

# NEWSLETTER

*The latest news and updates from Exmouth Wellness Centre and Margaret River Wellness Centre*

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MICROBIOME

GUT HEALTH FILMS,  
BOOKS AND MORE..

CHRISTMAS RECIPE  
THAT IS GOOD FOR  
YOUR GUT

## MASTERING THE MICROBIOME

BY DR SIOBHAN OVERBERG

Microbiome. It is harder to think of a hotter topic at the minute in both science and Natural Medicine. So, what's all the fuss about and why the sudden interest from scientific factions?

A core tenet of Natural Medicine is that "disease begins in the gut". The science has been slow to jump on board this train until relatively recently, whereby major research ventures such as The Human Microbiome Project (HMP) and

Metagenomics of the Human Intestinal Tract (MetaHIT) have finally unveiled a connection between chronic illness and gut health.

### MICROBIOME 101

Of perhaps great surprise to many is that while our bodies comprise about ten trillion cells, our microbiome – all the bacteria, viruses and fungi that live on or in our bodies, 75% of which live in the large intestine – outnumber human cells by a factor of 10. You could argue

that we are far more microorganism than human! This raises some interesting questions then in relation to whom or what drives our emotional state, our propensity for health or disease, and even specific food cravings. The science is beginning to unveil that to a large extent individual characteristics such as these can be traced back to the ecology of our gut. It is now well established that more than 90% of our immune system resides in the gut. [0]

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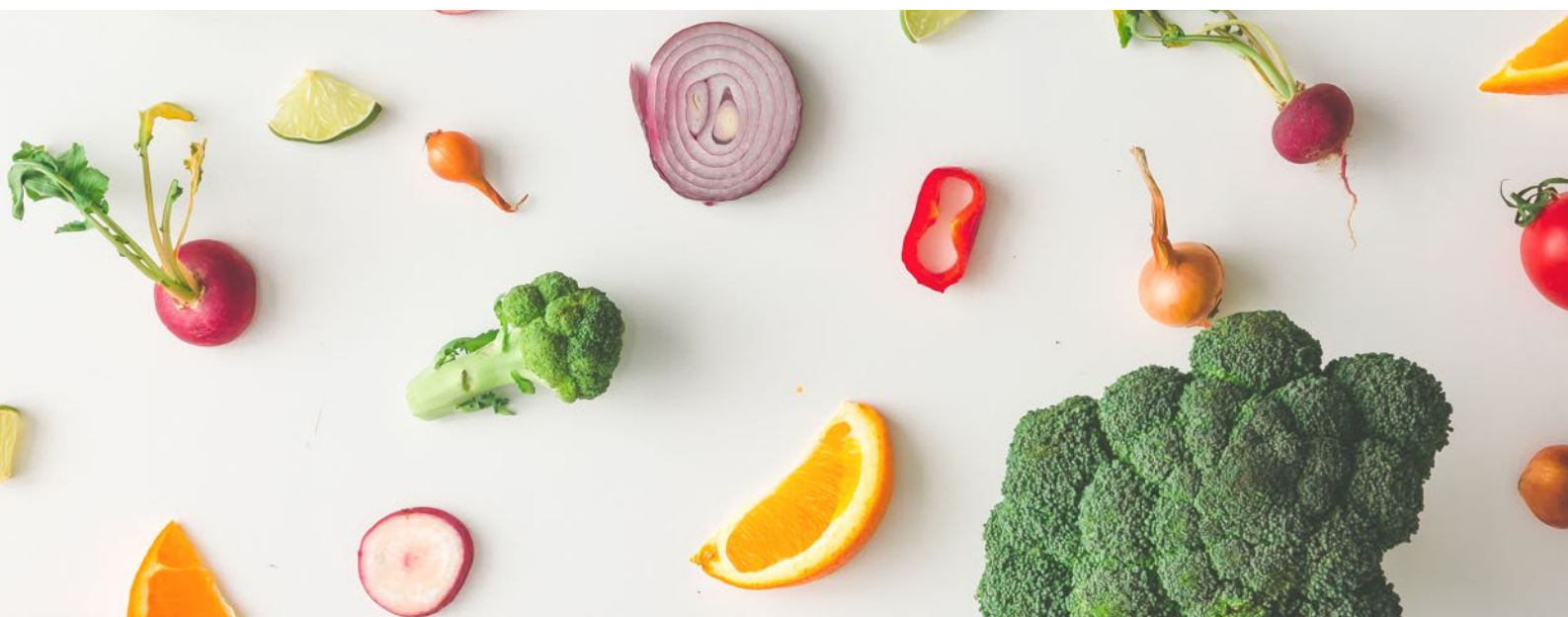
# MASTERING THE MICROBIOME

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So, what constitutes a healthy gut microbiota? Microbiome science is still in its relative infancy and, considering the thousands of microbial species in the gut lumen, characterising an ideal microbiome is a decidedly tricky task.

## SHOULD WE HAVE PALEO GUTS?

The microbiome composition of the Hunter-Gatherers is often used as a yardstick for the ideal microbiome. Hunter-gatherer societies were thought to have exhibited comparatively good health with the absence of most modern-day disease profiles such as obesity, insulin resistance, inflammation, bowel disease and dental caries. [1]



Wouldn't it then make sense to replicate the diet and lifestyle of ancient civilisations in order to achieve similar biomarkers as those recorded in stool analyses of these subjects? Studies that compare microbiome specific data from some of the few remaining paleolithic cultures of the world to DNA analysis of faecal samples of long deceased hunter-gatherers reveal that the compositions are different. Despite seemingly similar lifestyles and states of health, no consistent microbiome composition is shared amongst these groups. [2,3,4]

Second to hunter-gatherers as healthy role models are people living a simple rural, agricultural lifestyle. Again, several studies investigating this cohort found mixed results in terms of the ideal microbiome. The ideal "one size fits all" healthy microbiome simply does not exist. [5,6]

So, what then do we actually know about what distinguishes a healthy microbiome from an unhealthy one?

## DIVERSITY BREEDS STRENGTH

A common thread amongst our Paleolithic ancestors and agrarian lifestyles is that these groups consistently have a greater bacterial diversity than Westerners. It appears that simply having a large variety of bacterial species is highly beneficial. The further we have veered from a traditional lifestyle, the less diverse our microbiota - a significant risk factor for chronic disease. [7,8]

## PLANT POWER

What is clear is that a diet more heavily based on plants - that is, fruits and vegetables - may result in a microbiome containing a wider range of healthful organisms. This is because plant fibre provides the substrate inulin, an indigestible food ingredient that behaves as a prebiotic (a.k.a. food and nourishment) for the existing microbiome. [9]

## BUILD CORE STRENGTH

Healthy individuals typically have appreciable levels of certain bacterial genera, dubbed 'core' bacterial strains, belonging to six genera: Faecalibacterium, Eubacterium, Clostridium, Blautia, Ruminococcus and Roseburia. These genera are doing a lot of the heavy lifting for the microbiome, meaning that adequate levels of these genera may be the common denominator in the hunt for a healthy microbiome. [10]

Your microbiome is largely an imprint of your mother's at birth, inherited in utero and through traversing the vaginal birth canal. C-section birth bypasses part of this process, hence the origin of 'seeding', whereby swabs of the mother's vaginal secretions are rubbed over the newborn's skin to bestow the benefits of the birth process. [11,12]

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Other factors influencing an individual's core bacteria are breast milk and antibiotics given within the first few years of life. [11,12] During this phase, the microbiome is still in its relative infancy and building in both diversity and strength. [11,12] These factors may affect the transmission and establishment of the six core genera, which may be irrecoverable beyond this point unless concerted efforts are made to remediate the gut. [11,12]

### CROSS-FEEDING VERSUS SEEDING

One long-held belief is that when we consume probiotics, we directly re-seed the gut, compensating for any lack of diversity and enhancing the overall output (i.e. metaphorical 'punch') of the microbiome.

We now know this to be incorrect. Rather the core bacteria, with the exception of *Blautia*, play a vital role in fully metabolising fibre down to a substrate called butyrate. Butyrate is a key immunomodulator and essential for gut motility. Butyrate production is considered a hallmark of a healthy microbiota. [13]

In contrast, the other gut bacteria only partially metabolise fibre; instead creating intermediate metabolites, such as lactate and acetate. The core bacteria metabolise these intermediates into butyrate, a process known as cross-feeding. [14] Therefore, enhancing levels of these core butyrate-producing bacteria plays a very important role in an individual's health and provides one measure of healthy microbiome function.

### TAKEAWAYS

- Use antibiotics judiciously – ask your GP these questions; Do I really need this antibiotic? What would happen if I didn't take this antibiotic? Are you treating me based on an actual result or are you treating me preventatively? Has whatever it is I am growing been cultured and ID'd and is it really sensitive to this antibiotic? Studies show that physicians prescribe antibiotics in the paediatric world 67% of the time when they think the patient expects it and 7% when they don't. [15]

- Eat a varied diet high in indigestible plant fibre and avoid antibiotic fed animal foods.

- Live dirty! Don't over-sanitise and avoid antimicrobial products – check your personal and cleaning products, avoid hand sanitiser (use soap and water instead).

- Consult your relevant healthcare practitioner for advice on therapeutic probiotics – not all probiotics are the same or have the same 'punch'. Certain strains are known to bestow benefit in specific health conditions.

*To be continued...*

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## UPCOMING FEATURE FILM

### THE GUT MOVIE

The Gut Movie follows the quest of journalist & researcher, Kale Brock, to discover whether the 'optimal microbiome' does indeed exist. His journey takes him from Australia to Namibia to live with The San, an ancient hunter-gatherer people living traditionally from the land.

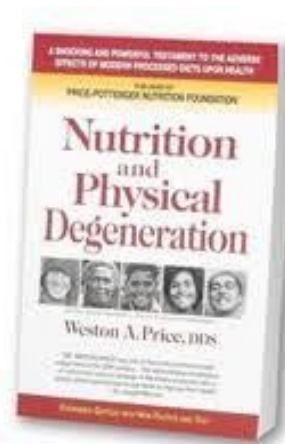
With expert commentary by leading gastroenterologist Professor Thomas Borody, molecular geneticist Dr. Margie Smith, immunology researcher and expert Professor Mimi Tang, naturopath and chiropractor Dr. Damian Kristof and more, The Gut Movie provides an insightful yet entertaining look at the explosive research of the gut & its impact on human health.

## BOOK OF THE MONTH

### NUTRITION AND PHYSICAL DEGENERATION WESTON A. PRICE

More than sixty years ago, a Cleveland dentist named Weston A. Price decided to embark on a series of unique investigations that would span a decade. Met with an increasing incidence and severity of dental decay in practice, often accompanied by other health complaints such as arthritis, osteoporosis, diabetes, intestinal complaints and chronic fatigue, Price began to ask some questions. It was the dentition of younger patients that alluded to a greater problem. He observed that crowded, crooked teeth were becoming the norm, alongside "facial deformities"—overbites, narrowed faces, underdevelopment of the nose, lack of well-defined cheekbones and pinched nostrils. These children invariably suffered from other complaints that plagued the 1990s: frequent infections, allergies, anaemia, asthma, poor vision, lack of coordination, fatigue and behavioral problems. Price did not believe that such "physical degeneration" was God's plan for mankind. He was inclined to believe that physical perfection was intended for all, and that children should grow up free of ailments.

This observation and curiosity spurred a research investigation, in which Price would travel to isolated parts of the world where the inhabitants had no contact with "civilization" to study their health and physical development. His travels took him to isolated Swiss villages and a windswept island off the coast of Scotland. He studied traditional Eskimos, Indian tribes in Canada and the Florida Everglades, Southsea islanders, Aborigines in Australia, Maoris in New Zealand, Peruvian and Amazonian Indians and tribesmen in Africa. The photographs Price took, the descriptions of what he found and his startling conclusions are elegantly documented to demonstrate the clear causative effects of nutrition and physical degeneration.



## DOCUMENTARY SERIES

### ARE YOU WHAT YOUR MOTHER ATE?

In this SBS series, Dr Michael Mosley explores how a mother's diet at conception may influence life expectancy and risk of diabetes.

"At this vital time if a mother eats a diet of rich and leafy green vegetables it provides a cocktail of chemicals that bind strands of DNA and changes forever how some of our genes work."

The phenomenon at play is known as Epigenetics and describes how familial genes inherited from our mother are turned 'on' or 'off' due to different environmental factors (e.g. toxins, smoke, plastics and pollution, diet and exercise habits pre-conception and during pregnancy). The resultant gene expression determines health expression.



# Vanilla Spice Cheesecake

## Ingredients

- 2 cup soaked raw cashews
- Soak in hot water for two hours overnight
- 1 cup sunflower seeds
- 1½ cups shredded coconut
- Pure stevia, to taste (suggested ½ tsp.)
- 1 tbsp Organic Virgin Coconut Oil
- Pinch of salt
- ½ cup of probiotic coconut yoghurt\*
- ½ cup melted coconut oil (extra)
- ¼ cup pure maple syrup
- 3 tsp organic vanilla paste
- 250g fresh or thawed organic berries

## Method

Line the base of a 20cm springform cake tin with non-stick baking paper.

### FOR THE BASE

Process the sunflower seeds and shredded coconut in a blender for approximately 30 seconds or until coarsely chopped. Add the agave syrup, coconut oil and salt to the blender and pulse until all the ingredients are combined. Press firmly into the base of the lined tin and refrigerate until firm.

### FOR THE FILLING

Blend the drained cashews, coconut yogurt, extra coconut oil, maple syrup and vanilla paste in a blender for 2-3 minutes or until very smooth.

Arrange the berries over the sunflower seed base. Pour the filling over the base and smooth the surface. Cover and refrigerate overnight, until firm or place in the freezer for 2-3 hours to set.

### OPTIONAL

Serve with organic berries or fruit or with a sprinkle of shredded coconut for decoration.

\*With an unparalleled knowledge and understanding of gut microbiome, Kirsty Wirth of Kultured Wellness has created potent therapeutic probiotic cultures of coconut yoghurt, coconut kefir and apple kefir. Visit [www.kulturedwellness.com](http://www.kulturedwellness.com) for more information on the coconut yoghurt starter.



## Featured Product

### Metagenics Ultra Flora Intensive Care

Ultra Flora Intensive Care is a scientifically formulated probiotic to help rebuild beneficial gut flora for a healthy and balanced intestinal microbiome (\*gut ecosystem).

Ultra Flora Intensive Care contains three of the world's most widely researched probiotics (LGG®, SB and BB-12®) with documented outcomes and mechanisms for microbiome replenishment. These probiotics support the growth and function of the dominant bacterial groups of the microbiome and suppress pathogen growth. In addition, BB-12® and LGG® strains specifically support the gut epithelial mucosa where the bacterial populations reside and interact systemically.

*This product is available in the clinic.*



## Exmouth Wellness Centre

### Holiday Trading Hours

Monday 8am - 6:30pm

Tuesday 9am - 6:30pm

Wednesday 8am - 12:30pm

Thursday 2pm - 6:30pm

Friday 8am - 6:30pm

Saturday: Closed

Sunday: Closed

*Please note Exmouth Wellness Centre will be closed on Public Holidays.*

## Margaret River Wellness Centre

### Holiday Trading Hours

Monday 11:00am - 6:00pm

Tuesday 8:00am - 6:00pm

Wednesday 12:00pm - 3:00pm

Thursday 11:00am - 6:00pm

Friday 8:00am - 1:00pm

Saturday: Closed

Sunday: Closed

*Please note Margaret River Wellness Centre will be closed on Public Holidays.*







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