

SURAT TUGAS

Nomor: 272-R/UNTAR/Pengabdian/VIII/2024

Rektor Universitas Tarumanagara, dengan ini menugaskan kepada saudara:

1. WIYARNI, dr., Sp.A., IBCLC.
2. ERNAWATI, dr., MS, SE, FISCM, FISPH

Untuk melaksanakan kegiatan pengabdian kepada masyarakat dengan data sebagai berikut:

Judul	:	Pengaruh Kesehatan Mulut dan Kesehatan Respirasi
Mitra	:	Fakultas Pasca Sarjana Universitas Airlangga
Periode	:	26 Juni 2024
URL Repository	:	

Demikian Surat Tugas ini dibuat, untuk dilaksanakan dengan sebaik-baiknya dan melaporkan hasil penugasan tersebut kepada Rektor Universitas Tarumanagara

28 Agustus 2024

Rektor



Prof. Dr. Ir. AGUSTINUS PURNA IRAWAN

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- Kedokteran
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- Teknologi Informasi
- Seni Rupa dan Desain
- Ilmu Komunikasi
- Program Pascasarjana



UNTAR
Universitas Tarumanagara



UNTAR untuk INDONESIA

26 Juni 2024

Nomor : 449 - AK/FK UNTAR/EX/VI/2024
Lamp. : -
Perihal : Mohon Kesediaan Menjadi Pembicara

Kepada Yth.
Dr. dr. Wiyarni Pambudi, Sp.A., IBCLC
Bagian Ilmu Kesehatan Anak
Fakultas Kedokteran Universitas Tarumanagara
Jakarta.

Sehubungan dengan akan diselenggarakannya acara Pendidikan Pengembangan Kedokteran Berkelanjutan (P2KB/CME) Fakultas Kedokteran Universitas Tarumanagara. Terkait hal tersebut, kami mohon kesediaan Dr. dr. Wiyarni Pambudi, Sp.A., IBCLC, untuk menjadi pembicara pada kegiatan tersebut, pada:

Hari/Tanggal : Sabtu, 29 Juni 2024
Waktu : pk 14.30 – 16.00 WIB
Tempat : Zoom meeting
Topik : *"Pengaruh Kesehatan Gigi & Mulut terhadap Gangguan Respiratorik pada Anak"*

Atas kesediaannya kami ucapkan terima kasih.

DEKAN,



Dr. dr. Noer Saelan Tadjudin, SpKJ.

Pengaruh Kesehatan Mulut dan Gangguan Respirasi

Sabtu, 29 Juni 2024, 14:30 – 16:00



Pengaruh Kesehatan Gigi & Mulut terhadap Gangguan Respiratorik pada Anak

Dr. dr. Wiyarni Pambudi, Sp.A, IBCLC
Fakultas Kedokteran Universitas Tarumanagara



Pengaruh Kesehatan Rongga Mulut dan Gangguan Sistem Stomatognatik pada Sinusitis, Asma alergi dan GERD

Dr. Haryono Utomo, drg., SpOrt
Fakultas Pasca Sarjana Universitas Airlangga



dr. Ernawati, MS, SE, FISCN, FISPH, Sp.DLP
Fakultas Kedokteran Universitas Tarumanagara

Moderator



zoom Meeting

Terbatas

(khusus mahasiswa dan dosen FK untar)

► Dr. dr. Wiyarni Pambudi, Sp.A, IBCLC



▣ Riwayat Pendidikan

- Physician, Universitas Airlangga (1997)
- Pediatrician, Universitas Airlangga (2007)
- Doctoral, Universitas Indonesia (2022)
- International Board-Certified Lactation Consultant (2011, recertified 2016 & 2021)
- Course Director & Facilitator of Breastfeeding Counseling + BFHI Training (2011)

▣ Aktivitas & Pekerjaan

- Lecturer at Faculty of Medicine, Universitas Tarumanagara
- Pediatrician at BJ Medical Center, Central Park Jakarta
- Member of Breastfeeding Task Force Indonesian Pediatric Society (IPS)
- Member of Nutrition and Metabolic Diseases Working Group IPS
- Member of WHO Guideline Development Group for Donor Human Milk Banking
- Member of Academy Breastfeeding Medicine (ABM)
- Member of International Lactation Consultant Association (ILCA)

Oral-Lung Axis
Pengaruh Kesehatan Gigi & Mulut terhadap Gangguan Respiratorik pada Anak



Dr. dr. Wiyarni Pambudi, Sp.A, IBCLC
Departemen Ilmu Kesehatan Anak
Fakultas Kedokteran Universitas Tarumanagara



1 Oral Microbiome

2 Oral-Lung-Gut-Brain Axis

3 Oral Care Regimen

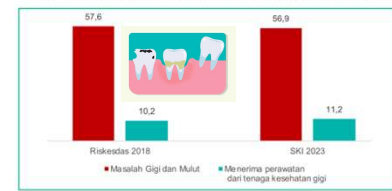
► Laporan hasil SKI 2023

PROBLEMATIKA KESEHATAN GIGI DAN MULUT DI INDONESIA

TEMUAN UTAMA

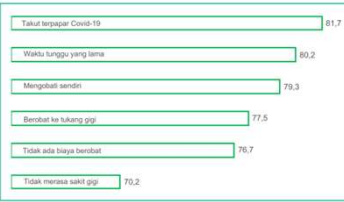
Hasil dari SKI 2023 menunjukkan bahwa masalah kesehatan gigi dan mulut di Indonesia masih belum sepenuhnya teratasi. Terdapat peningkatan masalah kesehatan gigi dan mulut, terutama pada kelompok usia 5-14 tahun. Hal ini disebabkan oleh berbagai faktor, seperti kurangnya pengetahuan masyarakat tentang kesehatan gigi dan mulut, kurangnya akses layanan kesehatan gigi dan mulut, serta kurangnya dukungan kebijakan pemerintah.

GAMBAR 7.3. PROPORSI MASYARAKAT YANG MENGELUH MEMPUYAI MASALAH GIGI & MULUT DIBANDINGKAN DENGAN YANG MENERIMA PERAWATAN DARI TENAGA KESEHATAN GIGI



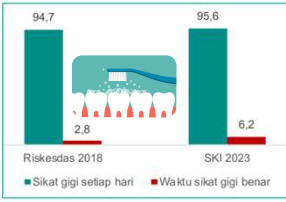
Tahun	Masalah Gigi dan Mulut	Menerima perawatan dari tenaga kesehatan gigi
Riskesdas 2018	57.6	10.2
SKI 2023	56.9	11.2

GAMBAR 7.4. ALASAN MASYARAKAT TIDAK MENCARI PENGOBATAN



Alasan	Persentase
Takut terpapar Covid-19	61.7
Waktu tunggu yang lama	60.2
Mengobati sendiri	79.3
Berobat ke tukang gigi	77.5
Tidak ada biaya berobat	76.7
Tidak merasa sakit gigi	70.2

GAMBAR 7.5. PERILAKU MENJAGA KEBERSIHAN GIGI DAN WAKTU SIKAT GIGI SECARA BENAR



Tahun	Sikat gigi setiap hari	Waktu sikat gigi benar
Riskesdas 2018	94.7	2.8
SKI 2023	95.6	6.2

GAMBAR 7.2. PERMASALAHAN GIGI DAN MULUT BERDASARKAN KELOMPOK UMUR



Umur	Riskesdas 2018	SKI 2023
3-4 Tahun	4.2	4.9
5 Tahun	6.1	6.7
12 Tahun	1.9	1.3
15 Tahun	2.4	2.0
35-44 Tahun	6.9	5.7
45-54 Tahun	9.2	7.7
55-64 Tahun	12.8	10.3
65+ Tahun	15.8	13.0
Nasional	7.1	6.4

Indeks DMF-T Atau dmf-t menurut WHO
0.0 — 1.1 Sangat Rendah
1.2 — 2.6 Rendah
2.7 — 4.4 Sedang
4.5 — 6.5 Tinggi
≥ 6.6 Sangat Tinggi

Indeks DMF-T adalah indeks yang menggambarkan tingkat keparahan kerusakan gigi.
DMF-T = Jumlah rata-rata Decay + Missing + Filling dibagi jumlah orang yang diperiksa.

► Kesehatan Gigi dan Mulut pada Anak

- **Gingivitis** terjadi pada >50% balita ⇒ meningkat hampir 100% saat pubertas (AAPD)
- **Karies gigi** dan komplikasinya terjadi pada 42% anak usia 2-11 tahun
- Kesehatan gigi yang buruk ⇒ memengaruhi perkembangan dan pertumbuhan anak ≈ kebiasaan makan, pemapasan yang tepat, berbicara, bersosialisasi

Gangguan perkembangan kognitif

Kondisi medis kronis

Malnutrisi dan kondisi lain yang dapat dicegah

Konsekuensi psikososial

► Oral health

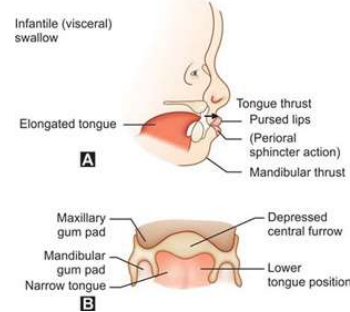
Oral health is multifaceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow, and convey a range of emotions through facial expressions with confidence and without pain, discomfort, and disease of the craniofacial complex. Further attributes of oral health:

- It is a fundamental component of health and physical and mental well-being. It exists along a continuum influenced by the values and attitudes of people and communities.
- It reflects the physiological, social, and psychological attributes that are essential to the quality of life.
- It is influenced by the person's changing experiences, perceptions, expectations, and ability to adapt to circumstances.

Source: FDI World Dental Federation, 2016.

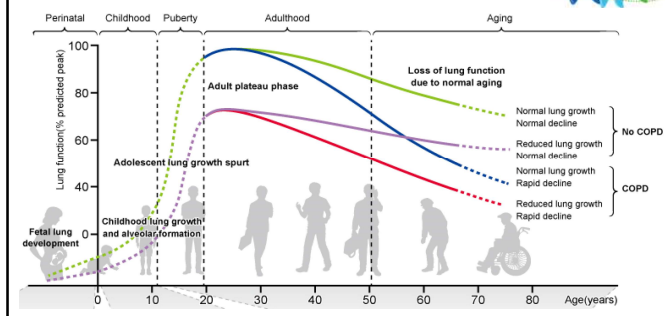


► Perkembangan oromotorik

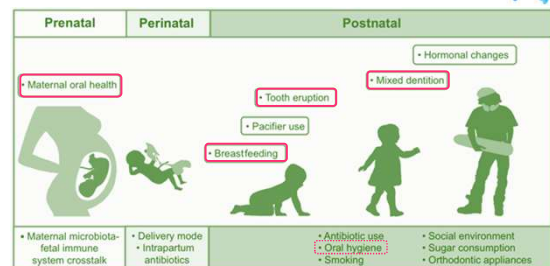


Perkembangan area oromotor, otot daerah sekitar mulut, pipi, rahang dan pencernaan ⇒ berpengaruh pada perkembangan berbicara dan keterampilan makan

► Age-association lung function



► Microbiome ≈ journey that shape our life

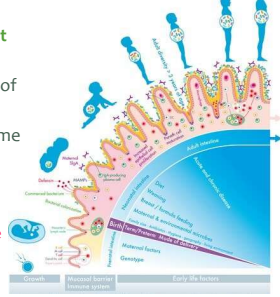


Factors shaping the oral microbiota from fetus through childhood and toward adolescence
Marjee Kaa et al (2021)

► Oral microbiome

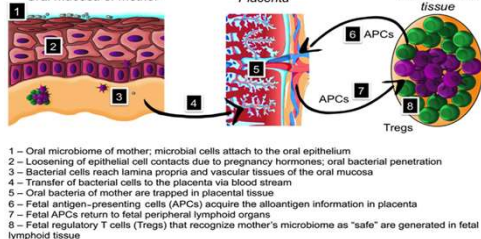
- After the gut, **mouth has the second largest and most diverse microbiota**
- Different bacteria populate different areas of the oral cavity
- Every individual has a unique oral microbiome
- Mouth microbes tend to work in teams

Launched in 2010, **The Human Oral Microbiome Database** offers a repository of oral bacterial genome sequences, featuring 772 prokaryotic species

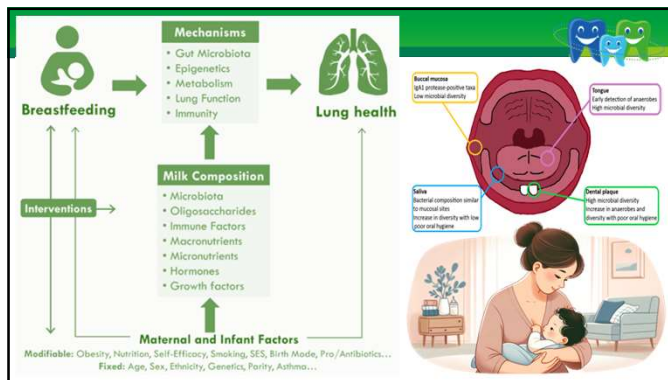


► Microbiom tolerance during pregnancy & delivery

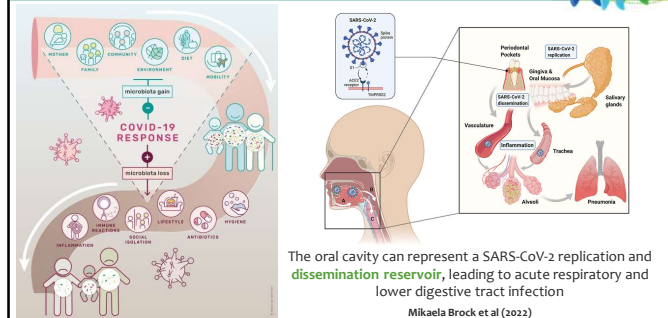
Hypothesis on the role of the placental microbiome in the development of **fetal tolerance** toward maternal (oral) microbiome
Zaura et al (2014), Marijke Kaan et al (2021)



Vaginal delivery	
Mother:	Neonate:
Oxytocin	Cortisol
Dopamine	Noradrenaline
Prolactin	Adrenaline
	Glucose
	NEFA
	Renin
	Angiotensin II
	Aldosterone
	Insulin & activity of immune cells
Cesarean section delivery	
- Impaired lung function - Impaired thermogenic response - Lower milk intake (days 2-5) - Reduced blood pressure (days 1-3) - Reduced hematocrit (day 1) - Reduced excretion (days 1-2)	
Mother:	Neonate:
Intake	TSH
partum	Thyroxine
antibiotics	Thyroid hormone



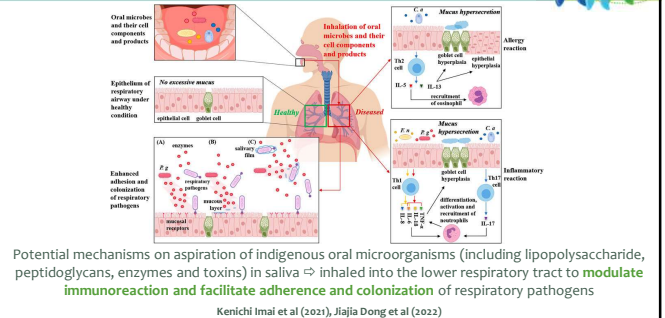
► Periodontal-COVID-19 connections



The oral cavity can represent a SARS-CoV-2 replication and dissemination reservoir, leading to acute respiratory and lower digestive tract infection

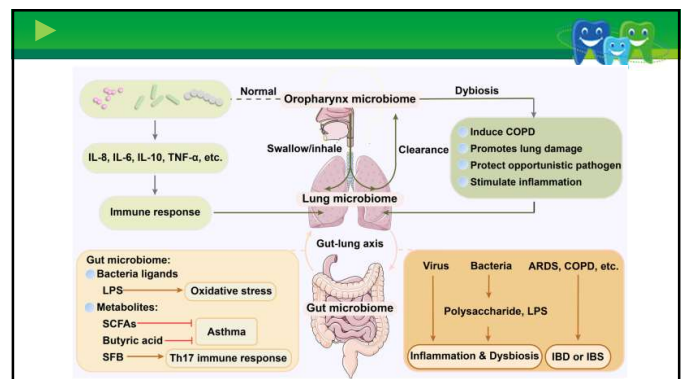
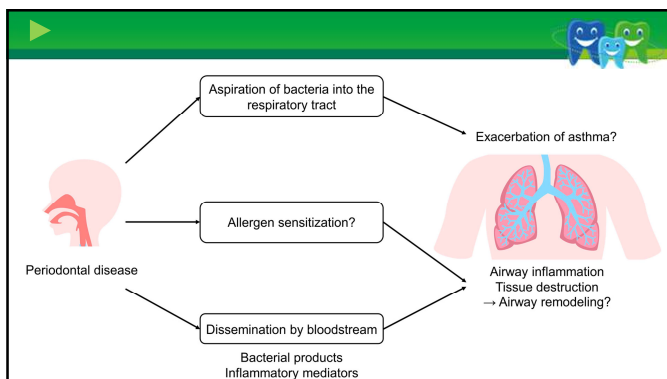
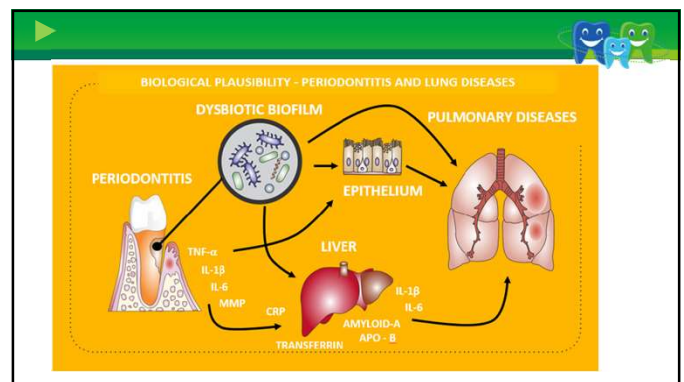
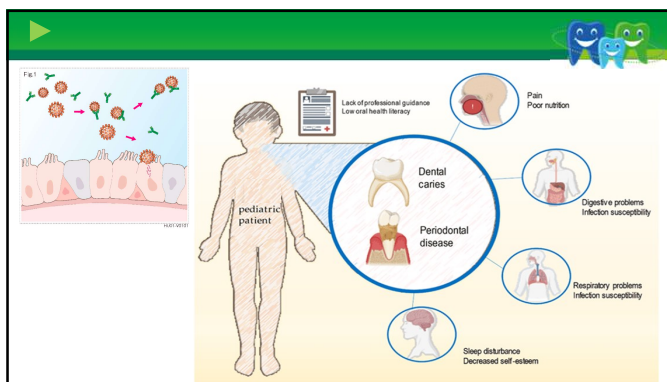
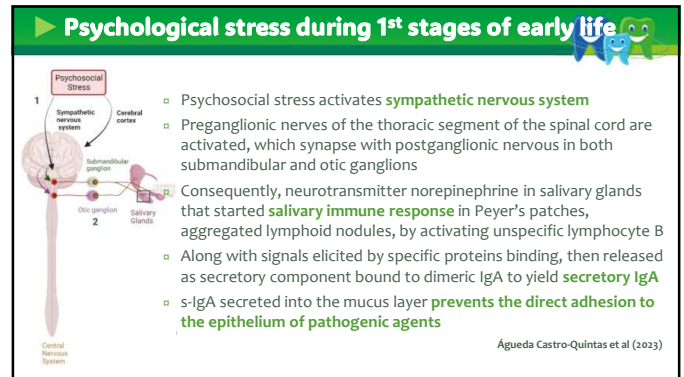
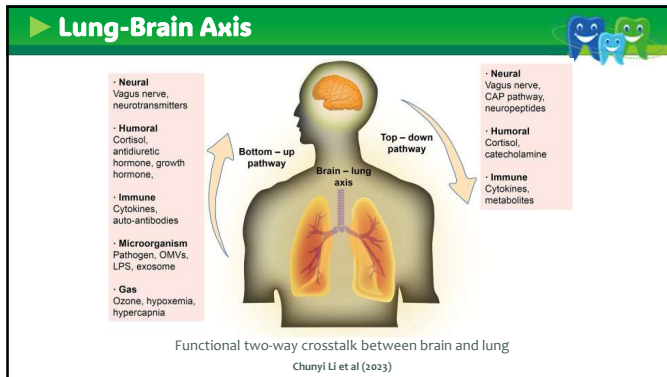
Mikaela Brock et al (2022)

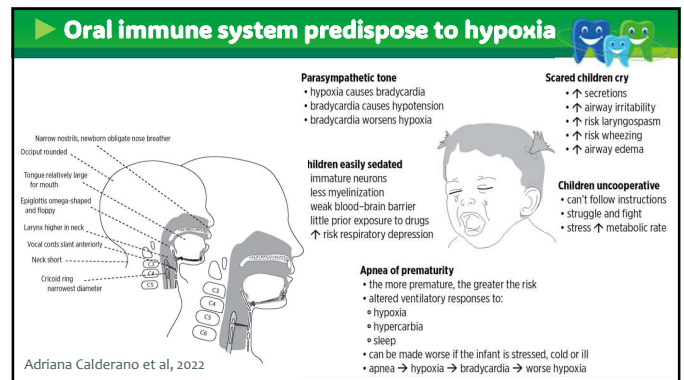
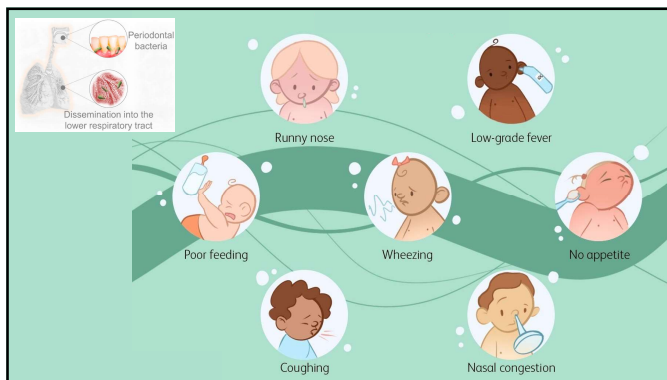
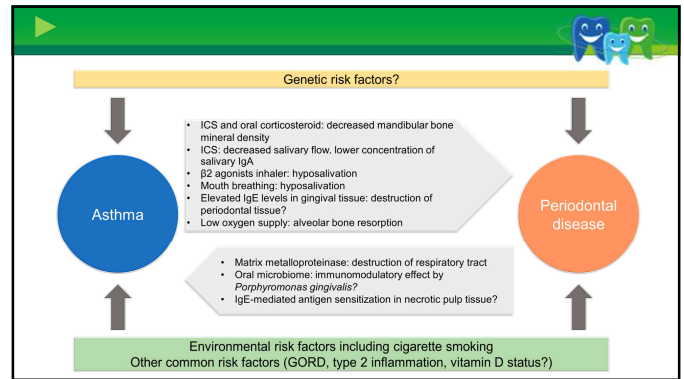
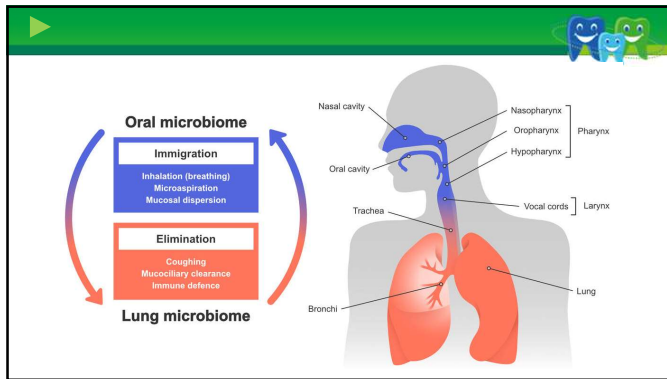
► Oral microbiome & respiratory diseases



Potential mechanisms of indigenous oral microorganisms (including lipopolysaccharide, peptidoglycans, enzymes and toxins) in saliva ⇒ inhaled into the lower respiratory tract to **modulate immunoreaction and facilitate adherence and colonization** of respiratory pathogens

Kenichi Imai et al (2021), Jialia Dong et al (2022)





► Growth failure

Article published online: 2021-10-01

32 Review Article

Does Growth Stunting Correlate with Oral Health in Children?: A Systematic Review

Zayyana Jasmine Sadida¹ Ratna Indriyanti² Arlette Suzy Setiawan²

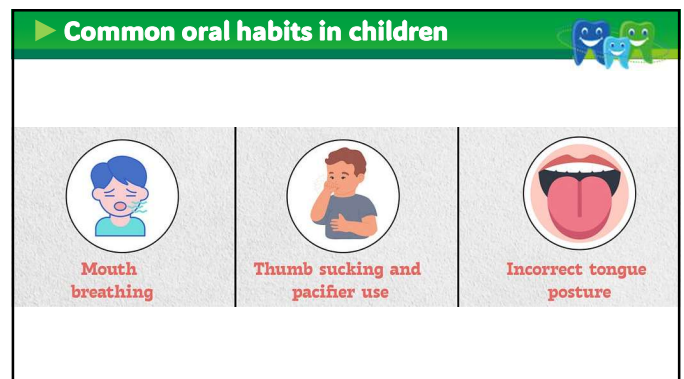
¹Faculty of Dentistry, Universitas Padjadjaran, Jl. Sekeloa Selatan 1, Bandung, Indonesia

²Department of Pediatric Dentistry, Faculty of Dentistry, Universitas Padjadjaran, Jl. Sekeloa Selatan 1, Bandung, Indonesia

Address for correspondence Arlette Suzy Setiawan, Department of Pediatric Dentistry, Faculty of Dentistry, Universitas Padjadjaran, Jl. Sekeloa Selatan 1, Bandung 40132, Indonesia (e-mail: arlette.suspa@fkg.unpad.ac.id).

Eur J Dent 2022;16:32-40.

A high plaque index and a decrease in saliva composition in stunting children ⇒ showed a relationship between **growth stunting** and **salivary flow rate** and the incidence of **dental caries**



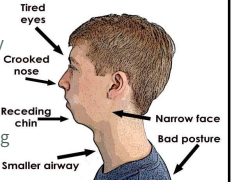
► Mouth breathing due to nasal obstructions

- **Anatomic deformities**
 - ① Deviated septum
 - ② Turbinate hypertrophy
 - ③ Concha bullosa
- **Atopy**
- **Nasal Mass or Polyp**
- **Enlarged Adenoids**
- **Vasomotor Rhinitis**



► Common issues caused by mouth breathing

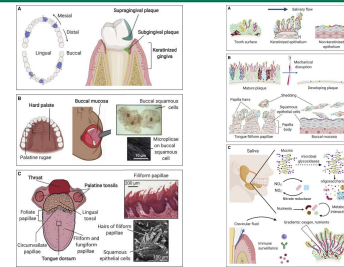
- **Improper Facial Development**
- **Bad Posture** ⇒ misalignment of neck—spine—body and muscle tension
- **Sleep Disordered Breathing** ⇒ restless sleep, restless leg syndrome, snoring, trouble falling or staying asleep, frequent night wakings, sleepwalking
- **Obstructive Sleep Apnea**
- **Teeth Grinding And Clenching**
- **ADHD and ADD** ≈ about 40% of kids who have **sleep disordered breathing issues** also develop ADHD, ADD, or a learning disability



► Nose breathing is better than mouth breathing

- Keeps child's face in a **natural position** ⇒ **optimal for proper development** of face structurally, functionally, and aesthetically
- Breathing through the nose means your child gets the **nitric acid** ≈ chemical that only produced in the nasal passage
- Nasal breathing takes in **more oxygen** vs mouth breathing ⇒ improves sleeping and brain activity ≈ especially important for rapidly-developing brains
- Nose breathing promotes **deeper breathing** ⇒ child who mouth breath are more prone to shallow breathing and **respiratory problems**
- Since 50% of what's in the mouth goes to the gut, mouth breathing can lead to **digestive issues**

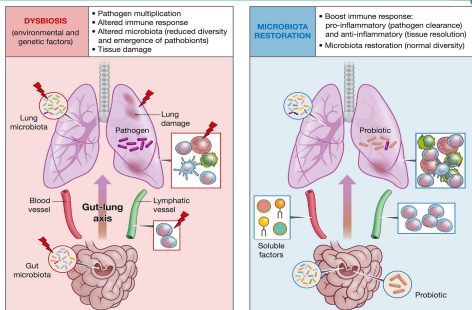
► Oral habitat of mouth-breathing child

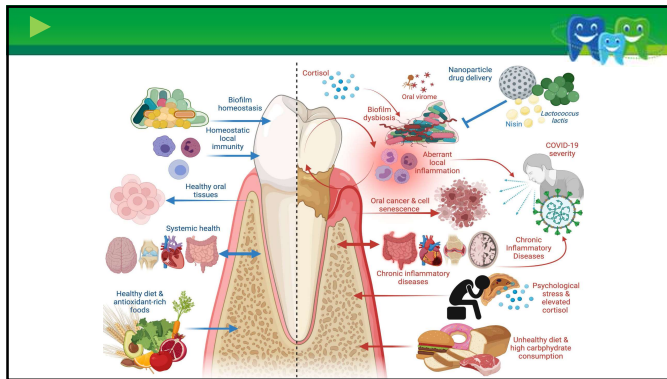


Alterations in oral–nasal–pharyngeal microbiota and salivary proteins in mouth-breathing children
⇒ micron-scale habitat and niche oral microbiome

Jessica L Mark Weich et al (2020), Cancan Fan et al (2021)

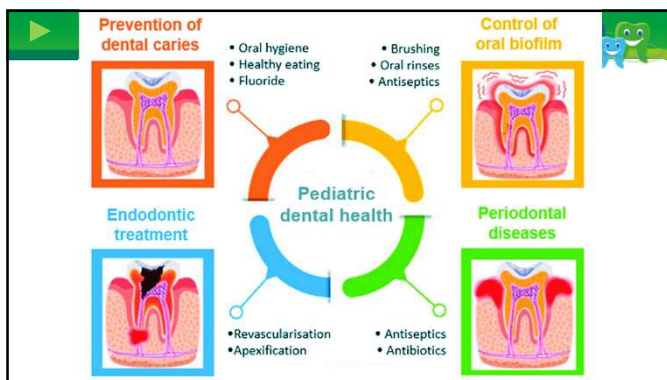
► Possible microbiome restoration





► Oral care regimen

- **Breastfeeding** provides the best nutrition for babies
- From 6 months of age infants should be introduced to **drinking from a free-flow cup**
- From age 1 year feeding from a **bottle should be discouraged**
- Sugar should not be added to weaning foods or drinks
- Limit intake of **free sugar** and or any medication
- Eat a healthy diet high in of fruits and vegetables ⇒ **more fiber** means more saliva
- **Rinse mouth** with water after every meal



► Oral care regimen

- **As soon as teeth erupt** in the mouth, brush them twice daily with fluoridated toothpaste – a flat smear of toothpaste up to 3 years of age, a pea-sized amount of toothpaste thereafter
- From 3 years onwards, at least **twice a day**, **brush** with a soft-bristle brush and toothpaste for a full two minutes ⇒ make sure to clean along gumlines and tongue ≈ to maintain fluoride concentration levels, spit out after brushing, do not rinse mouth
- Parents or carers should brush or **supervise toothbrushing** until the age of 7 years
- **Floss regularly** to remove plaque and leftover food
- On a regular basis, **visit the dentist** for a checkup and cleaning

► Oral care for asthmatic child

Asthma & Your Mouth

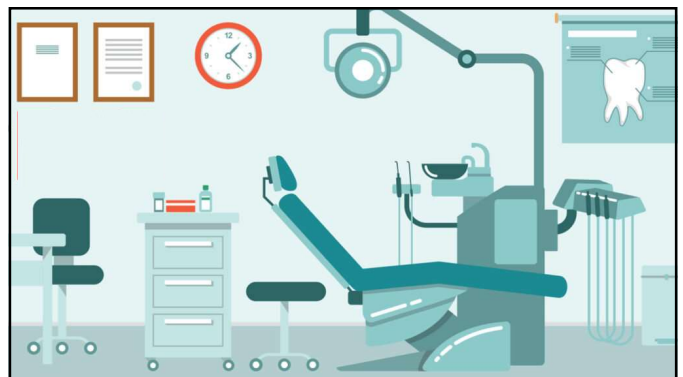
Some asthma and acid reflux medicines, and breathing through your mouth, can make your mouth dry.

dry mouth can cause

- Cavities
- Mouth sores
- Bad breath
- Gum disease

How you can help your mouth

- See your dentist every 6 months and tell them you have asthma. Make sure you keep your rescue inhaler with you, even at the dentist.
- Brush with a fluoride toothpaste and floss every day.
- Eat healthy foods and reduce stress in your life.
- See your doctor for help with your asthma, allergies and acid reflux.
- Rinse your mouth with water and spit it out after using a steroid inhaler. Drink lots of water.



► Take home messages ☺



- Dental caries, periodontitis and gingivitis, dental malocclusion, dental trauma, and some oral soft tissue lesions are among the most common oral disorders in children ⇒ if these problems remain untreated, they can have long-term effects on the orofacial system, chewing and speaking abilities, oral health-related quality of life, and overall health status ⇒ early diagnosis and management of these conditions necessitate being aware of the clinical manifestations of each disease at every age.
- Implementing preventive intervention, accurate diagnosis, proper treatment, and performing regular follow-ups are among the key factors for eliminating harmful long-life consequences of poor oral and dental health status in children and adolescents.

