

Commentary

Oral microbiome a key player in health

Fabio Leite

Imagine a bustling city with millions of residents, each playing a unique role in the maintenance of collective harmony.

Now think of your mouth as such a city, with the oral microbiome making up the citizenry.

Composed of hundreds of bacteria, viruses, fungi and other species, the oral microbiome is not just a passive community, but also an active participant in your health: It influences everything from your dental health to your immune system – it even plays a role in your blood pressure.

THE UNSUNG HERO OF ORAL DEFENCE

The oral microbiome is one of the body's first lines of defence.

A balanced microbiome prevents harmful pathogens from gaining a foothold by producing antimicrobial compounds and outcompeting invaders for resources.

This protective barrier shields the teeth and gums, reducing the risk of diseases such as cavities and periodontitis.

But its impact does not stop there.

Beneficial oral bacteria play an essential role in training our immune system to distinguish friend from foe. This helps prevent overreactions such as allergies, and underreactions such as chronic infections.

ORAL HEALTH AS A WINDOW TO SYSTEMIC HEALTH AND WELL-BEING

Emerging research highlights a profound connection between oral health and overall health.

For instance, the oral

microbiome's role in nitrate metabolism – converting dietary nitrates from vegetables and processed meats into nitric oxide – is crucial for cardiovascular health.

Nitric oxide helps regulate blood pressure, enhances exercise performance, and protects blood vessels from inflammation and clotting.

However, modern lifestyles often disrupt this delicate balance.

Diets high in sugar, as well as overusing antiseptic mouthwash, can indiscriminately kill beneficial microbes, tipping the scales towards dysbiosis, or microbial imbalance.

Dysbiosis doesn't just lead to oral diseases; it is also implicated in systemic issues.

RESTORING BALANCE: A PATH BACK TO HEALTH

So, how can we nurture this

intricate ecosystem?

The answer lies in a holistic approach that respects the microbiome's complexity:

Microbiome-friendly hygiene:

Swap harsh antiseptic mouthwashes for gentler, targeted products that support microbial diversity while combating pathogens as prescribed by dentists. Even different toothpastes can contain different products, so you should discuss with your dentist.

Dietary choices: Consuming nitrate-rich vegetables such as spinach and arugula feeds beneficial bacteria that produce nitric oxide, supporting cardiovascular and oral health. Reducing your sugar intake can also limit the growth of harmful bacteria.

Lifestyle factors: Stress, poor sleep and sedentary habits can

weaken the immune system, indirectly affecting the oral microbiome. Addressing these factors promotes a supportive environment for microbial balance.

WHY IT MATTERS

The oral microbiome is not just about healthy teeth and gums; it's a critical player in your body's ecosystem.

Understanding and caring for it could hold the key to preventing a host of chronic conditions.

By maintaining its equilibrium, you're not just investing in your smile, you are also protecting your overall well-being. In a world increasingly aware of the importance of microbiomes, from the gut to the skin, it is time to bring the oral microbiome into the spotlight. After all, every good story starts with a strong foundation, and for health, that foundation begins in the mouth.

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