



GRP

GUT REBALANCING PROTOCOL

ORAL & SKIN
MICROBIOME
Handbook

*"If it is going ON your body,
it is going IN your body"*

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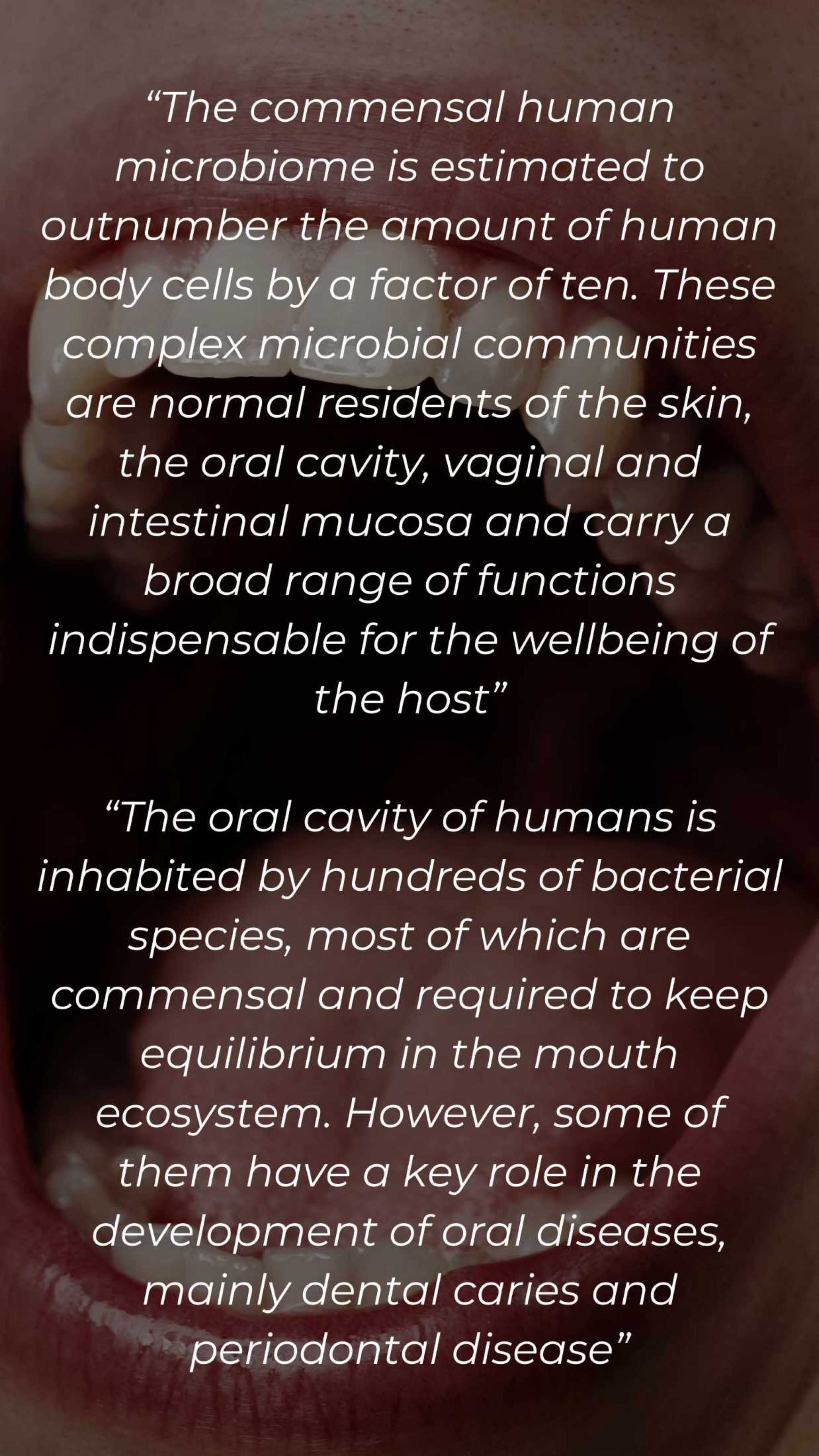
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ORAL MICROBIOME

Your Oral Microbiome is unique as your fingerprint and is influenced by the health of your Gut Microbiome and vice-a-versa.

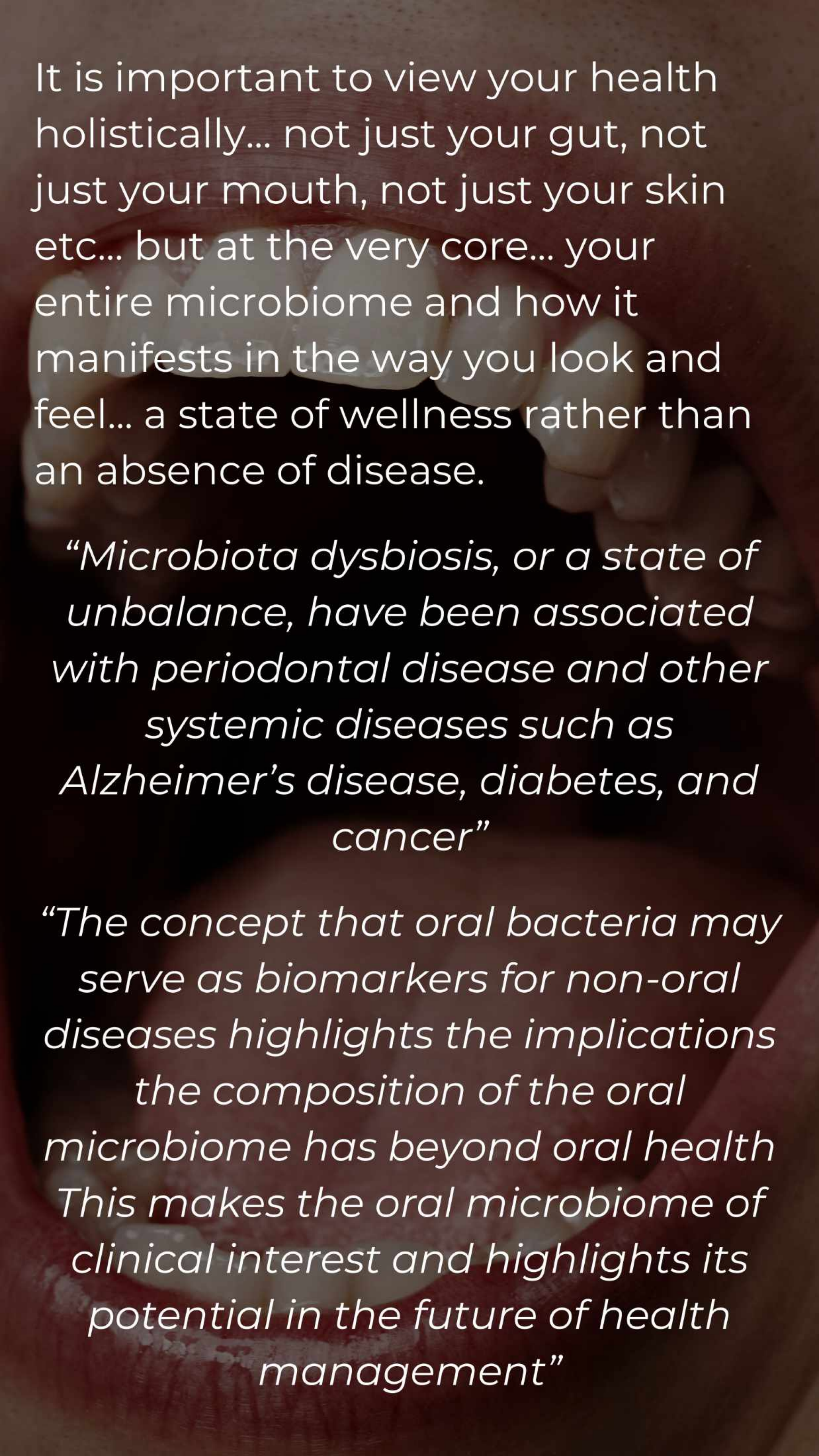
We really only become aware of this 'microbial' presence when the balance between our microbiota and ourselves is lost and unwellness, health issues or disease manifests.

“The oral cavity and gut are the two largest microbial ecosystems. Recent studies have demonstrated that the oral-to-gut and gut-to-oral microbial transmission can regulate pathogenesis, indicating the presence of the oral-gut microbiome axis”

A close-up photograph of human teeth, showing the upper and lower arches. The teeth are white and appear healthy. A dark, semi-transparent text overlay is positioned over the center of the image, containing two paragraphs of text in a white, italicized font.

“The commensal human microbiome is estimated to outnumber the amount of human body cells by a factor of ten. These complex microbial communities are normal residents of the skin, the oral cavity, vaginal and intestinal mucosa and carry a broad range of functions indispensable for the wellbeing of the host”

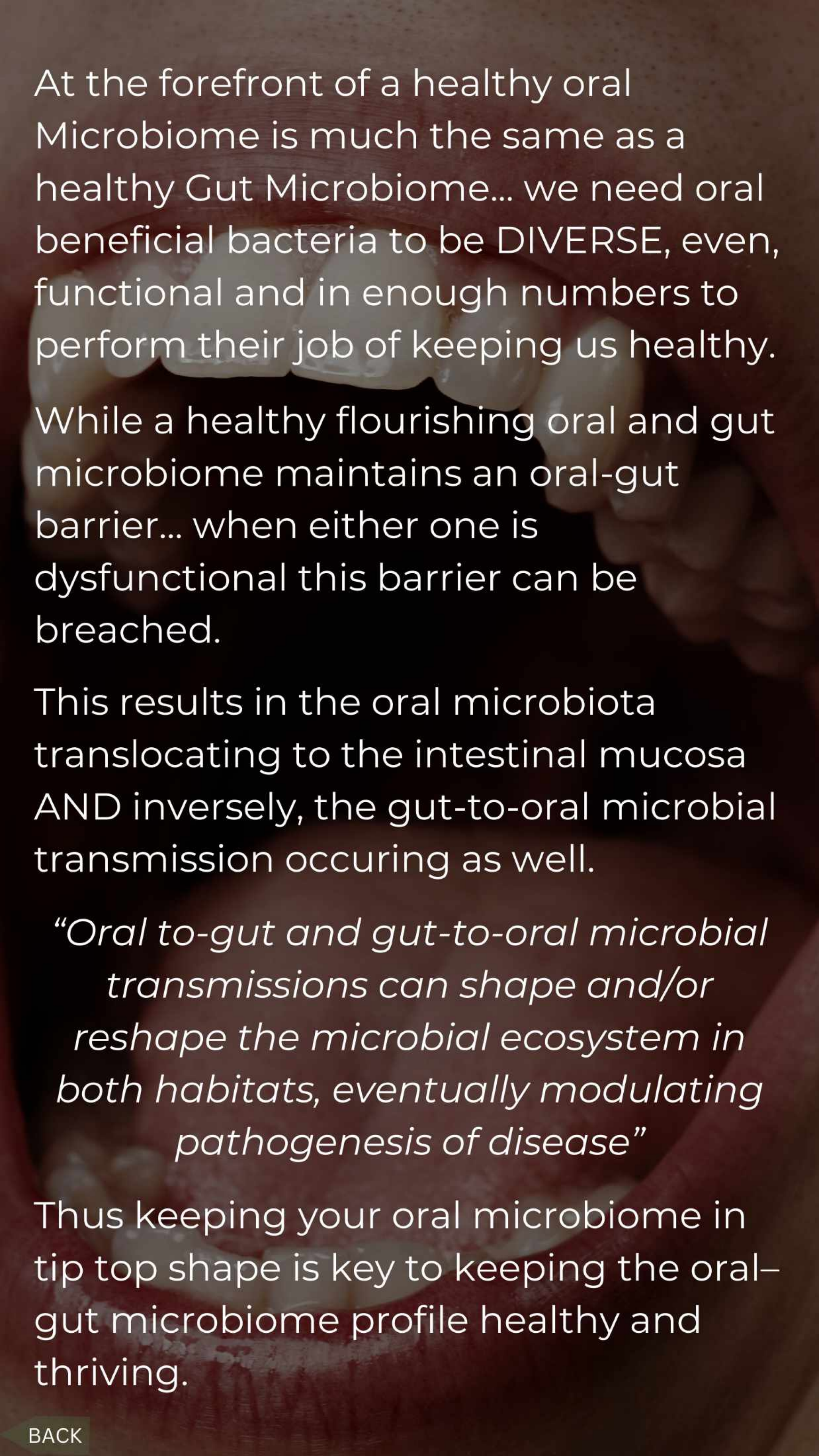
“The oral cavity of humans is inhabited by hundreds of bacterial species, most of which are commensal and required to keep equilibrium in the mouth ecosystem. However, some of them have a key role in the development of oral diseases, mainly dental caries and periodontal disease”



It is important to view your health holistically... not just your gut, not just your mouth, not just your skin etc... but at the very core... your entire microbiome and how it manifests in the way you look and feel... a state of wellness rather than an absence of disease.

“Microbiota dysbiosis, or a state of unbalance, have been associated with periodontal disease and other systemic diseases such as Alzheimer’s disease, diabetes, and cancer”

“The concept that oral bacteria may serve as biomarkers for non-oral diseases highlights the implications the composition of the oral microbiome has beyond oral health This makes the oral microbiome of clinical interest and highlights its potential in the future of health management”



At the forefront of a healthy oral Microbiome is much the same as a healthy Gut Microbiome... we need oral beneficial bacteria to be DIVERSE, even, functional and in enough numbers to perform their job of keeping us healthy.

While a healthy flourishing oral and gut microbiome maintains an oral-gut barrier... when either one is dysfunctional this barrier can be breached.

This results in the oral microbiota translocating to the intestinal mucosa AND inversely, the gut-to-oral microbial transmission occurring as well.

“Oral to-gut and gut-to-oral microbial transmissions can shape and/or reshape the microbial ecosystem in both habitats, eventually modulating pathogenesis of disease”

Thus keeping your oral microbiome in tip top shape is key to keeping the oral-gut microbiome profile healthy and thriving.

ORAL MICROBIOME CARE

Here are **SIX** simple actions - when you consistently implement - will reortize the health of your Oral microbiome and **YOU!!**

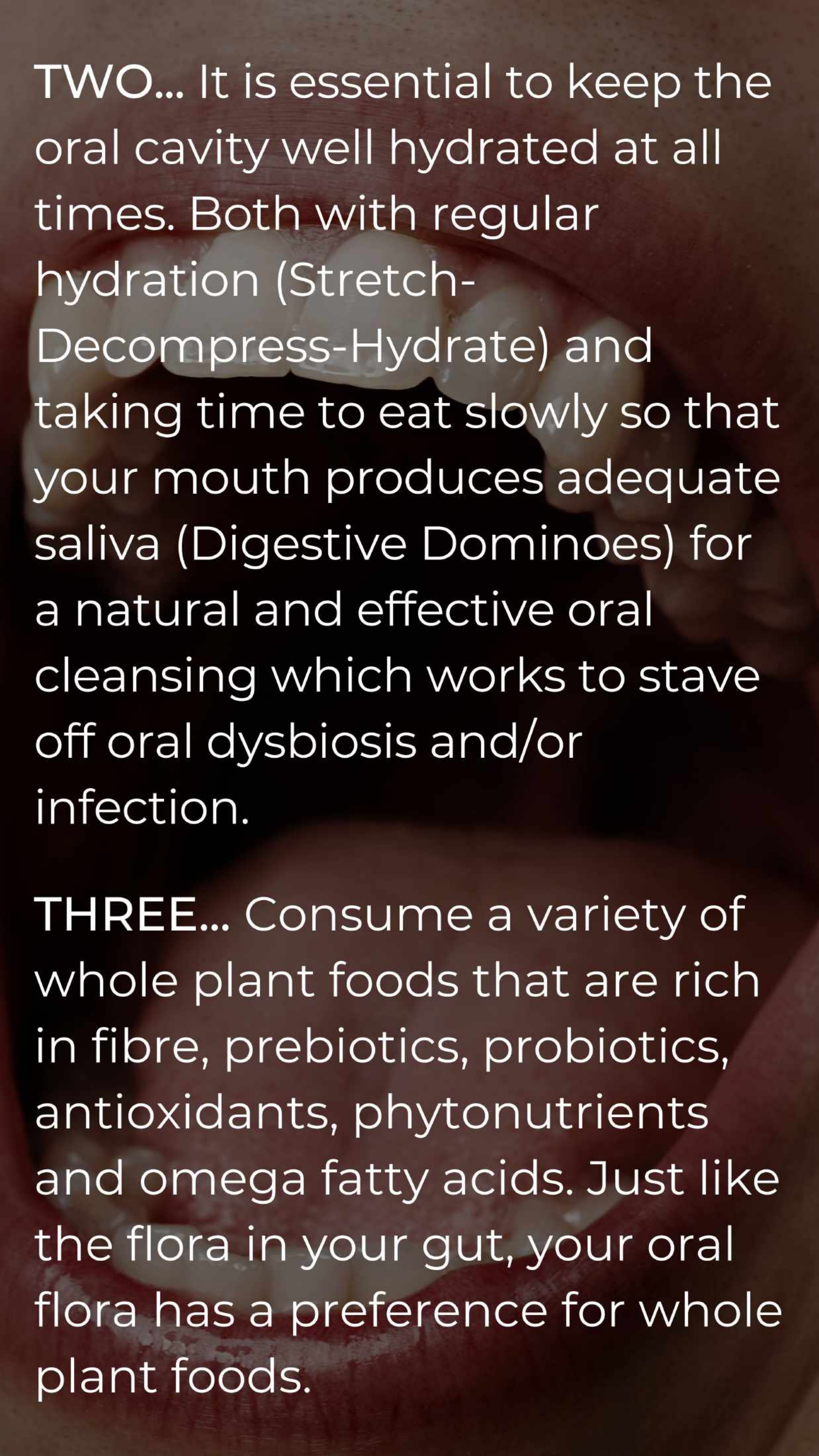
ONE... Implement stress awareness, stress relief and management techniques as a **PRIORITY**.

“Stress, both acute and chronic, have been shown to alter the oral microbiome”.

Your stress response occurs whenever you are faced with an internal or external challenge perceived as unpleasant, adverse or threatening... which can be induced by physical, physiological or psychological stimuli.

This ‘stress’ has a detrimental effect on the oral microbiome through the actions of cortisol (also secreted in saliva!) which alters the profile of the oral microbiota.

In fact, salivary cortisol has been shown to alter the oral microbiota within dental plaque to resemble that of periodontitis progression!

A close-up photograph of a person's mouth, showing the upper teeth and tongue. The image is slightly blurred and has a dark, semi-transparent overlay, which serves as a background for the white text. The text is arranged in a vertical column, following the shape of the mouth.

TWO... It is essential to keep the oral cavity well hydrated at all times. Both with regular hydration (Stretch-Decompress-Hydrate) and taking time to eat slowly so that your mouth produces adequate saliva (Digestive Dominoes) for a natural and effective oral cleansing which works to stave off oral dysbiosis and/or infection.

THREE... Consume a variety of whole plant foods that are rich in fibre, prebiotics, probiotics, antioxidants, phytonutrients and omega fatty acids. Just like the flora in your gut, your oral flora has a preference for whole plant foods.

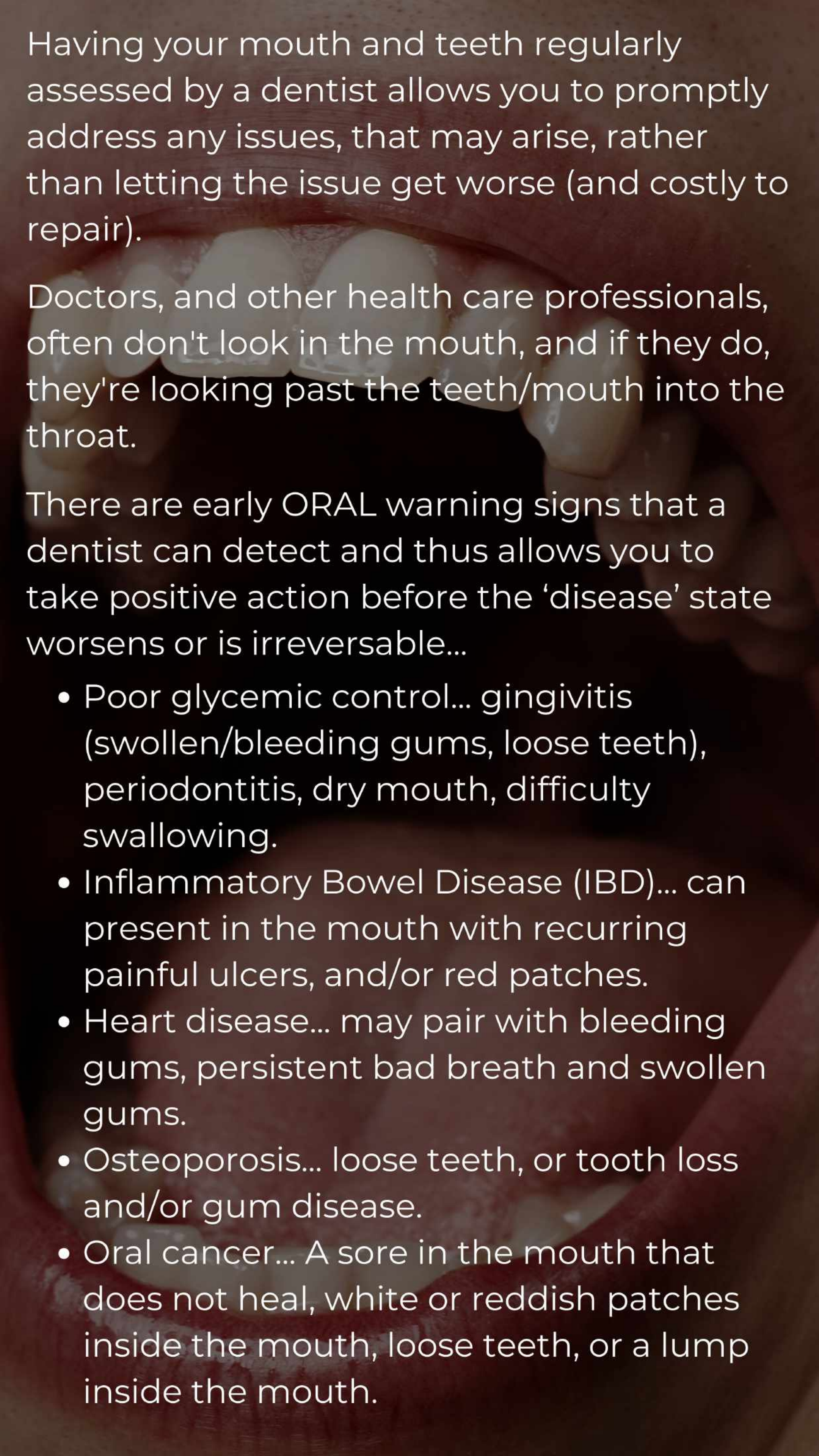
FOUR... Reduce or eliminate drinks such as alcohol, coffee and tea that have a lower pH which can upset the delicate flora balance in your mouth and acids can wear down tooth enamel. If you decide to reduce, instead of eliminate, ensure you swish water in your mouth after drinking and do NOT brush teeth within 30-mins of drinking, as the acid weakens tooth enamel.

FIVE... Avoid any type of juice, fizzy drinks and sugar. They have NO fibre and are high in simple sugars that disrupt the delicate balance of beneficial flora in your oral microbiome. Not to mention the disruption to your Gut Microbiome.

SIX... Find a holistic dentist that is up to date with the effects of 'chemical' based oral products, diet and lifestyle upon the oral microbiome.

You should see a dentist every 6-mths. If you haven't seen a dentist for longer than that then schedule a check-up **RIGHT NOW**.

And... so that you get into the cycle of regular 6-mthly dental check-ups, at the end of that check-up -- while you're in the dental clinic -- book your next 6-mth check-up

A close-up photograph of a person's upper teeth and gums. The teeth are white and appear healthy, with some minor wear on the enamel. The gums are a healthy pink color and are slightly swollen, which is a common sign of gingivitis. The background is a dark, out-of-focus color, possibly the interior of a dental office.

Having your mouth and teeth regularly assessed by a dentist allows you to promptly address any issues, that may arise, rather than letting the issue get worse (and costly to repair).

Doctors, and other health care professionals, often don't look in the mouth, and if they do, they're looking past the teeth/mouth into the throat.

There are early ORAL warning signs that a dentist can detect and thus allows you to take positive action before the 'disease' state worsens or is irreversable...

- Poor glycemic control... gingivitis (swollen/bleeding gums, loose teeth), periodontitis, dry mouth, difficulty swallowing.
- Inflammatory Bowel Disease (IBD)... can present in the mouth with recurring painful ulcers, and/or red patches.
- Heart disease... may pair with bleeding gums, persistent bad breath and swollen gums.
- Osteoporosis... loose teeth, or tooth loss and/or gum disease.
- Oral cancer... A sore in the mouth that does not heal, white or reddish patches inside the mouth, loose teeth, or a lump inside the mouth.

Early detection by your dentist also ensures less time and money required for treatment.

And, during your dental check-up get advice as to...

- Which type of toothbrush is best for your teeth.
- Which toothpaste is best for you.
- Which floss and how to floss.
- The correct tooth brushing method.

Your dentist is the professional here and they can advise on the what is best for YOU.

There is nothing (apart from your skin) that is more outward facing than your teeth (smile). So look after your Oral Microbiome as a priority!

ORAL HYGIENE PRODUCTS

- Choose a **TOOTHPASTE** that is **FREE** from SLS, triclosan, parabens, mineral oil, artificial sweeteners (saccharin, xylitol etc) titanium dioxide, artificial flavours, colours and preservatives. There are various types of **FLUORIDE** used in toothpastes and data from studies show that it... *“changes the bacterial composition and functional profiles of human dental plaque towards a healthier microbial community”*. This was not the same for fluoride in drinking water.
- Choose a dental **FLOSS**, or tape, that is free from colours, flavours and mineral oils.
- Choose a **TOOTHBRUSH** that has been recommended to you by your dentist and change it every 3-months, or sooner, if it is showing signs of wear and tear.
- Buy a dedicated **TONGUE SCRAPER** (cleaner). Do **NOT** use your toothbrush!

- **NEVER** use anti-bacterial mouthwashes as they kill the beneficial oral bacteria that maintain the healthy balance in your oral microbiome.

Antibacterial, antimicrobial and alcohol based mouthwashes have been shown to disrupt the delicate balance in the oral microbiome resulting in side effects such as taste alteration, teeth staining and oral dysbiosis. Ironically, they result in the 'condition' that they promise to address and treat!

“Most studies on clinical effectiveness and antimicrobial research have been undertaken with chlorhexidine which, whilst clinically effective, may also reduce the diversity of oral bacteria within various niches of the oral cavity, killing potentially both the “good” species associated with health and the “bad” species associated with disease”

“More recent metagenomics evidence, suggesting that mouthwashes such as chlorhexidine may cause “dysbiosis,” whereby certain species of bacteria are killed, leaving others, sometimes unwanted, to predominate”

ORAL HYGIENE ROUTINE

- Floss twice daily, prior to brushing. Preferably after breakfast and prior to going to bed at night.
- Brush your teeth twice a day, after flossing, preferably after breakfast and prior to going to bed at night. It is best to wait 30-minutes after eating and drinking to brush your teeth as the acids in your mouth can weaken tooth enamel. Rinse a few times, while brushing, to remove particles between the teeth.

“Brushing and flossing after each meal/snack is not realistic.

And overbrushing can cause unnecessary wear and tear on the tooth enamel. However, if you have a meal/snack that warrants a floss and brush, then do”

- Very gently scrape your tongue AFTER the first brushing. Your tongue is like ‘carpet’ and can easily hold plaque, bacteria, tiny debris, and dead cells.

Check with your dentist on this one, but my dentist recommended a VERY light gentle second brush a couple of times a week but JUST spitting out excess toothpaste and not rinsing. This allows the fluoride to strengthen and protect your teeth.

SKIN MICROBIOME

Our primary interface with the external environment, are both the SKIN and GUT (from the oral cavity) ... both are essential to the maintenance of normal healthy functioning and balance (homeostasis).

“Cumulative evidence has demonstrated an intimate, bidirectional connection between the gut and skin, and numerous studies link gastrointestinal (GI) health to skin homeostasis and allostasis (i.e. achieving stability through change)”

Disorders of the Gut Microbiome (gut dysbiosis) are often accompanied by skin disorders (skin dysbiosis).

With the bi-directional link of the Gut-Skin axis, research reveals that skin disorders – acne, atopic dermatitis (AD), eczema, psoriasis, rosacea, allergies and skin condition (incl. skin aging) – are influenced by the health of the Gut Microbiome.

The skin microbiota... is made up of trillions of microbes, derived from thousands of different strains, that live together as an intricate ecological community.

Microbiologist Dr Mary Marples (1908 – 1998) captures the skin's ecology so eloquently...

“The skin is an ecosystem, with a microscopic flora and fauna and diverse ecological niches: the desert of the forearm, the cool woods of the scalp and the tropical forest of the armpit”

Your skin has different populations (numbers) of microbial inhabitants based on their habitats e.g., moist, sebaceous, and dry areas...

“Moist areas such as between your toes have a count of 10^7 bacteria per cm^2 . “Dry areas such as the forearm or trunk may harbor 10^2 or fewer bacteria per cm^2 . Anaerobic bacteria are also present on human skin, with colony counts up to 10^6 bacteria per cm^2 ”

Then the different skin structures of your skin also have their unique and distinct microenvironments...

That is, the microbial community living on the stratum corneum (the outer most layer of your skin) varies from the bacteria on the hair shaft, or inside the follicle, or the sweat glands (Eccrine glands) or the scent glands (Apocrine glands).

Just like your digestive system, your SKIN is colonized by a diverse collection of microorganisms – bacteria, fungi and viruses – ALL of which create a physical barrier protecting your body from toxic substances, pathogens and foreign organisms. A healthy skin microbiome knows how to discriminate between HARMLESS microorganisms and HARMFUL pathogenic microorganisms.

Dr Marple provides an excellent analogy between the ecosystem of the soil and the ecosystem of the skin.

“Both the soil and the skin lack producer organisms and obtain their organic material from without: the soil from above (in the form of dead plant material) and the skin from below. In both soil and skin there is an extensive nonliving matrix that is permeated by solutions, and the living organisms in both are grouped around structures that penetrate the surface to deeper layers. In the soil the densest populations of microorganisms are in the rhizosphere, the region that surrounds plant roots. The comparable region in the skin is the hair follicle”

Your skin microbiome plays a key role in maintaining your skin's integrity i.e., keeping it hydrated, smooth and supple.

It maintains the skin's immune response and when 'meeting' beneficial bacteria acknowledges them, but does not cause inflammation. When meeting 'pathogenic' bacteria it enhances innate barrier immunity and activates cells to protect against infection and enhances healing, if required.

Your skin also has a delicate ACID MANTLE... a protective hydro-lipid (water/fat) film, your skin's shield of armour... that...

- Stops bacteria, fungi and viruses from permeating your skin and entering your bloodstream.
- Protects the skin against environmental stressors – dust, pollution, heat, cold etc.
- Secretes enzymes which break down excess sebum (oil) in the skin – to keep skin soft and supple – rather than dry or oily spots.
- Can recognise foreign substances and impede the growth of bacteria that cause skin issues.

There are MANY external factors that can alter the ecosystem of your skin, altering the diversity of organisms and breaking down your skin's delicate acid mantle. They include...

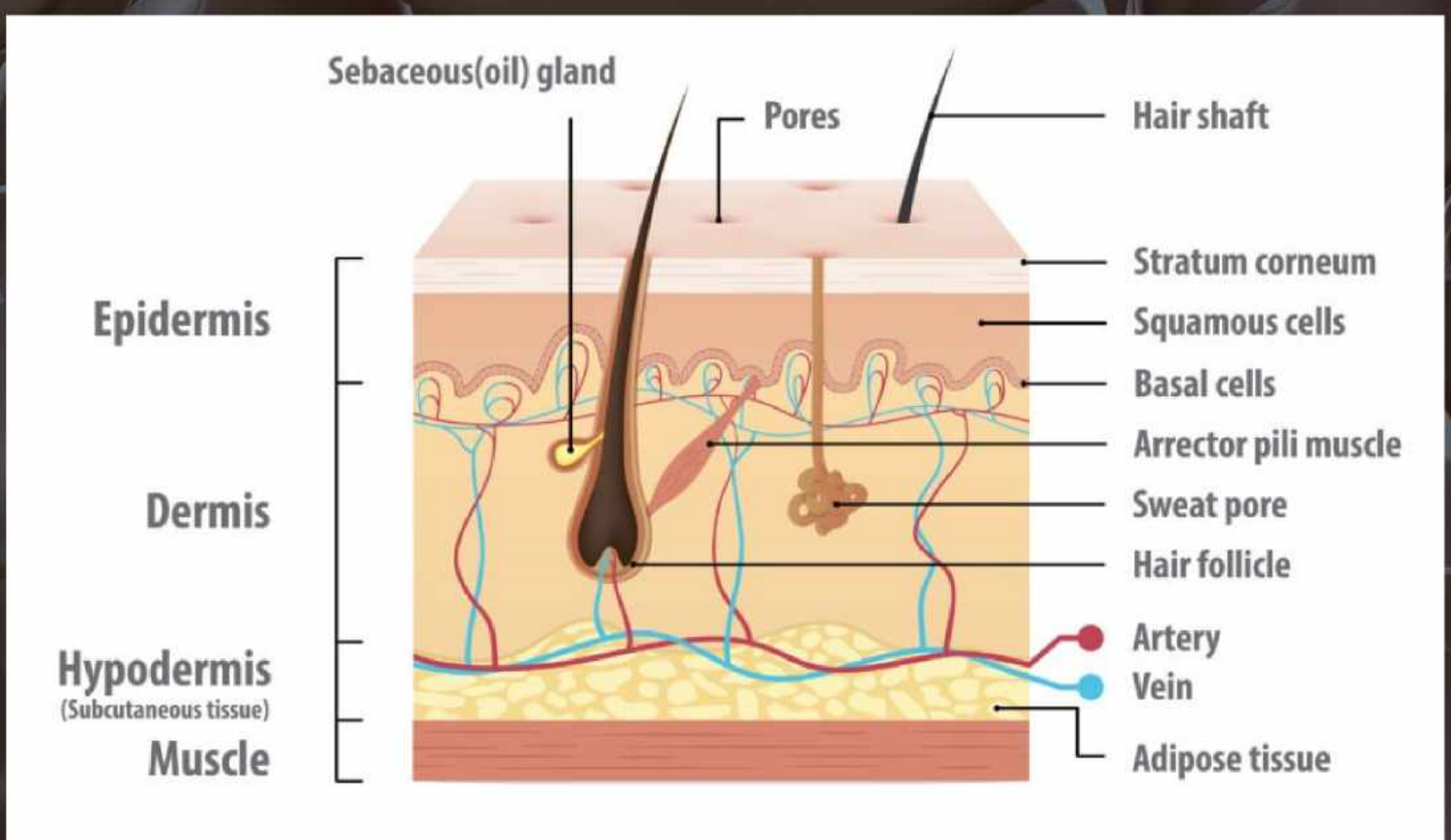
Environmental factors ... Temperature, humidity, salinity, and light exposure.

Individual factors... Age, gender, immune status, trauma, hospitalization status, medication (topical and internal) and antibiotic use.

To understand what your skin **NEEDS**, it's important for you to know how the skin is structured. Skin is made up of **THREE** layers (from the outside to the inside)...

EPIDERMIS... The outside layer, that you can see, which provides a waterproof barrier. It is comprised of...

- Stratum corneum - 25+ layers of dead cells.
- Stratum lucidum - 3 to 5 layers of dead cells (absent in **THIN** skin) which disperse keratohyalin creating a tight impermeable layer that protects the body from invasion by foreign particles.
- Stratum granulosum - 2 to 5 layers of flattened diamond shaped cells that produce keratohyalin granules and release lipids from cells.
- Stratum spinosum - 8 to 10 layers of many sided cells produces keratin fibres.
- Stratum basale - single layer of cube & column cells which attaches to the dermis. Produces melanin which protects against ultraviolet light.



And just about THIN skin vs THICK skin...We're not talking about a person's ability to take criticism!!

“Thick skin is found in areas subject to pressure of friction, such as the palms of the hands, the soles of the feet, and the fingertips.”

“Thin skin covers the rest of the body and is more flexible than thick skin. Each of its strata contains fewer layers of cells than are found in thick skin; the stratum granulosum frequently consists of only or two layers of cells, and the stratum lucidum is generally absent. hair is found only in thin skin.”

“The entire skin, including both the epidermis and the dermis varies in thickness from 0.5mm in the eyelids to 5.0mm on the back and shoulders.”

The next layer down is your **DERMIS**... the deep part of the skin comprising of the...

- Papillary layer - Loose connective tissue that brings blood vessels close to the epidermis.
- Reticular layer - Collagen and elastic fibres.

If the skin is overstretched, the dermis can rupture, thus leaving lines that are visible through the epidermis i.e. stretch marks.

Then there is the **HYPODERMIS** (Subcutaneous tissue) that is not technically part of the skin but rather attaches the dermis to the underlying tissue and has adipose tissue for energy storage, insulation and padding. In addition, this area supplies the dermis with blood (arteries and veins) and nerves.

SKIN MICROBIOME CARE

Now you know a little more about your skin's structure and delicate microbial balance... you get to decide HOW you will support your skin's health.

To support it from the inside-out (diet and lifestyle) and the outside in with personal care products, cosmetics (make-up) and home care products.

“Activities that seem trivial to us, such as taking a shower, may be the equivalent of a hurricane to the microbes inhabiting the skin, with changes in landscape and population structure”

“Stress has been shown to ... impair barrier permeability function, and increase susceptibility to infection.”

“These defects in skin innate immune response and barrier function caused by glucocorticoids ultimately resulted in a greater susceptibility to Streptococcus infections and delayed healing.”

Very much like caring for your ORAL and GUT Microbiome.... here are SIX simple actions you can take to prioritize the health of your Skin microbiome and YOU!!

ONE... Implement stress awareness, stress relief techniques and management of stressors as a PRIORITY.

You know HOW your stress response is activated... and you know HOW it affects your GUT Microbiome and your ORAL Microbiome, and NOW... here is how it affects your SKIN Microbiome!

“Glucocorticoids (stress steroid hormones) can also exert direct effects on several aspects of wound repair. It is well known that systemic steroids inhibit wound repair via suppression of cellular wound responses, such as fibroblast proliferation and collagen synthesis.”

It literally shapes your MICROBIOME profile...

“Every day, under exposure to UV, pollution or even stress, the equilibrium of the microbiota is threatened and can be disrupted, leading to an imbalance called dysbiosis, which can cause skin disorders or even pathological conditions”

“Physiological (e.g., metabolic disease, inherent skin pathologies, etc.) and psychological (e.g., depression, perceived stress, etc.) stressors can modulate communication between the host and microbiome to impair wound healing and/or promote pathologic infection”

Often when skin becomes comprised we use pharmaceutical topical creams, ointments etc. however studies show these have a detrimental effect on the skin Microbiome...

“Steroids and other neuroendocrine therapies are common treatments for numerous conditions, but they also impact the bacterial microbiome by manipulating local and systemic host stress molecules. Consequently, alterations in the local microbiome due to current pharmacologic and surgical practices can suppress or augment skin innate immune responses and inhibit normal wound repair”

“Patients taking systemic glucocorticoids may have global immune suppression, which in turn, diminishes fibroblast proliferation, alters collagen synthesis, reduces wound contraction, and causes incomplete formation of granulation tissue. All of these comorbid conditions play a key role in determining the response of the host to additional stressors, such as acute wounding or the persistence of chronic wounds. Further, these individuals are more likely to exhibit an unhealthy lifestyle, which include poor nutrition, inadequate sleep, insufficient exercise habits, and a greater propensity for use and/or abuse of alcohol and cigarettes. Collectively, the interplay between these comorbid factors and unhealthy habits exacerbates these detrimental effects on wound healing and likely, the wound microbiome”

The research is endless... and clear... that stress has the MOST detrimental effects on our collective MICROBIOMES.

This is empowering... as you now have the knowledge and tools to shift your Gut, Oral and Skin Microbiome into a new steady state.

By CONSISTENTLY implementing your Lifestyle practices... Resonant breathing, Barefoot walking, Before bed Yin Yoga, Stretch-Decompress-Hydrate, Optimal Sleep Practices, Stress Awareness, Relief and Management Techniques... you get to shift your state into one that supports optimal skin health.

TWO... It is essential to keep your skin well hydrated at all times. Dehydrated skin, is skin that lacks moisture from the INSIDE and is exposed to OUTSIDE 'drying' environmental factors such as air-conditioning, pollution, UV exposure, dry hot weather, hot showers, soaps and chemical laden lotions and cremes etc.

Liquid or bar soaps break down your skin's 'acid mantle'... and once damaged, it can take up to 15 hours to restore itself.

However, during this time, most individuals are disrupting it again!

Skin that is dry can feel itchy, look scaly and sallow. As opposed to hydrated skin that is smooth, soft and supple.

Skin requires continual 'hydration' replenishment and your Stretch-Decompress-Hydrate method takes care of this. Ensuring you reach the end of every day well hydrated for your a radiant complexion.

THREE... Consume a variety of whole plant foods that are rich in fibre, prebiotics, probiotics, antioxidants, phytonutrients and omega fatty acids. Just like the flora in your gut, and your oral cavity... your skin flora has a preference for whole plant foods.

“Dietary polysaccharides have a positive effect on the improvement of aging skin.

Mechanistically, oral polysaccharides enhance skin antioxidant enzyme activity, remove ROS, and reduce oxidative damage”

“Finally, polysaccharides inhibit collagen degradation... maintaining a stable collagen ratio, repairing skin structure, and maintaining skin moisture content”

“A Western diet has been shown to negatively impact skin health by disrupting the microbiome and leading to skin diseases. Conversely, a plant-based diet has been associated with healthier skin due to its ability to enrich and modulate the microbiome through various plant-based dietary patterns”

“Dairy and sugar consumption was reported as one of the most common triggers for psoriasis, while meat and eggs were included as one of the minor common triggers. Moreover, they observed that only adding vegetables to the habitual diet also had a favorable skin response in 42.5% of patients, probiotics in 40.6%, organic foods in 38.4%, and fruits in 34.6%. On the other hand, it was also observed that avoiding certain foods such as junk foods (50%), white flour products (49.9%), dairy (47.7%), pork (35.6%), and red meat (30.4%) had similar results”

“SCFA, particularly butyrate, are also able to improve the skin barrier and relieve skin inflammation. In fact, low levels of fecal SCFA have been observed in patients with eczema and atopic dermatitis, and interventions with SCFA-producing probiotics are able to ameliorate inflammation in other skin conditions “

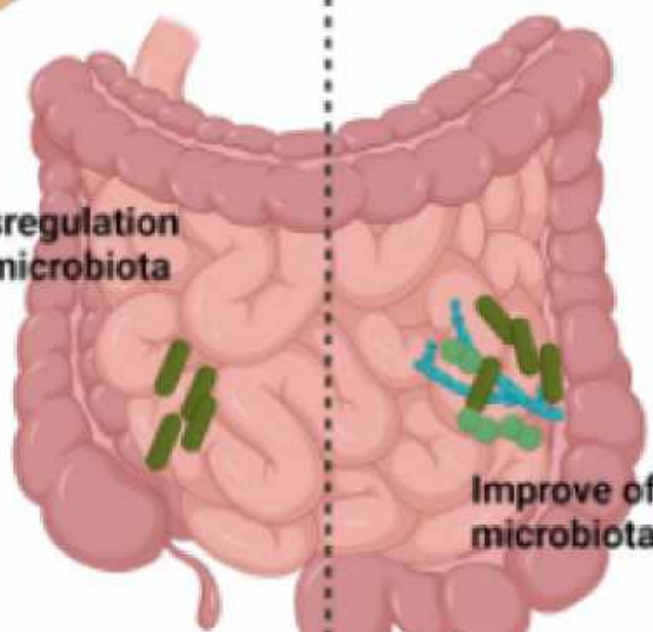
“Following a plant-based diet and maintaining it over time have demonstrated positive effects on the skin. The gut-microbiome axis has been demonstrated to be dysregulated in Western diets. In contrast, plant-based diets have been shown to enhance the composition of the microbiome, leading to positive effects. Western diets, however, have been linked to a reduction in skin elasticity, firmness, and depigmentation”

“Conversely, plant-based diets have demonstrated an opposite effect, by promoting healthier skin”...“This improvement has been linked to the interaction between the intestinal microbiota and a diverse range of bacteria that are specific to these skin diseases, including psoriasis, atopic dermatitis, and acne”

Western Diets



Dysregulation
of microbiota

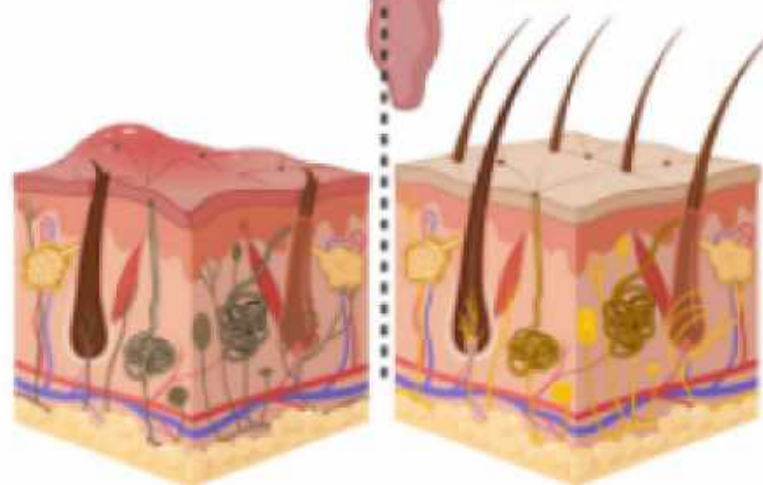


Improve of
microbiota



Plant-Based Diets

Elasticity
Firmness
Depigmentation



Elasticity
Firmness
Depigmentation



FOUR... Reduce or eliminate alcohol as it has a dehydrating and aging effect on the skin.

Alcohol stimulates histamine release causing an increase in allergic reactions (hay fever etc) plus causes facial flushing which can result in breaking tiny capillaries in the face (spider veins) especially on the cheeks and around the nose.

Alcohol has been shown to directly cause or exacerbate skin conditions such as psoriasis, eczema, rosacea, and post adolescent acne.

Alcohol damages skin's barrier function and has been shown to increase skin pigmentation. Studies also show that alcohol is moderately associated with increased melanoma risk.

The degree of facial aging increases with the amount and time of exposure to alcohol.

FIVE... Avoid any type of juice, fizzy drinks or SUGAR. They have NO fibre and are high in simple sugars. which have been shown to trigger and exacerbate skin conditions.

Excess sugar results in the accumulation of advanced glycation end products (AGEs). AGEs accumulate in photo-aging skin, affect protein function in the dermis, and promote skin aging.

Sugar also induces oxidative stress in epidermal cells, causing cell damage and inflammation. When the degree of inflammation exceeds the ability of the macrophages (effector cells of the innate immune system) to clear up then macrophages also begin secreting pro-inflammatory factors and 'reactive oxygen species' which accelerate dermal inflammation and injury.

SIX... Stay out of the sun. Sun exposure accelerates skin-aging... i.e. premature aging and manifests as skin wrinkles, skin roughness, yellowish or grayish-yellow complexion, capillary expansion, and pigmented spot formation, etc.

Ultraviolet light is divided into A, B, C depending on the length of wavelength.

UV-A (320–400 nm) has low energy but strong penetrating power, which mainly affects the dermis of the skin. It accelerates the breakdown of collagen.

UV-B potentially induces DNA damage and mutation in keratinocytes and causes skin cells to show symptoms such as aging, inflammation, apoptosis, and carcinogenesis.

UVC is the shortest wavelength and most harmful but it isn't able to penetrate the earth's atmosphere as it is absorbed completely by the ozone layer. However, research has shown there has been a thinning of the ozone layer in certain geographical locations but the effects of UV-C have yet to be studied extensively.

PERSONAL CARE PRODUCTS

“Societal obsession with the process of aging dates back to ancient history, and myths related to the conservation of youth—ranging from a bathing fountain that confers eternal youth to a philosopher’s stone that could be used to create an elixir of life—populate both past and contemporary folklore”

“While several hypotheses have been proposed to explain the pathophysiology responsible for senescence, no single theory accounts for the diverse phenomena observed. Rather, aging appears to be a multifactorial process that results from a complex interplay of several factors and mechanisms”

Marketers, play our obsession with ‘aging’ and have made a precise science, especially towards women, to create the illusion that cremes, lotions and potions are able to ‘halt’ skin aging or reverse skin aging!! Even though it’s actually impossible.

Open your bathroom cupboards, or anywhere else you stash 'personal care' products (including make-up) and take a look ...

How many products do you have? And how many do you really NEED?

While 'skin care' products can certainly 'protect' and 'nurture' the skin from the outside-in... the formation of EVERY new skin cell ONLY happens from the inside.

No 'skin care' product will ever trump what you put in your body, however you can certainly find skin-supporting products as opposed to skin-eroding products.

But, how do you decide what is BEST for your skin?

Well, just like what you put in your body... you need to have chemical free, additive free, preservative free and colour free skincare products.

Choose ORGANIC, NATURAL and PLANT BASED Skin Microbiome supportive skincare products.

Choose an organic natural plant-based chemical free moisturizer that has lipophilic (oil-based) properties (one that can be absorbed into the lipid skin cell) i.e. one with phytonutrients that are able to pass through the Stratum corneum without clogging pores allowing its polyphenols and Vitamins A, C & E to penetrate into the dermis and stimulate natural collagen production and repair skin.

Lipophilic (oil-based) cleansers are able to bind to dirt in pores and remove without disrupting the skin barrier (acid mantle). Foam cleansers on the other hand do not remove dirt in pores but DO break down the delicate acid mantle.

Organic natural plant based chemical free skincare products that have hydrophilic properties and a delivery system such as plant-based extracts (with glycerine, the back bone of fatty acids) act as humectants and lock in moisture (hydration) in the skin, making it smooth, soft and supple.

HOME CARE PRODUCTS

Go to your kitchen, bathroom and laundry cupboards and get out ALL your cleaning and home-care products... do you know what is in them? How they impact YOUR health? The health of your family?

“Humans are exposed to hundreds of chemicals as evidenced by the fact that more than 300 environmental chemicals or their metabolites have been measured in human biological samples”

Exposure to parabens, triclosan's, bisphenols, Phthalates etc. that are common in both HOME care and PERSONAL care products have been shown to modify the gut microbiota of infants, adolescents and adults.

Common home care products ingredients have been shown to result in adverse health outcomes such as... skin issues, allergies, headaches, skin rashes, sneezing, red watery itchy eyes, sore itchy throat, congestion, sinus problems, tightness in the chest, difficulty breathing, male and female reproductive and developmental defects, type 2 diabetes, cardiovascular dysfunction, liver disease, obesity, thyroid disorders, and immune dysfunction, cholesterol overloading... just to name a few.

Here are COMMON INGREDIENTS, found in everyday cleaning products, and their detrimental effects...

SODIUM DODECYLBENZENE SULPHONATE can be absorbed into the body by inhalation, irritating the eyes, skin and respiratory tract. Long term exposure may result in dermatitis. Found in kitchen and bathroom cleaning sprays and liquid cleaning agents.

SODIUM TETRABORATE DECAHYDRATE is basically borax. Commonly used in air-fresheners and cleaners. The jury is still out on borax. Good or bad? There is conflicting information out there. But inhalation may result in shortness of breath, sore throat, coughs and nose bleeds. In America, the FDA banned borax as an additive in foods. The European Chemicals Agency has named it as being 'of very high concern'. I'll leave it to you to decide.

FRAGRANCE is added to nearly all cleaners and air-fresheners so things can smell 'clean'. What does 'clean' really smell like, I wonder...?? Manufacturers are not obliged to list the source. Mind-boggling, hey? Something we use in our homes, day in and day out and there is no mention of what's in it! But research is clear... that frequent use of household cleaning sprays is a risk factor for asthma as fragrances were found to linger in the air and long-term use of cleaning products is *"recognized as a common cause of new-onset and aggravated occupational asthma"*

DIPROPYLENE GLYCOL BUTYL ETHER also found in Mace spray and brake fluid; and your household cleaning products – eek! The compounds can be absorbed into the body by inhalation and can result in irritation of the eyes, nose, throat and symptoms such as dizziness and headaches. Long term use targets the respiratory and central nervous system.

PROPYLENE GLYCOL can affect the...
“Integumentary system (Skin), Urinary system (Kidneys) and Respiratory system (From Nose to the Lungs)”. According to the Agency for Toxic Substances and Disease Registry. Repeated eye, skin, nasal, or oral exposures to propylene glycol is dangerous for health.

SODIUM LAURETH SULFATE (SLES) a detergent and surfactant “causes eye or skin irritation in experiments conducted on animals and humans” This is a common ingredient in home spray cleaners, toilet cleaners, shower cleaners etc.

AMMONIUM CHLORIDE used in glass and bench cleaning sprays produces strong fumes that are potentially damaging to mucous membranes in the eyes, nose and airways.

HYDROCHLORIC ACID is found in toilet and shower screen/tile cleaners. It's corrosive and its fumes can result in asthma like symptoms such as coughing, shortness of breath and chest tightness. Skin contact can blister and burn skin.

TRICLOSAN is a common ingredient in antibacterial cleaners and hand sanitisers. Apparently, an individual can only absorb a small amount of triclosan through the skin or the mouth. However, a study of participants aged 6yrs and older, Triclosan was detected in the urine of nearly 75% of the people tested. And ironically, the product that is meant to keep pathogenic bacteria at bay actually makes them stonger... *“There is some concern that widespread use of triclosan and other biocides can alter antibiotic resistance in bacteria”*.

BENZISOTHIAZOLINONE is used as a preservative and antimicrobial in room air-fresheners. The Environmental Working Group (EWG) rates it as a HIGH concern due to its irritation to the skin, eyes and lungs.

Also, **FORMALDEHYDE** is permitted to be used in small concentrations as a preservative in cleaning products and air fresheners. It can interfere with the ability to smell by coating nasal passages with an oily film.

So, what do you do... when it is in **ALL** your cleaning and home care products?

Well that's your decision.

However if you and your family's health is a priority, I think you know what to do.

What to use instead?

Check out your **BIOME FRIENDLY HOME CARE** sheet which provides simple recipes to replace all your toxic cleaners and an option to buy an 'all in one' natural and organic home care cleaner, if you wish.

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