PRACTITIONER HANDOUT

The Gut & Oral Microbiome.

Human-origin strains, the 3-in-1 Eubiotic, and the emerging science connecting Bifidobacterium to whole-body health.

A slide-by-slide summary of the RE-1® Microbiome Reset briefing

Everything you heard in the briefing, in one place: the science of the gut and oral microbiome, the human-origin strains inside every sachet of RE-1®, and the evidence behind them. Each page pairs a slide with a short summary of its key points.

Prepared by Natalie Dumer, Rebiirth Independent Distributor

rebiirth®

OPENING

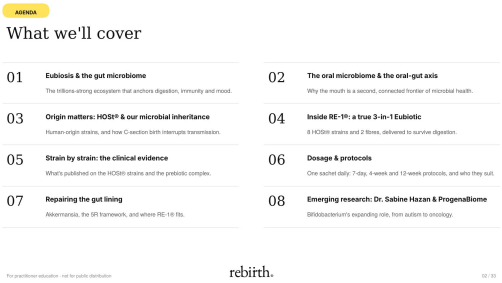


SLIDE 1

The Gut & Oral Microbiome

This handout summarises a practitioner briefing on the gut and oral microbiome: the communities of microbes living in our mouth and digestive tract, why their balance matters, and the science behind human-origin probiotic strains.

It also explains where Rebiirth's RE-1® Microbiome Reset fits, and looks at emerging research on *Bifidobacterium*, one of the most important groups of gut bacteria.



SLIDE 2

What we'll cover

The briefing moves through eight topics: a healthy gut microbiome; the mouth and its link to the gut; why the origin of a probiotic strain matters; what is inside RE-1; the published evidence for its strains; how it is used; repairing the gut lining; and emerging research from Dr. Sabine Hazan and ProgenaBiome.

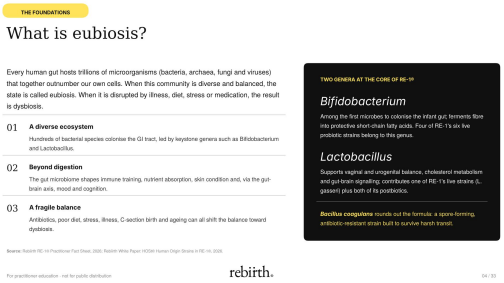


SLIDE 3

"All disease begins in the gut"

This phrase is widely credited to Hippocrates, the ancient Greek "father of medicine". Historians can't find these exact words in his surviving writing, but they echo his teaching that diet and digestion underpin health.

Around 2,400 years later, microbiome science is testing that idea with modern tools.



SLIDE 4

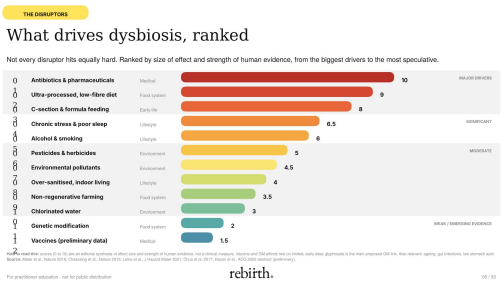
What is eubiosis?

Your gut is home to trillions of microorganisms, including bacteria, fungi and viruses, which together outnumber your own cells. When this community is diverse and balanced, scientists call it **eubiosis**. When it is thrown off balance, it is called **dysbiosis**.

The gut microbiome does far more than digest food. It helps train the immune system, absorb nutrients, and influence skin and, through the gut-brain connection, mood and thinking.

Two groups of bacteria sit at the core of RE-1: *Bifidobacterium* (four of its six live strains) and *Lactobacillus*. A hardy, spore-forming strain, *Bacillus coagulans*, completes the blend.

DYSBIOSIS



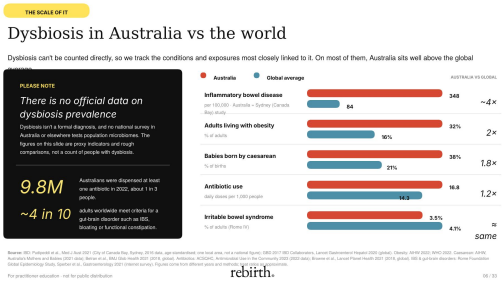
SLIDE 5

What drives dysbiosis, ranked

Many things can push the gut out of balance, but not equally. This slide ranks twelve common factors by how big their effect is and how strong the evidence in people is.

Biggest drivers: antibiotics and other medicines; a low-fibre, ultra-processed diet; and caesarean birth with formula feeding. Significant everyday factors: chronic stress, poor sleep, alcohol and smoking. Moderate or harder to measure: pesticides, pollutants, over-sanitised indoor living, depleted farm soils and chlorinated water.

Genetic modification and vaccines rank lowest because the evidence on them is limited and early.



SLIDE 6

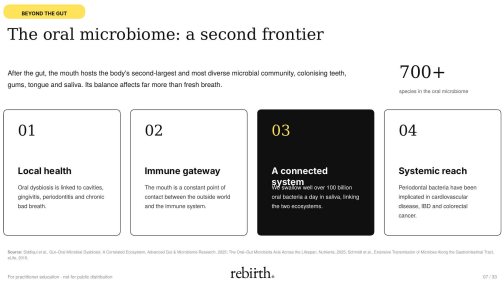
Dysbiosis in Australia vs the world

There is no official data on how many people have dysbiosis. It isn't a formal diagnosis, and no country surveys its population's microbiomes. Instead, the slide compares conditions and exposures linked to dysbiosis.

On most of these, Australia sits above the global average. Inflammatory bowel disease is about 4 times more common, based on a Sydney study. Adult obesity is about double, caesarean births are about 1.8 times higher (38% vs 21%, AIHW), and antibiotic use is around 1.2 times higher (16.8 vs 14.3 daily doses per 1,000 people). About 9.8 million Australians, roughly 1 in 3, were given at least one antibiotic in 2022.

Irritable bowel syndrome is the exception: Australia is close to the global average.

THE MOUTH AND THE GUT

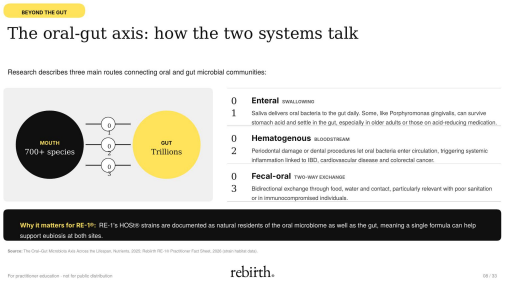


SLIDE 7

The oral microbiome: a second frontier

After the gut, the mouth has the body's largest and most diverse microbial community, with more than 700 species living on the teeth, gums, tongue and in saliva.

An imbalance in the mouth is linked to cavities, gum disease and bad breath. The mouth is also a constant meeting point between the outside world and the immune system, and bacteria from gum disease have been linked to heart disease, inflammatory bowel disease and bowel cancer.

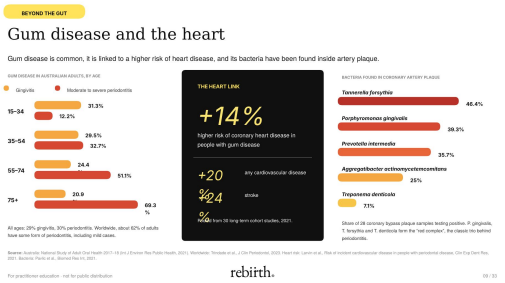


SLIDE 8

The oral-gut axis: how the two systems talk

The mouth and gut are connected in three main ways: through swallowing, as saliva carries oral bacteria into the gut every day; through the bloodstream, when gum damage lets bacteria enter circulation; and through two-way exchange via food, water and contact.

RE-1's human-origin strains are naturally found in both the mouth and the gut, so a single formula can support balance in both places.

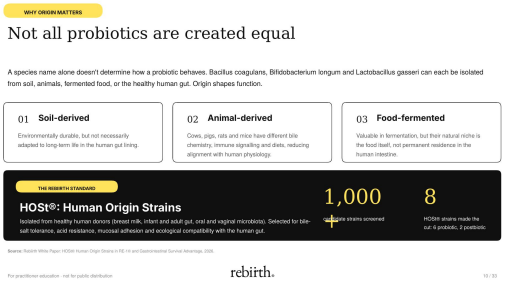


SLIDE 9

Gum disease and the heart

Gum disease is common in Australia: about 3 in 10 adults have gingivitis and 3 in 10 have moderate to severe periodontitis, rising from 12% of 15–34 year olds to 69% of people aged 75 and over. Worldwide, around 6 in 10 adults have some periodontitis.

People with gum disease have about a 14% higher risk of coronary heart disease, 20% higher risk of cardiovascular disease overall and 24% higher risk of stroke, pooled from 30 cohort studies. Oral bacteria from dental plaque, including Tannerella forsythia (46%) and Porphyromonas gingivalis (39%), have been found inside coronary artery plaque, a strong reason to support a balanced oral microbiome.

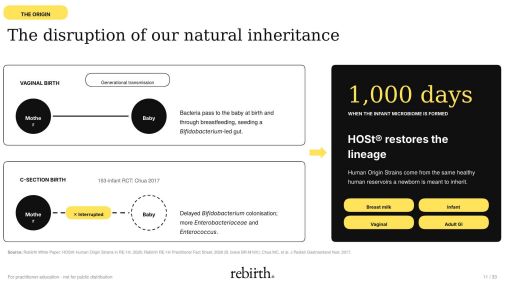


SLIDE 10

Not all probiotics are created equal

The same species of bacteria can come from soil, animals, fermented food or the human gut, and where it comes from shapes how it behaves. Soil strains are tough but not adapted to life in the human gut; animal strains evolved alongside different diets and digestion; food strains are suited to the food itself.

RE-1 uses HOSt® (Human Origin Strains), isolated from healthy human sources such as breast milk and the infant and adult gut. They are chosen for their ability to tolerate stomach acid and bile and to attach to the gut lining. More than 1,000 candidate strains were screened, and 8 were selected: 7 are of human origin, plus one hardy, spore-forming strain selected from a non-human source for its resilience.



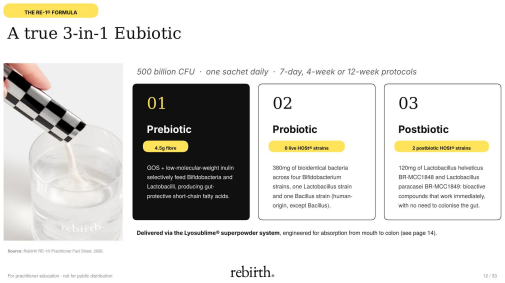
SLIDE 11

The disruption of our natural inheritance

During a vaginal birth and breastfeeding, babies receive bacteria from their mothers that seed a gut led by Bifidobacterium. A caesarean birth interrupts this hand-over: a trial of 153 infants found delayed Bifidobacterium and more unwanted bacteria in C-section babies.

The first 1,000 days of life are when the infant microbiome forms. Human-origin strains come from the same healthy human sources a newborn would normally inherit.

INSIDE RE-1

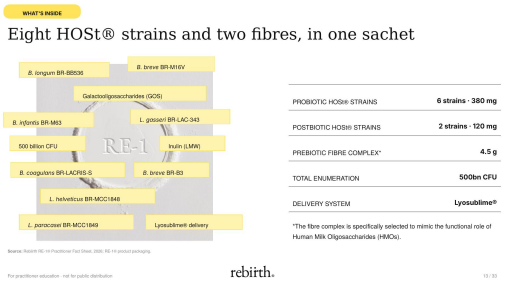


SLIDE 12

A true 3-in-1 Eubiotic

RE-1 combines three types of ingredient in one daily sachet, delivering 500 billion CFU (colony-forming units):

Prebiotic fibres (GOS and inulin) that feed beneficial bacteria. Probiotic strains: 380 mg of live, human-origin bacteria. Postbiotic strains: 120 mg of heat-treated bacteria that act straight away without needing to settle in the gut.

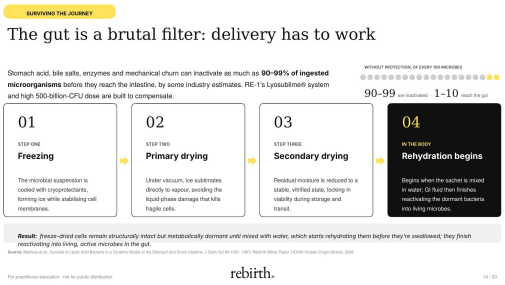


SLIDE 13

Eight HOSt® strains and two fibres, in one sachet

Each sachet contains 6 live probiotic strains (380 mg), 2 postbiotic strains (120 mg) and 4.5 g of prebiotic fibre, for a total of 500 billion CFU.

The live strains include four Bifidobacterium strains, Lactobacillus gasseri and Bacillus coagulans. The fibre blend is chosen to mimic the role of the natural sugars found in human breast milk.

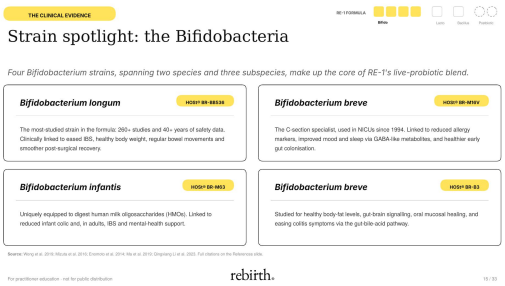


SLIDE 14

The gut is a brutal filter: delivery has to work

Stomach acid, bile and digestive enzymes can destroy as much as 90 to 99% of swallowed microbes before they reach the intestine, by some industry estimates.

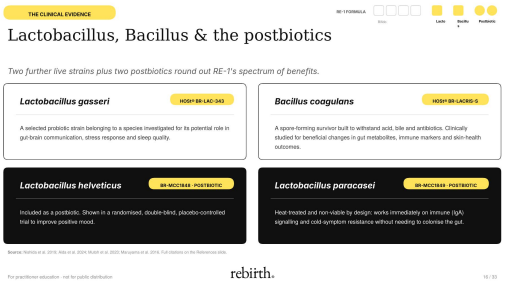
RE-1 uses a freeze-drying process called Lyosublime®. The bacteria are frozen and gently dried so they stay intact but metabolically dormant. Rehydration begins as soon as the sachet is mixed in water, and finishes in the gut, reactivating the bacteria into living microbes. Together with the high 500-billion dose, this is designed to get enough live bacteria through.



SLIDE 15

Strain spotlight: the Bifidobacteria

Four Bifidobacterium strains form the core of RE-1's live blend. B. longum BB536 is the most researched, with more than 260 studies and over 40 years of safety data. B. breve M16V has been used in hospital newborn units since 1994. B. infantis M63 is specially equipped to digest breast-milk sugars. B. breve B3 has been studied for healthy body-fat levels and gut-brain signalling.



SLIDE 16

Lactobacillus, Bacillus & the postbiotics

L. gasseri belongs to a species investigated for its potential role in gut-brain communication, stress response and sleep quality. Bacillus coagulans forms tough spores that survive acid, bile and antibiotics, and has been studied for beneficial changes in gut metabolites, immune markers and skin-health outcomes.

The two postbiotics, L. helveticus and L. paracasei, are heat-treated. L. helveticus has been shown in a randomised, double-blind, placebo-controlled trial to improve positive mood; L. paracasei supports immune (IgA) signalling and cold-symptom resistance. Both act without needing to colonise the gut.



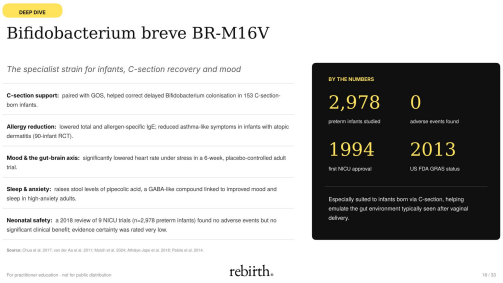
SLIDE 17

Bifidobacterium longum BR-BB536

RE-1's flagship strain. A trial pairing it with L. rhamnosus HN001 eased IBS symptoms in a 25-patient crossover study. Other research links it to more regular bowel movements in adults over 65 and shorter hospital stays after bowel surgery. Combined with M16V, it reduced the risk of eczema in infants whose mothers took it during pregnancy and breastfeeding. It is one of the most widely used probiotic strains worldwide, in dairy and supplement products across Asia, Europe and North America for over two decades.

FOSHU (“Food for Specified Health Uses”) is Japan's government approval for foods that carry a specific health claim, granted only after safety and benefit are reviewed against scientific evidence. BB536 has held it since 1996.

GRAS (“Generally Recognized as Safe”) is a US FDA status meaning qualified experts consider an ingredient safe for its intended use. BB536 has held it for foods since 2009 and for infant formula since 2019.

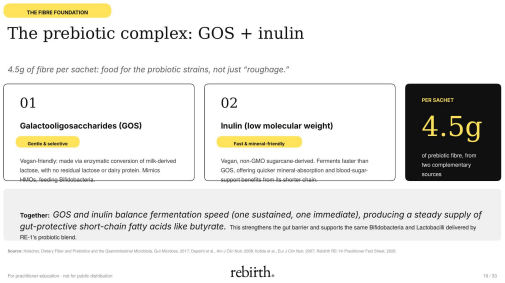


SLIDE 18

Bifidobacterium breve BR-M16V

A specialist strain for infants, recovery after a caesarean birth, and mood. Paired with GOS fibre, it helped correct delayed Bifidobacterium growth in 153 C-section babies, and it lowered allergy markers in infants with eczema.

Its safety record is favourable: a 2018 systematic review of 9 trials involving 2,978 premature babies found no adverse events, though the review also found the RCTs showed no significant benefit on major clinical outcomes and rated the overall evidence certainty very low. It has been used in Australian newborn units since 2012. In adults, it has been studied for stress response, mood and sleep. It has held US GRAS status since 2013.



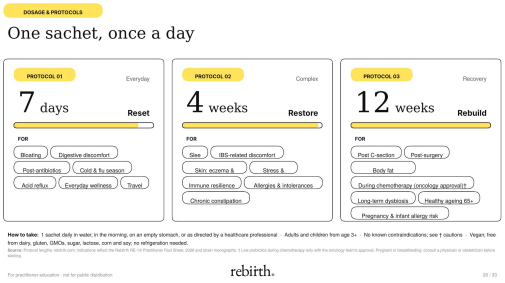
SLIDE 19

The prebiotic complex: GOS + inulin

Each sachet contains 4.5 g of prebiotic fibre: food for the probiotic strains.

GOS (galactooligosaccharides) is made via enzymatic conversion of milk-derived lactose, with no residual lactose or dairy protein in the finished, vegan-friendly product. It selectively feeds Bifidobacteria, mimicking breast-milk sugars, with less gas and bloating than faster-fermenting fibres. Low-molecular-weight, non-GMO sugarcane-derived inulin ferments faster, supporting mineral absorption and blood-sugar balance. Together they provide a steady supply of short-chain fatty acids such as butyrate, which help strengthen the gut lining.

USING RE-1

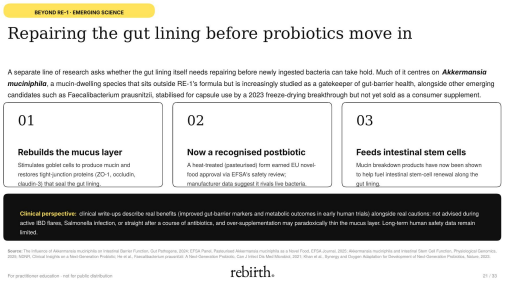


SLIDE 20

One sachet, once a day

RE-1 is taken as one sachet a day, in three protocol lengths: 7 days to reset (for example after antibiotics or travel), 4 weeks to restore (for issues such as sleep, IBS discomfort, skin or stress), and 12 weeks to rebuild (for example after a caesarean birth or surgery, or for healthy ageing).

It is taken in water in the morning, on an empty stomach, or as directed by a healthcare professional. It is suitable from age 3, vegan, and free from dairy, gluten, sugar and soy, with no refrigeration needed.



SLIDE 21

Repairing the gut lining before probiotics move in

Researchers are asking whether the gut lining needs repairing before new bacteria can settle, a question that complements the reinoculation RE-1 provides.

Much of this work focuses on Akkermansia muciniphila, a bacterium that helps rebuild the protective mucus layer and seal the gut lining, alongside other emerging candidates such as Faecalibacterium prausnitzii. A pasteurised form of Akkermansia has earned EU novel-food approval following an EFSA safety review, and manufacturer data suggest it may work as well as live bacteria.

Faecalibacterium prausnitzii, a major butyrate producer, was long too oxygen-sensitive for a shelf-stable capsule until a 2023 breakthrough adapted it for freeze-drying. It is not yet available as a consumer supplement, and like Akkermansia, RE-1 does not currently contain it.



SLIDE 22

Sequencing matters: repair alongside reinoculation

Many integrative practitioners use a five-step “5R” approach to gut health: Remove trigger foods, Replace digestive support, Reinoculate with probiotics and prebiotics (RE-1's role), Repair the gut lining with nutrients such as glutamine and zinc, and Rebalance sleep, stress and lifestyle.

This sequencing is why RE-1 is positioned as the Reinoculate step: pairing it with barrier-repair nutrients and lifestyle changes, rather than relying on probiotics alone, is what the 5R framework recommends.



SLIDE 23

Gut bacteria may help clear ‘forever chemicals’

PFAS, the “forever chemicals” used in non-stick, waterproof and food-packaging coatings, build up in the body for years. A 2025 University of Cambridge study found that some human gut bacteria, mainly Bacteroides species, absorb PFAS inside their cells.

Mice carrying human gut bacteria passed 2 to 8 times more PFAS in their faeces than mice with no gut bacteria. The study looked at gut bacteria in general, and it adds to the case that a diverse, well-supported microbiome matters.

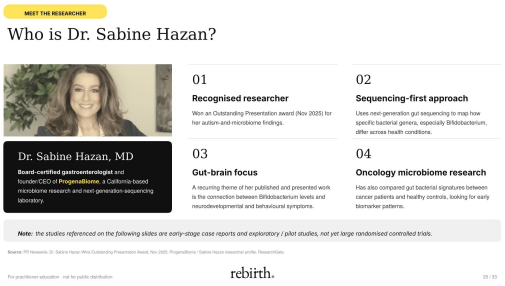
EMERGING RESEARCH ON BIFIDOBACTERIUM



SLIDE 24

Dr. Sabine Hazan & ProgenaBiome

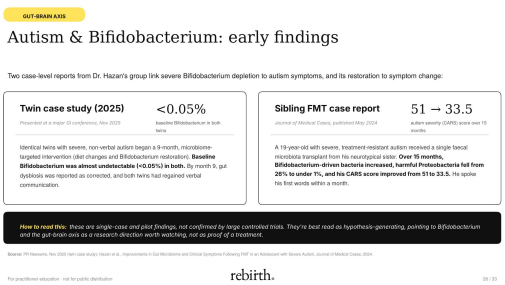
This section looks at emerging research on Bifidobacterium, from the gut-brain connection to cancer.



SLIDE 25

Who is Dr. Sabine Hazan?

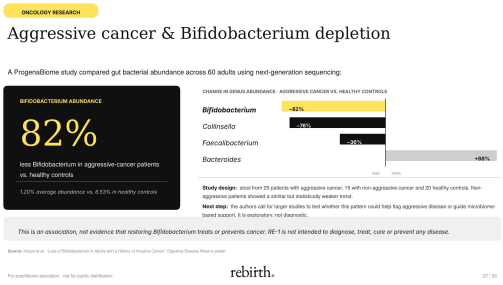
Dr. Sabine Hazan is a US gastroenterologist and founder of ProgenaBiome, a California laboratory that uses gene sequencing to study the gut microbiome. Her work compares gut bacteria, especially Bifidobacterium, across different health conditions.



SLIDE 26

Autism & Bifidobacterium: early findings

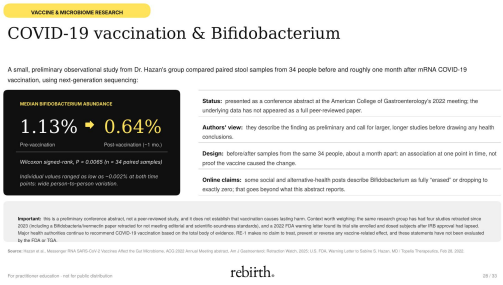
Two case reports from Dr. Hazan's group link very low Bifidobacterium to autism symptoms. In one, identical twins with severe, non-verbal autism regained speech after a 9-month programme to restore their gut bacteria. In another, a young man's autism severity score improved after a faecal transplant from his sister.



SLIDE 27

Aggressive cancer & Bifidobacterium depletion

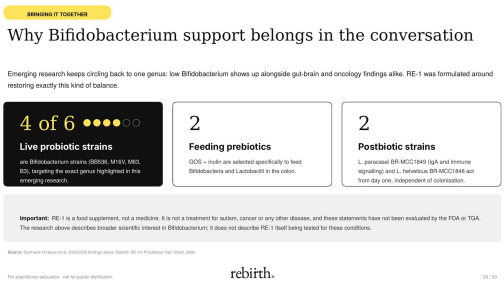
A study of 60 adults found 82% less Bifidobacterium in people with aggressive cancer than in healthy people. The authors are calling for larger studies to explore this link.



SLIDE 28

COVID-19 vaccination & Bifidobacterium

A small study of 34 people reported lower Bifidobacterium about a month after mRNA COVID-19 vaccination. The findings were presented as a conference abstract in 2022.



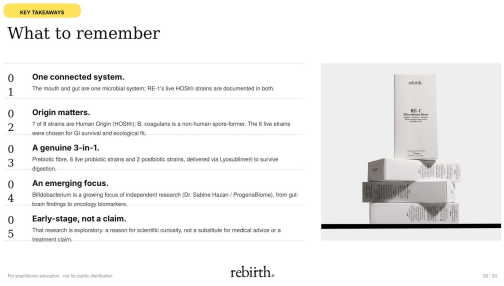
SLIDE 29

Why Bifidobacterium support belongs in the conversation

A common thread in this emerging research is low Bifidobacterium. RE-1 is built around supporting this group: 4 of its 6 live strains are Bifidobacterium, its two prebiotic fibres feed them, and its two postbiotics act from day one.

Please note: RE-1 is a food supplement and is not a treatment for autism, cancer or any other disease.

CLOSING

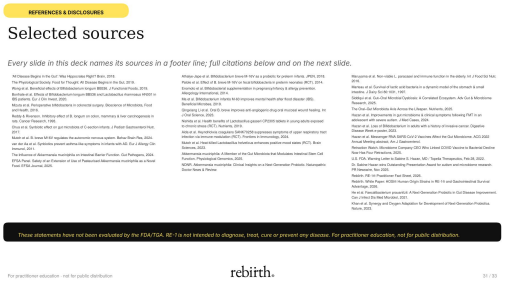


SLIDE 30

What to remember

The mouth and gut are one connected microbial system. Where a probiotic strain comes from matters: 7 of RE-1's 8 strains are of human origin, with Bacillus coagulans added as a spore-forming strain selected from a non-human source for its resilience. RE-1 combines prebiotic, probiotic and postbiotic ingredients, designed to survive digestion.

With Bifidobacterium at the centre of so much emerging research, RE-1 gives practitioners a well-researched, human-origin way to support it.



SLIDE 31

Selected sources

Every slide in the presentation lists its sources, and the full reference list appears across this slide and the next. It includes peer-reviewed studies on each strain, Australian and global health statistics, and the research discussed in the emerging-science sections.

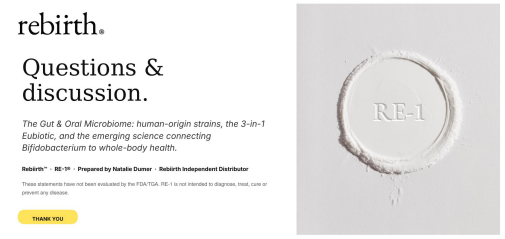


SLIDE 32

Selected sources (continued)

A second sources slide continues the reference list where the first leaves off, covering the population-data, oral-health, prebiotic and PFAS references that didn't fit on the first slide.

It names the specific source behind any statistic used earlier in the briefing, from the Australia-vs-world figures to the PFAS study.



SLIDE 33

Questions & discussion

Thank you for attending. Protocol details and product information are available on request, so please get in touch to discuss how RE-1 can fit into your practice.