of libido, irregular periods, frequent urination, clear urine, oedema, asthma, shortness of breath



Foods for Kidney Yang Deficiency:

✓ Cloves, fenugreek, fennel, walnuts, black pepper, dried ginger, cinnamon, onions, quinoa, chicken, salmon, lamb

Avoid: Raw and cold foods, seaweed

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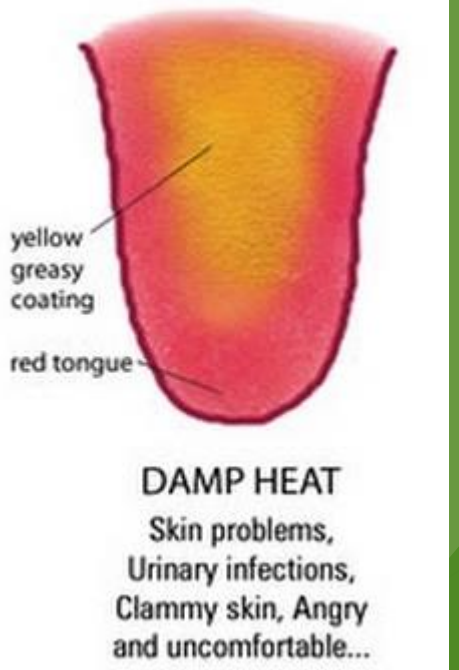
TCM approach to bladder health

Damp-heat in Bladder (cystitis)

- Common in women but also those with high acidity conditions e.g. gout
- Symptoms: frequent, burning or painful urination, cloudy urine, needing to go when already voided



<u>Foods to help reduce dampness:</u>

- ✓ Cooling and bitter foods e.g. aduki beans, carrots, celery, asparagus, mushrooms, lemons, cranberry
- ✓ Dandelion leaf, plantain leaf

Chronic infections point toward kidney yang or yin deficiency

Acupuncture can be a fabulous adjunct

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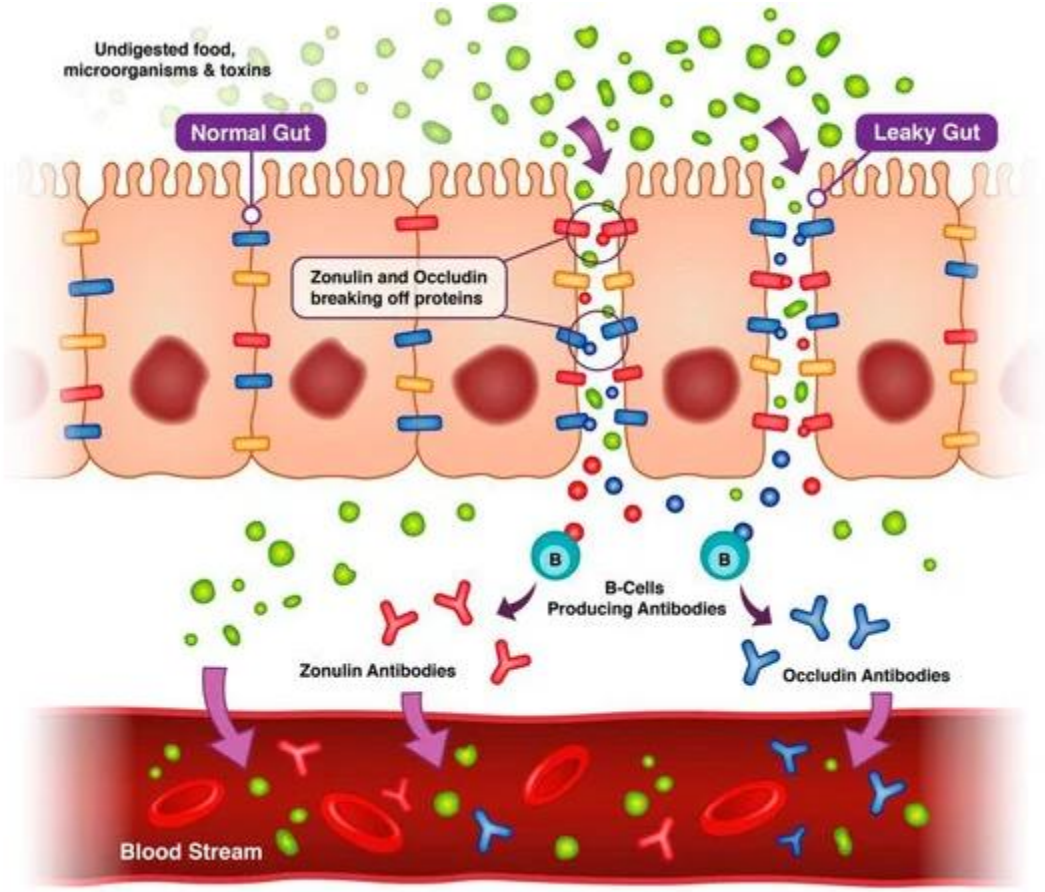
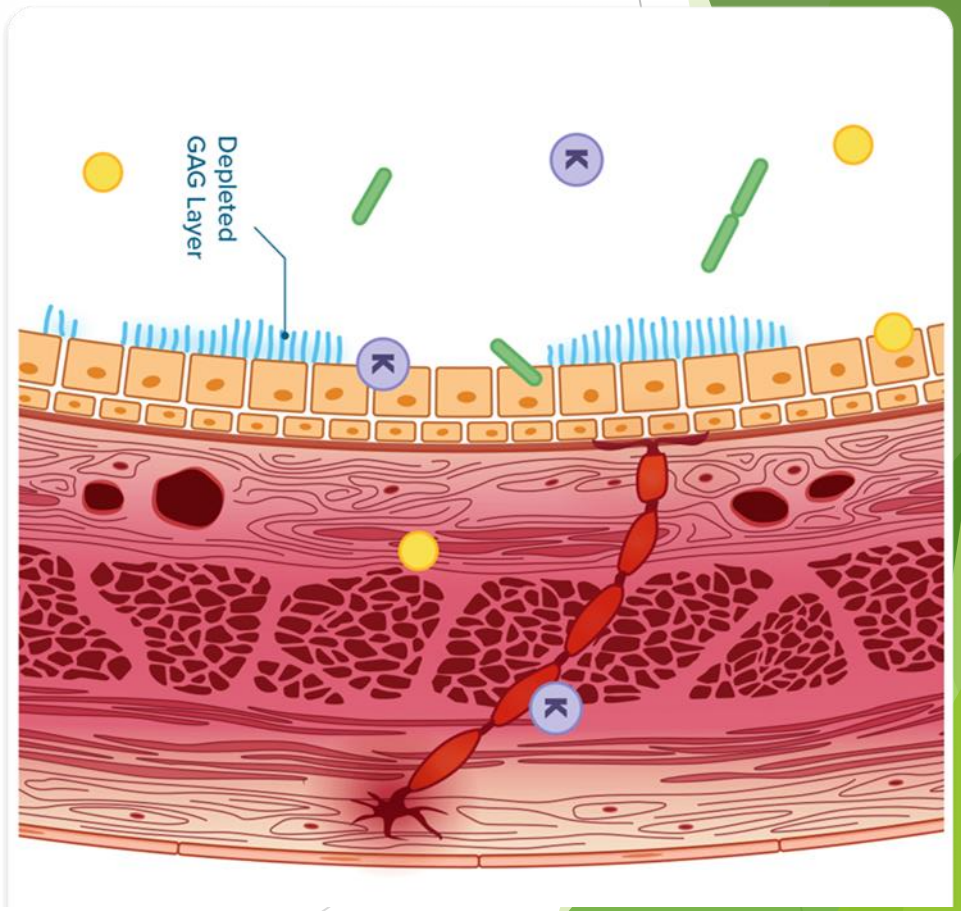
The Role of the Microbiome – gut permeability



Bladder permeability



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The Role of the Microbiome

<u>Many pathogenic microbes are linked to urinary imbalances:</u>

- Uropathogenic E Coli – associated with chronic/recurrent cystitis, can re-seed post ABs
- Enteroccocus faecalis – major cause of catheter-linked UTIs, can form biofilms
- Klebsiella pneumoniae – can cause UTIs, causes biofilms and can enter epithelial cells

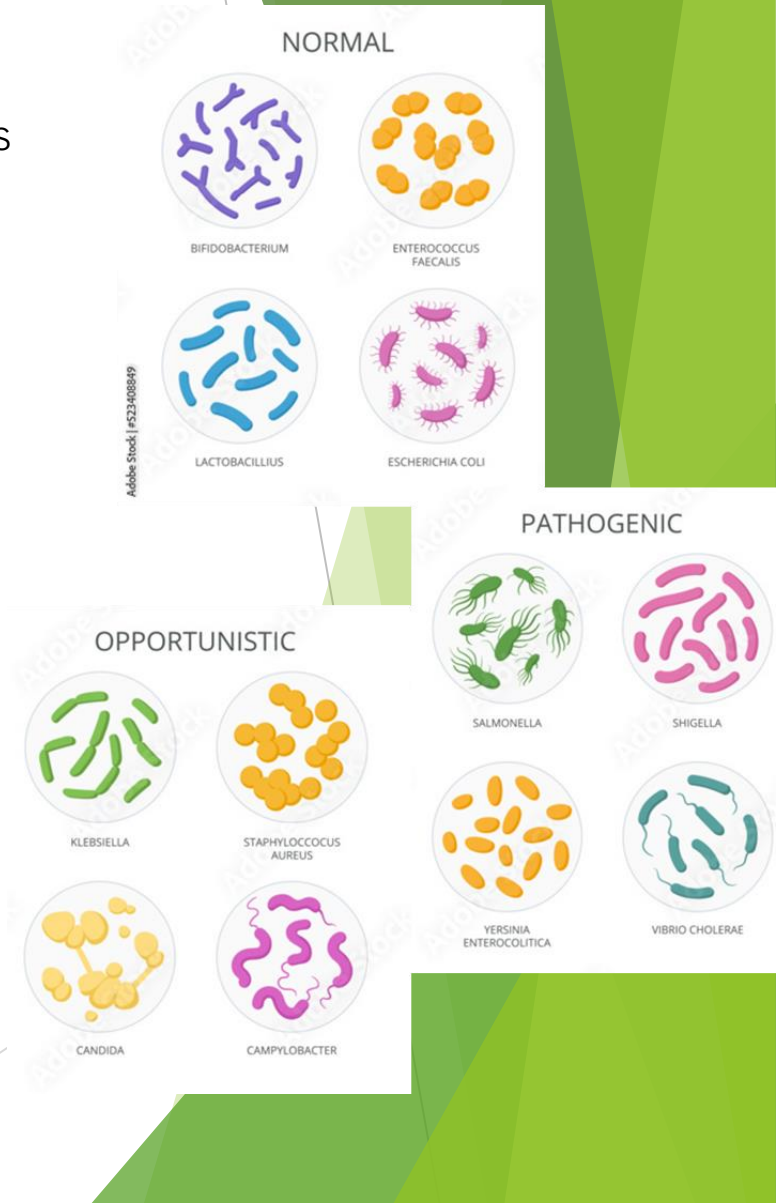
<u>Inflammation</u>

- Supporting epithelial tissue
- Adequate lactobacilli and bifidobacterium

<u>Biofilm</u>

- Some pathogenic microbes can create biofilms which makes them antibiotic resistant
- Can occur in chronic bladder issues e.g. IC

Inhibitors: xylitol, arabinogalactan, pomegranate seed oil & garlic



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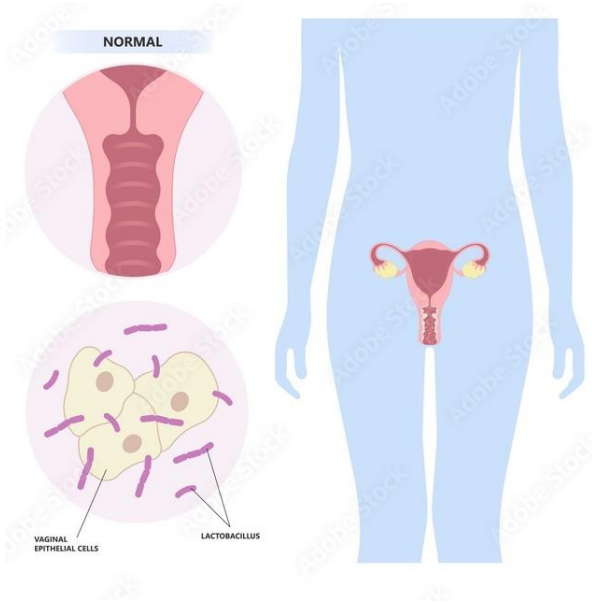
The Role of the Vaginal Microbiome

Poor vaginal microbiome (especially low lactobacillus species) is linked to a higher risk of UTIs

<u>Lower species of lactobacillus caused by:</u>

- Exposure to Antibiotics
- Oral Contraceptives
- Lowering oestrogen (postpartum & menopause)
- Poor food choices (low fibre and prebiotic)



- L. crispatus has been linked to good bladder health
- L. iners more protective for bladder post-menopause
- Lactobacillus and bifidobacterium are resident strains, vital to encourage a variety of good microbes in both the gut, vaginal and urinary microbiome

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Menopause and health issues

When women lose oestradiol, some health risks increase:

- **Urogenital issues** – UTIs, incontinence and painful sex
- **Immune** - decreased oestrogen increases susceptibility to infection
  - lactobacillus reduces in gut and vagina
- **Muscle loss/sarcopenia** – more risk of bladder infections and incontinence

Webinar:

https://www.bionutri.co.uk/herbs-the-menopause

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Bladder Supporting Herbs

Cranberry & Blueberry (D-mannose)

- Inhibits E. Coli from attaching to uroepithelial cells

Corn Silk

- Site specific demulcent

Parsley

- Easy to access and grow
- Nurtures the whole urinary system – diuretic
- Gotu kola – parsley family – healing & anti-inflammatory

Dandelion Root

- Diuretic
- Liver-supportive

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Clinic: Cystitis/UTIs

Table 27.1 Traditional herbal actions in urinary tract infection*

HERB	ANTI-ADHERENT	ANTI-INFLAMMATORY	ANTILITHIC	ANTISEPTIC (URINARY)	ASTRIN-GENT	BLADDER TONIC	DIURETIC	DEMULCENT (URINARY)	IMMUNE MODULATING	SPASMOLYTIC
Andrographis		✓							✓	
Buchu		✓		✓			✓	✓		
Corn silk		✓	✓				✓	✓		
Couch grass							✓	✓		
Cramp bark					✓					✓
Cranberry	✓			✓						
Crataeva nurvala		✓	✓			✓				
Goldenrod		✓		✓			✓			
Horsetail					✓	✓	✓			
Hydrangea			✓				✓			
Liquorice		✓						✓	✓	
Marshmallow		✓						✓		
Nettle		✓					✓			
Parsley		✓					✓			✓
Arctostaphylos uva-ursi		✓		✓	✓					

*Adapted from Commission E and British Herbal Pharmacopoeia monographs[9,10]

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Herbs

Hibiscus

- Contains organic acids and compounds which inhibits growth of bacteria
- High levels of mucilage – play a role in defending our urinary system
- Anti-microbial and anti-fungal
- The flowers help to regulate menstrual cycles (especially with ginger)

Dong quai

- Adaptogen – kidney supportive
- Can support healthy androgen levels
- Oestrogen-balancing
- Blood cleanser

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Nettles Urtica dioica

- A kidney tonic
- Thickens head hair and enriches the blood
- Mineral rich
- It can help to inhibit 5-alpha-reductase (help to reduce androgens)

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Nettles

Nutrient	Per 1 cup (blanched)
Protein	2.4g (40%)
Calcium	428mg
Magnesium	50mg
Potassium	297mg
Iron	1.46mg
Lutein & Zeaxanthin	3720mcg
Beta Carotene	1020mcg
Vitamin K (phylloquinone)	444mcg

Source - https://fdc.nal.usda.gov/fdc-app.html#/food-details/169819/nutrients

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Nettles Urtica dioica

- 2 cups of oats
- 2 cups of seeds
- 1 cup of nuts
- ¼ cup of oil (coconut/olive)
- ¼ cup of maple syrup/honey
- 1 tsp turmeric
- 1 tsp ginger
- 1 tsp nettle

160F fan for 10-13 mins

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Key nutrients – CoQ10

CoQ10 levels are halved at the age of 80, compared to at 20 years old.

Statins can lower the endogenous production of CoQ10 (8 million take them)

The heart, liver, kidneys and pancreas have the richest amount of CoQ10

“Our study [on rats] suggests that coenzyme Q10 acts as an antioxidant to protect bladder function”

https://pubmed.ncbi.nlm.nih.gov/23306086/

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The Modern Day Spiral

Toxins, pro-inflammatory & low nutrient food, medications, poor sleep, stress

↓

Poor enzyme secretions, hypochloridria & lower bile flow

↓

Lack of absorption & pathogens proliferate

↓

Lower nutrient status

↓

Poor gut barrier function

↓

Inflammation, dysbiosis, imbalanced immunity

↓

Mental & Physical Dis-ease

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Nettle Plus

- Nettle Leaf & Dandelion Root
- Dong Quai
- Hibiscus & Blueberry
- Alpha lipoic acid – water and fat soluble
- Grape Seed Extract (Vitaflavan®)

- ➢ Blood purifier
- ➢ Aids anaemia
- ➢ Balances inflammation
- ➢ Liver, kidney and prostate support
- ➢ Hair and skin support
- ➢ Supports healthy androgens

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CT Plex

(2 caps)

- Glucosamine Hydrochloride 1000mg
- Rosehip Extract 200mg
- Magnesium ascorbate (vitamin C) and vitamin B6
- Rutin 100mg
- Quercetin 50mg
- Grape Seed Extract (Vitaflavan®) 20mg
- Green Tea Extract 20mg

- ➢ Major tissue support for tissue integrity and repair
- ➢ Helps to alleviate pain in muscular skeletal system
- ➢ Supports GAG production

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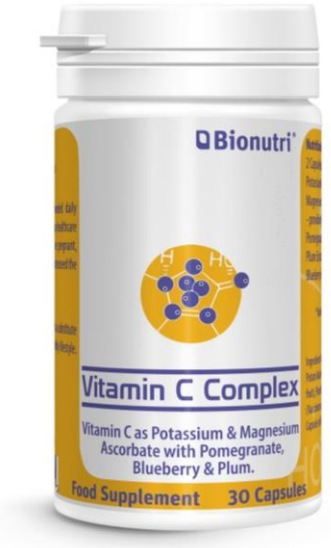
Vitamin C Complex

(2 caps)

- 1000mg potassium & magnesium ascorbates
- Pomegranate, Plum and Blueberry extracts



- ➢ Vitamin C can help to reduce histamine production
- ➢ Protects against the development of chronic disease
- ➢ Adrenals have a very high concentration of ascorbate (vitamin C)
- ➢ Plays a vital role in connective tissue, the endocrine & immune system
- ➢ Levels deplete with excess stress and age
- ➢ Formulated to match how it's found it nature (with broad-spectrum polyphenolic compounds)
- ➢ Aids elasticity of urinary vessels

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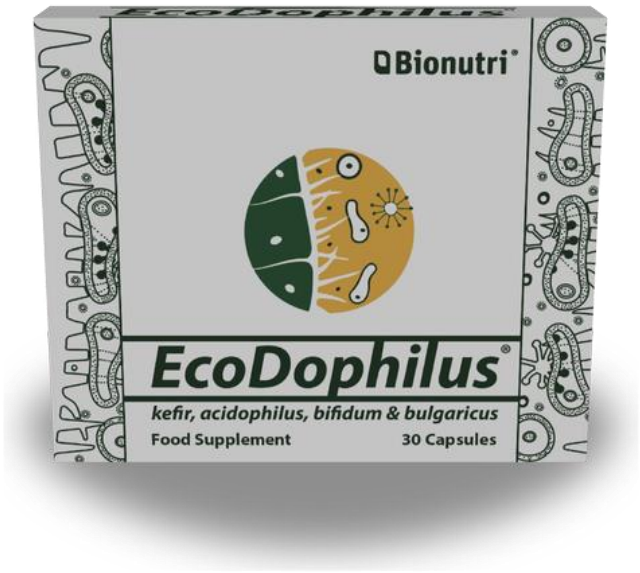
EcoDophilus®

Resident dominant bacteria (L. acidophilus & B. lactis)

- Reduces risk of pathogenic proliferation
- Colonises small and large intestine
- Help balance inflammatory processes

Transient (L. bulgaricus & L. kefir)

- Enables other good bacteria to flourish



- ➢ For sensitive clients and long-term maintenance
- ➢ Dose can be increased in cases of gastroenteritis
- ➢ Can be titrated for difficult complex cases

FOS free

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EcoGest®

(1 cap)

- Pineapple concentrate 325mg
- Papaya concentrate 270mg
- Gamma oryzanol 300mg
- L. acidophilus (CUL60 & CUL21), B. bifidum & B. lactis 3 billion

- Aids digestion from a variety of foods when eaten at mealtimes
- Supports microbiome
- Taken on an empty stomach, may support clearance of protein fragments
- Can aid the breakdown of excessive mucus

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Phyto-Epicell®

- Chamomile & Green Tea Extracts
- Milk Thistle, Dandelion Leaf & Root
- Vitamin B3
- L. Plantarum 3 billion
- Limonene, Papain & Bromelain

- ➢ Supports healthy cell turnover in gut
- ➢ Broad-spectrum botanical uses
- ➢ Supports all epithelial tissues in the body
- ➢ Liver supportive

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Lignan Plus

- Flax Lignan SDG 35mg
- Limonene 80mg
- Red Clover Extract
- L. bulgaricus 2 billion
- L. plantarum 2 billion

- ➢ Healthy hormone balance for men and women
- ➢ Especially helpful for peri-menopause and beyond
- ➢ Nutritive and non-accumulative
- ➢ Supports healthy androgens

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Garlic Complex

- Freeze dried slow-release garlic
- Rosemary Oil
- Thyme Oil

- ➢ Thyme may help to balance inflammation - cytokines
- ➢ Immune supportive
- ➢ Reduces proliferation of pathogenic growths in the gut including candida

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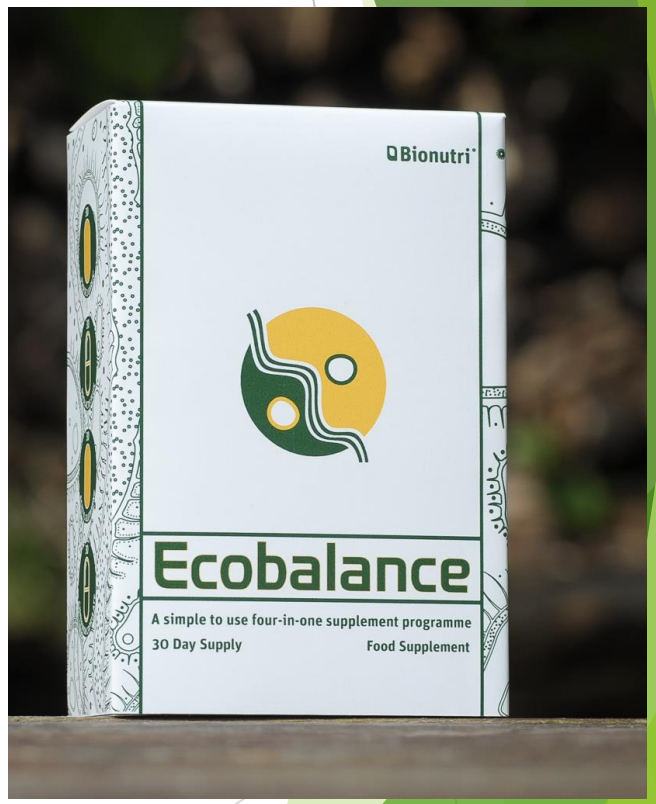
EcoBalance

1. L. acidophilus, L. casei, B. lactis, acacia prebiotic, FOS
2. Freeze dried garlic (slow-release 18 hour)
3. Cinnamon oil & bark, caprylic acid
4. L-glutamine, N-acetyl Glucosamine

- Maintains gut barrier function
- Supports normal inflammatory status
- Supports gut immunity
- Reduces pathogenic fungus, virus, bacteria and parasites
- 3 months minimum use



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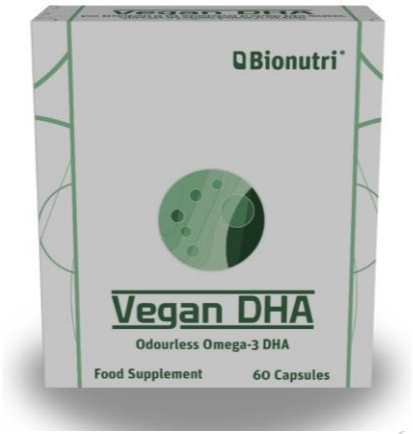
Omega 3 Fish Oil

- DHA 500mg
- EPA 100mg
- Vitamin D3 400iu and 5mg Vitamin E

- ➢ Helps regulate inflammatory processes
- ➢ Helps to increase LDL particle size
- ➢ Helps to lower circulating triglycerides
- ➢ Vital for nervous system and brain health



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Liver Support

Taracyn®

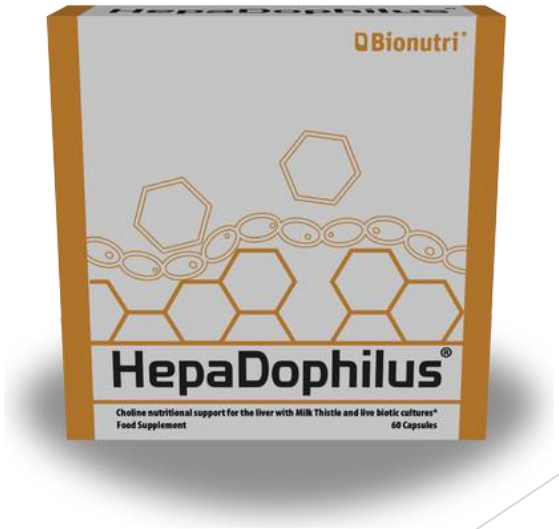
- Dandelion root, Choline, Artichoke, Turmeric root, amino acids
- L. plantarum

✓ Cravings, constipation, fat malabsorption, hormone & blood sugar balance

HepaDophilus®

- Milk Thistle, Choline
- L. acidophilus, L. plantarum, L. rhamnosus, L. casei (10 billion)

✓ Sluggish liver, dysbiosis, liver cell health



Make sure elimination pathways are open before targeting the liver. Especially the bowels.

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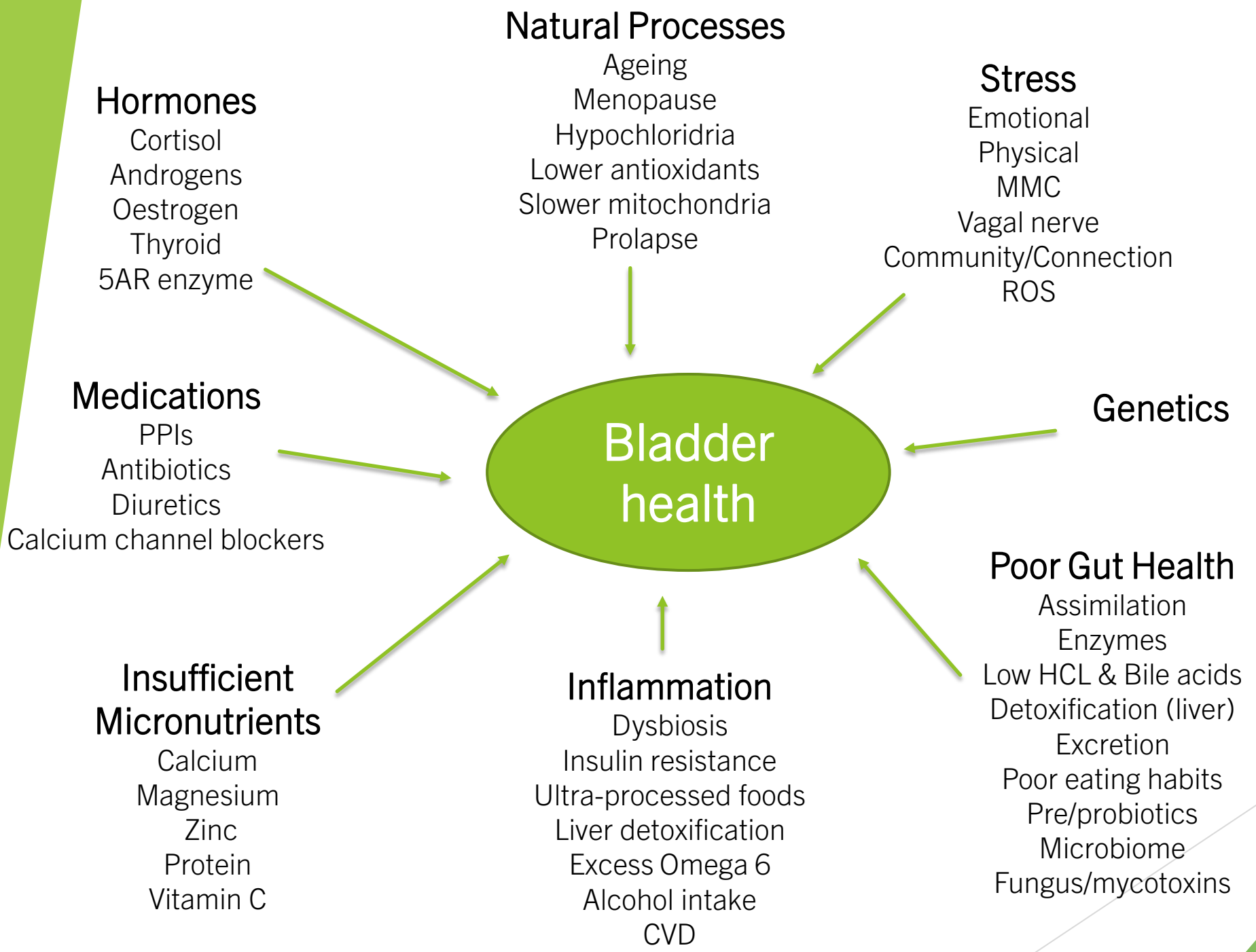

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Relevant Webinars on-demand

Ageing Gracefully – https://www.bionutri.co.uk/new-page-59

Bladder Health - https://www.bionutri.co.uk/bladder-health-banner

Cell Health - https://www.bionutri.co.uk/cell-health

Supporting the Genitourinary System - https://www.bionutri.co.uk/genitourinary-system-banner

Stinging Nettle - https://www.bionutri.co.uk/stinging-nettle

Leaky Gut - https://www.bionutri.co.uk/leaky-gut-banner

Herbs, menopause & perimenopause - https://www.bionutri.co.uk/herbs-the-menopause

Mediators of Inflammatory Response - https://www.bionutri.co.uk/mediators

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Practitioner Support (technical support)

Practitioner area on our website – www.bionutri.co.uk
- upcoming free webinars
- previous CPD webinars
- product info
- technical team contact details

Practitioner Facebook group & page – facebook.com/bionutriuk
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1:1 Technical Support – via Zoom, Teams, phone, email
- Sue McGarrigle ND, mBANT, mGNC suem@bionutri.co.uk
- Edward Joy, Herbalist ed@bionutri.co.uk
- Rosie Rayner, ND, mANP rosie@bionutri.co.uk

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Thank you

- Sister company Aquasol

aquasol

- We don't use gluten or yeast-containing ingredients
- Samples for sensitive clients & kinesiology
- www.bionutri.co.uk
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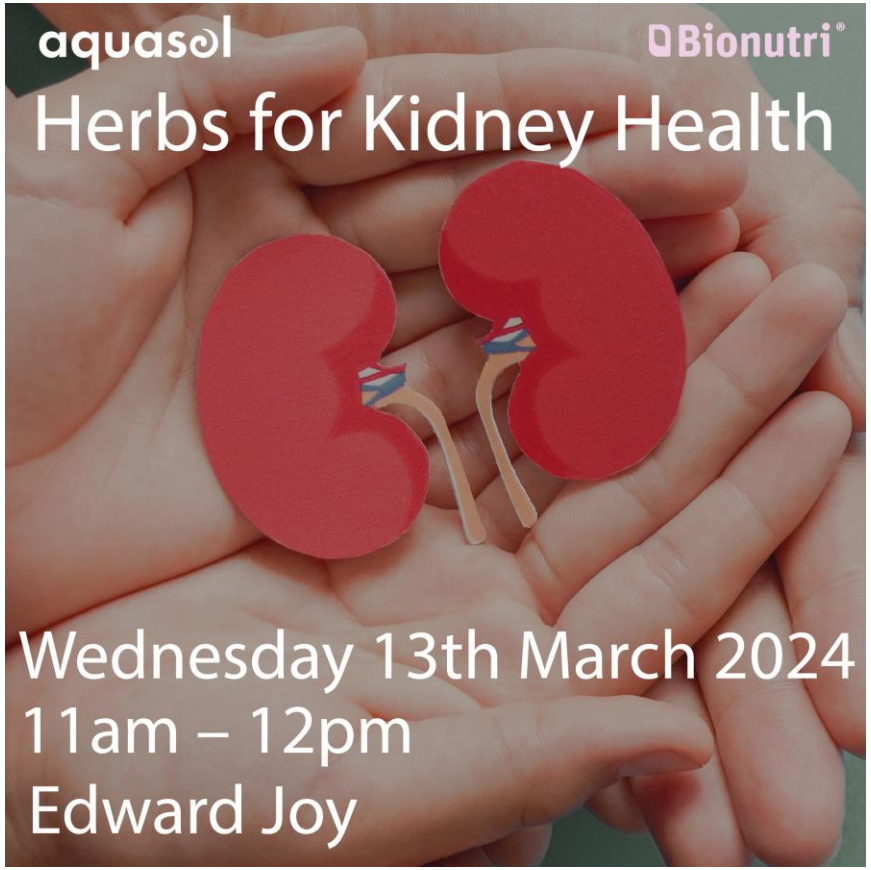
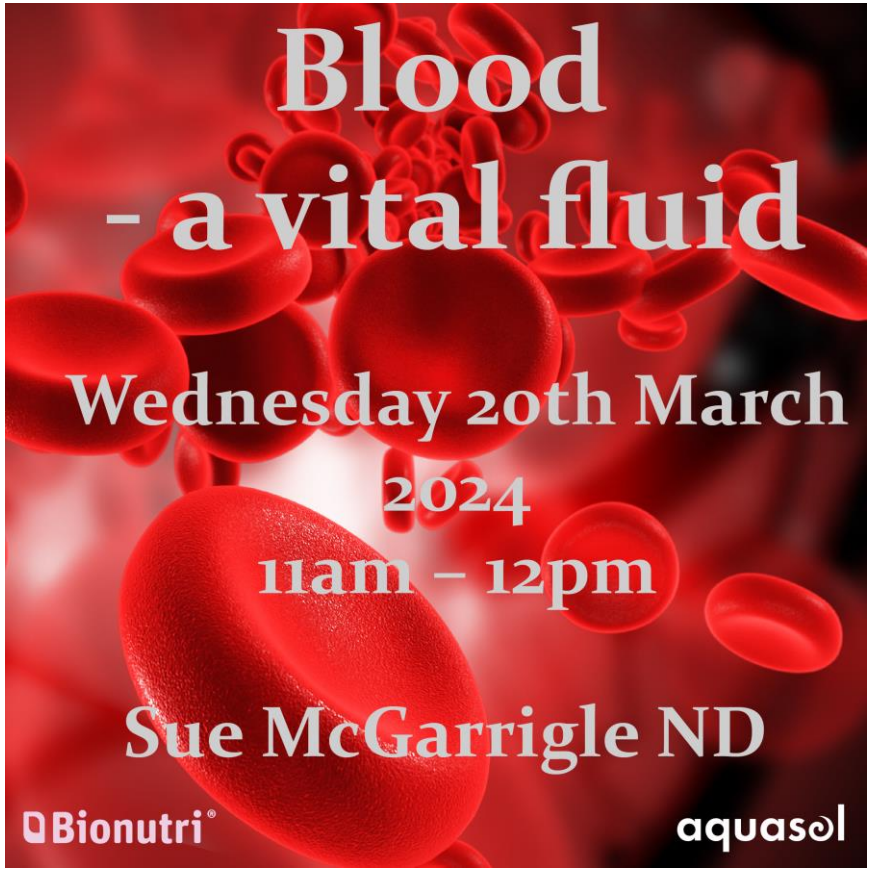
March webinars





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