UW Osher Center for Integrative Health and the Cha Chi Ming Endowed Fund Present: Seminars in Integrative Health and Medicine

Digestive Health Series
Spring 2025

The How of Food

Part 1: "How to Eat"

February 5, 2025
12:15 - 1:30 PM
Zoom Seminar

UW Osher Center for Integrative Health

As a member of the Osher Centers for Integrative Health, we ensure expert care by sharing knowledge and resources through the Osher Collaborative. We offer evidence-informed therapies like nutrition, mind-body practices, stress reduction, supplements, and lifestyle adjustments.

Our core clinical services include Integrative Health Consults, Acupuncture, Naturopathic Medicine, and Medical Massage Therapy.

Each individual's well-being is our priority.

The Osher Collaborative for Integrative Health comprises an international group of eleven academic health Centers funded by The Bernard Osher Foundation to study, teach, and practice integrative healthcare.

OSHER COLLABORATIVE
FOR INTEGRATIVE MEDICINE

Northwestern University

HARVARD MEDICAL SCHOOL AND BRIGHAM AND WOMEN'S HOSPITAL

UCSF
University of California San Francisco

Karolinska Institutet

University of CINCINNATI

WISCONSIN
UNIVERSITY OF WISCONSIN-MADISON

UNIVERSITY OF MIAMI

THE UNIVERSITY OF UTAH

UNIVERSITY of WASHINGTON

VANDERBILT UNIVERSITY

THE UNIVERSITY OF VERMONT
OSHER CENTER FOR INTEGRATIVE HEALTH

Cha Chi Ming Endowed Lectureship in East-West Medicine

We extend our deepest gratitude to the Sunlin and Priscilla Chou Foundation. This generous fund is dedicated to promoting the understanding and translation of research findings in integrative, East-West, and other complementary and alternative medicine disciplines, such as Traditional Chinese Medicine.

This endowment represents a personally significant component of Mr. Cha Chi Ming's legacy, an industrialist and philanthropist who was deeply invested in the integration of Traditional Chinese Medicine with Western biomedical science. His family's support continues to be instrumental in advancing our educational initiatives.

Debra Bell, MD

Debra G. Bell, MD is Co-Director of Education at the UW Osher Center for Integrative Health and assistant clinical professor at the University of Washington Department of Family Medicine. She has been a pioneer in the field of integrative medicine, practicing and studying it for over 40 years. Her clinical practice involves both integrative primary care as well as consultative integrative medicine.

Jason Harper, MD

Jason Harper, MD, UW department of Gastroenterology, Director of the Harborview Medical Center Inflammatory Bowel Disease program. In addition to completing his internal medicine and gastroenterology fellowships, he has completed a fellowship in integrative medicine and has specialized training in the use of dietary therapies in the management of inflammatory bowel disease.

The "How" of Food: How We Eat Influences Digestion

Jason Harper, MD

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

Why Has Feeding Myself Become Such a Chore Lately?

https://www.vice.com/en/article/how-the-pandemic-has-changed-our-relationship-to-food-and-cooking/

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

Food Culture

Food does not only have nutritional value, it also has cultural value. Culture largely determines the food we eat, while the foods available in the environment are themselves an important building block of culture and tradition of the people. Food culture involves the ways in which humans use food, including how food is obtained and stored, how it is prepared, how it is served and to whom, how it is consumed, and how people celebrate special occasions with special foods. Food culture arises out of the place of a people's origin and whether they still live there or not. It is also shaped by several other factors: resources (climate, land, soil, water, and fuel); belief and information (religion, education and literacy, communication); ethnicity (indigenous or immigrant); technology (hunting, gathering, agricultural, horticultural, aquacultural, fishing, food processing and storage, transport, cooking); colonization; and by health status and health care (Wahlqvist & Lee, 2007).

Samuel F, Makhani N. Community Nutrition for Developing Countries, 2016

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

How Should We Eat?

- Eating with all our senses
  - Sight
  - Smell/taste
  - Touch (texture/temperature)
- Introduction to slow eating (set/setting)

Optimizing Digestion: Sensory Integration → Sight

- Color
- Proximity
- Variety/diversity of appearance
- Shape
- Relative size
- Spatial relationships (presences/voids)
- Ambient environment (lighting/contrast)

Ancestral Understanding of Food/Digestion → "How" **and** "What"

Rogaaha sarve api mande agnau sutaraam udaraani cha
Ajeernaat malinaihi cha annaihi jaayante mala sanchayaat (Ref – Ashtanga Hridaya Nidanam 12)

3 One should always eat while seated or reclining on his left side. He should not walk about, ride, exert himself, subject his body to startling influence, nor take a stroll until the food has been digested in his intestines. Anyone who takes a stroll or exerts himself after eating brings serious and harmful illnesses upon himself.

ג לְעוֹלָם יְשֵׁיאכַל אָדָם יֵשֵׁב בִּמְקוֹמוֹ אוֹ יִטֶּה עַל שְׂמאל. וְלֹא יְהַלֵּךְ וְלֹא יִרְכַּב וְלֹא יִגַּע וְלֹא יְזַעְזֵעַ גּוּפוֹ וְלֹא יְטַיֵּל עַד שֶׁיִּתְעַכֵּל הַמָּזוֹן שֶׁבְּמֵעָיו. וְכָל הַמְטַיֵּל אַחַר אֲכִילָתוֹ אוֹ שֶׁיָּגֵעַ הֲרֵי זֶה מֵבִיא עַל עַצְמוֹ חֳלָאִים רָעִים וְקָשִׁים:

"We should look first for someone to eat and drink with before looking for something to eat and drink. Dining alone is leading the life of a lion or wolf."

- Epicurus, Greek philosopher, 3rd century B.C.

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

Taste: The Misunderstood Sense

- Taste receptors are **widespread**
- "Classic" paradigm of taste
  - Sweet
  - Salty
  - Sour
  - Bitter
  - Umami
- Carbonation is sensed through sour receptors
- "Fatty" taste receptors have been proposed
- Spicy/cool "tastes" unique

Key to Optimized Digestion: Balance Tastes!

- Bitter tastes too often neglected
- Salt your own food → processed food contains **shocking** amounts of sodium but taste is hidden
- Acid/sour to cut through need to over-salt or over-sweeten
- Combination of elemental flavors seems to synergize digestive function

Smell and Digestion

- Olfaction is **the strongest driver** of central control of eating behavior and initiation of digestive processes
- If pleasure/emotion centers are not triggered by positive odors → balanced by other reward mechanisms (e.g. sweetness)
  - Acuity of smell affected by age, medications and medical conditions (e.g Parkinson's, post-COVID, etc.)

Food Texture and Digestion

- Meal texture ("mouth feel") affects chewing time and speed of eating considerably
- Texture influences palatability
  - Hardness → slows down eating but aversive if too much (i.e overcooked meat)
  - Softness → faster eating but aversive in some situations (slimy, gelatinous food)

Food Temperature and Digestion

- Stomach temperature fluctuation affects emptying/transit time significantly
- **Hot non-caloric liquids or cold liquids/foods slow** stomach emptying
- **Warm/hot caloric liquids and solid foods accelerate** stomach emptying

The Importance of Slow Eating

- Forgotten art of chewing
- Optimizing gastric intake/output
- Benefits of social eating

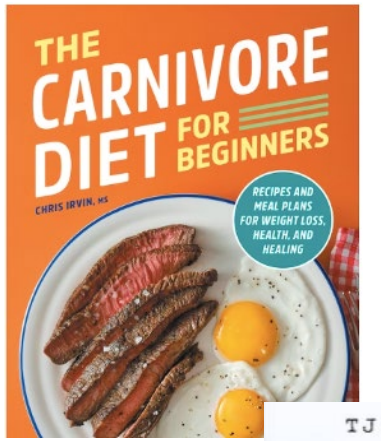
UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

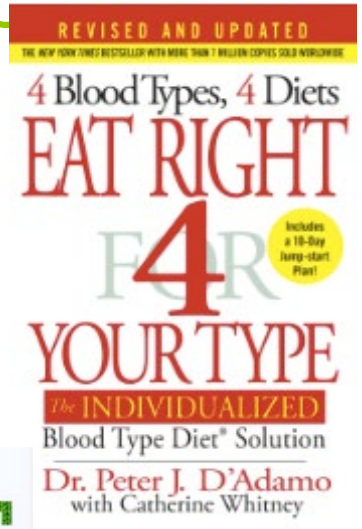
Chew Your Food! (Or Why Your Mom Was Right)

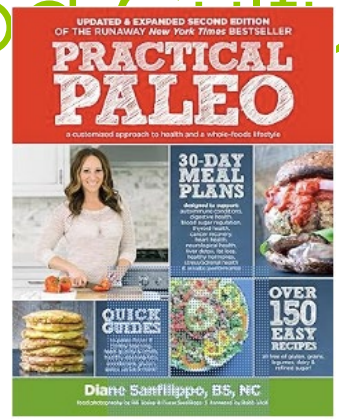
- Digestion begins in the mouth
- Longer chewing → more saliva
- Smaller food particle size → higher nutrient digestion/absorption
- Longer chewing → less gas/bloat after meals (better digestion, less swallowed air)

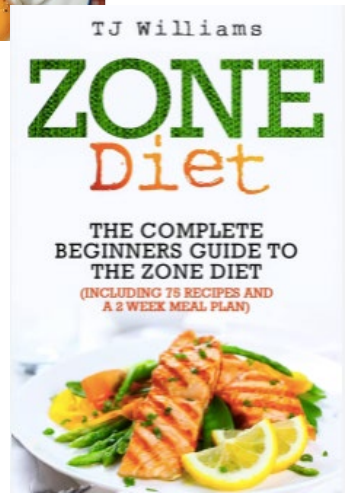
UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

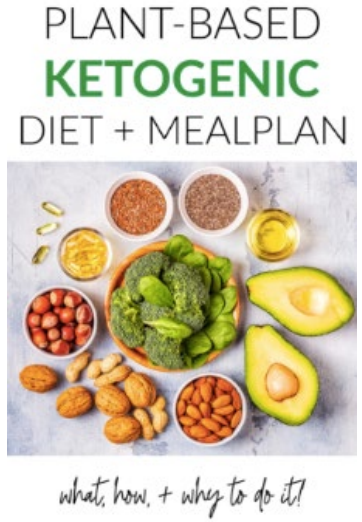
The "What" of Food: Our Food Culture





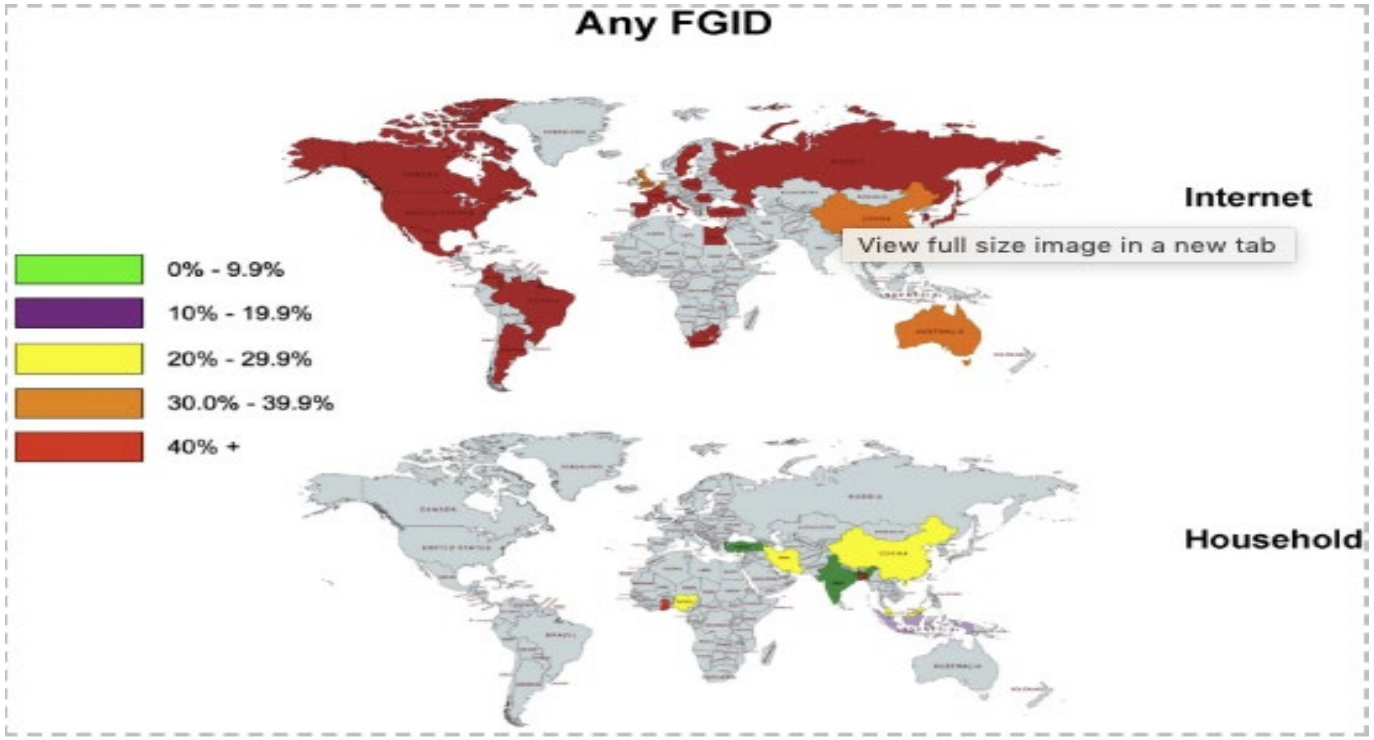






UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

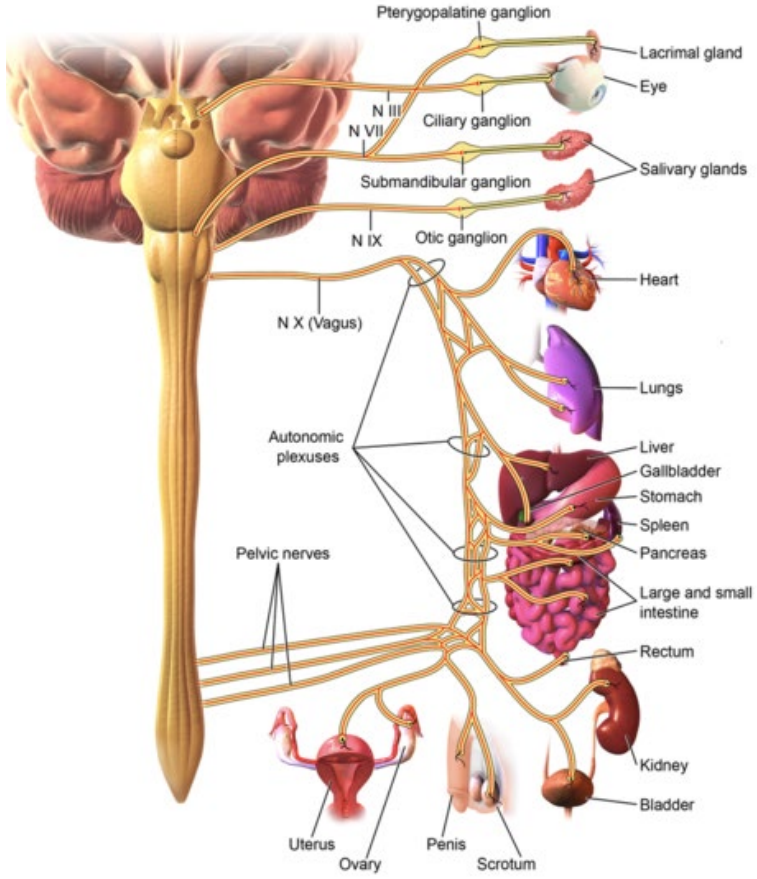
Prevalence of GI Disorders (2020)



Worldwide Prevalence and Burden of Functional Gastrointestinal Disorders, Results of Rome Foundation Global Study
Sperber, Ami D. et al.
Gastroenterology, Volume 160, Issue 1, 99 - 114.e3

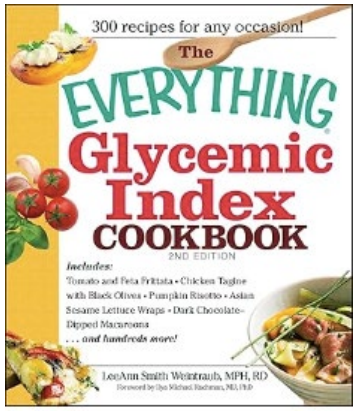
UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

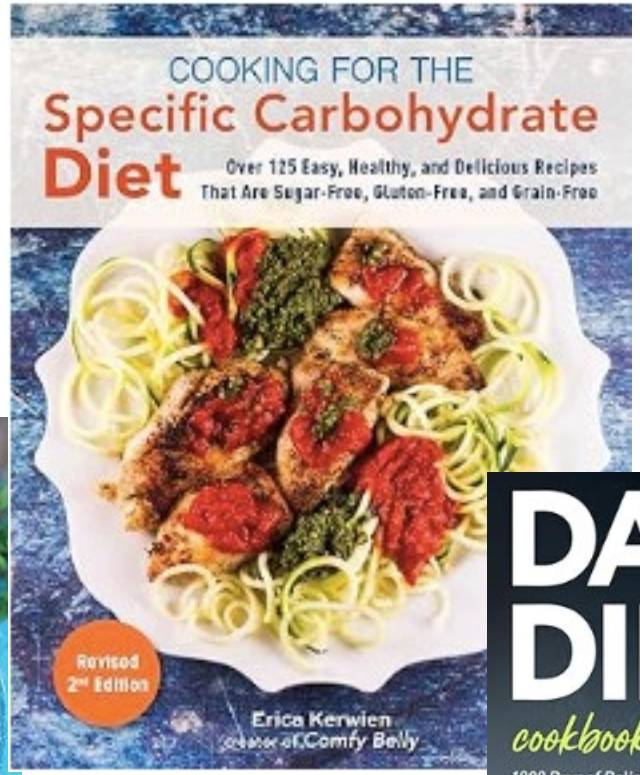
The Digestive Process: Cephalic Phase

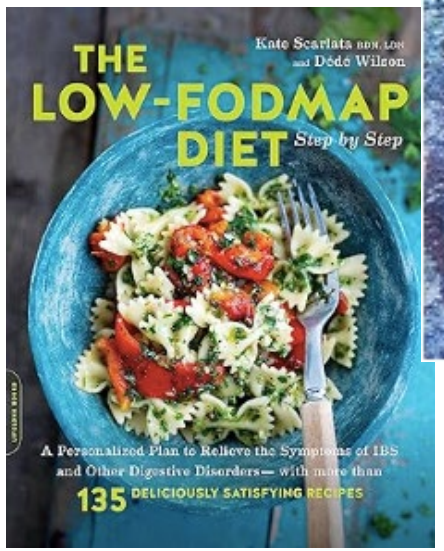


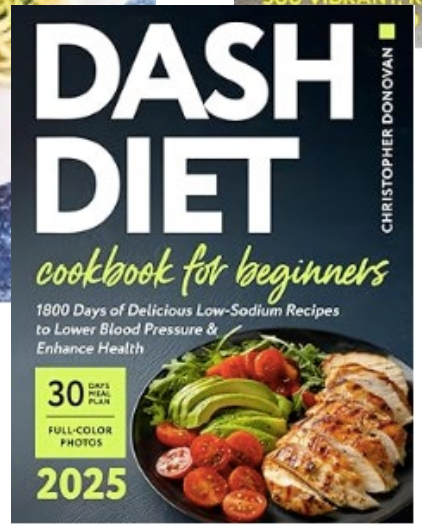
UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

Medical Diets: What to Eat



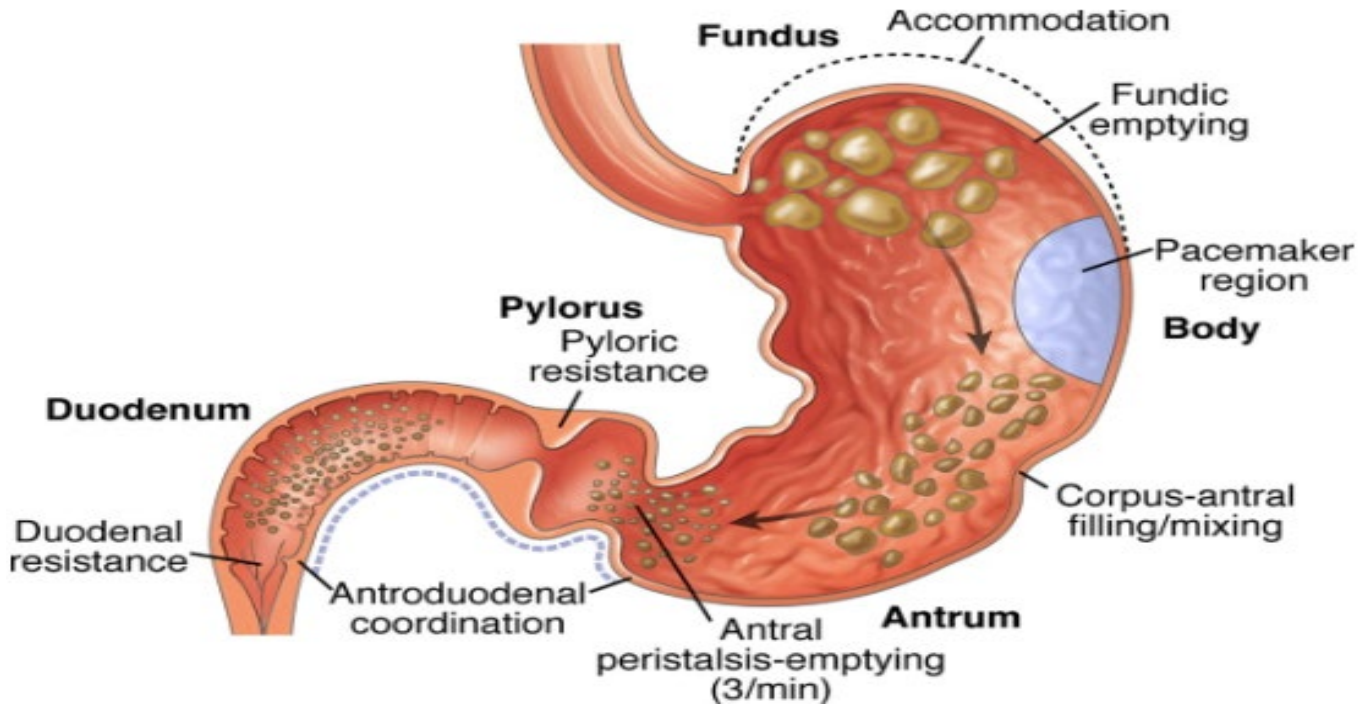






UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

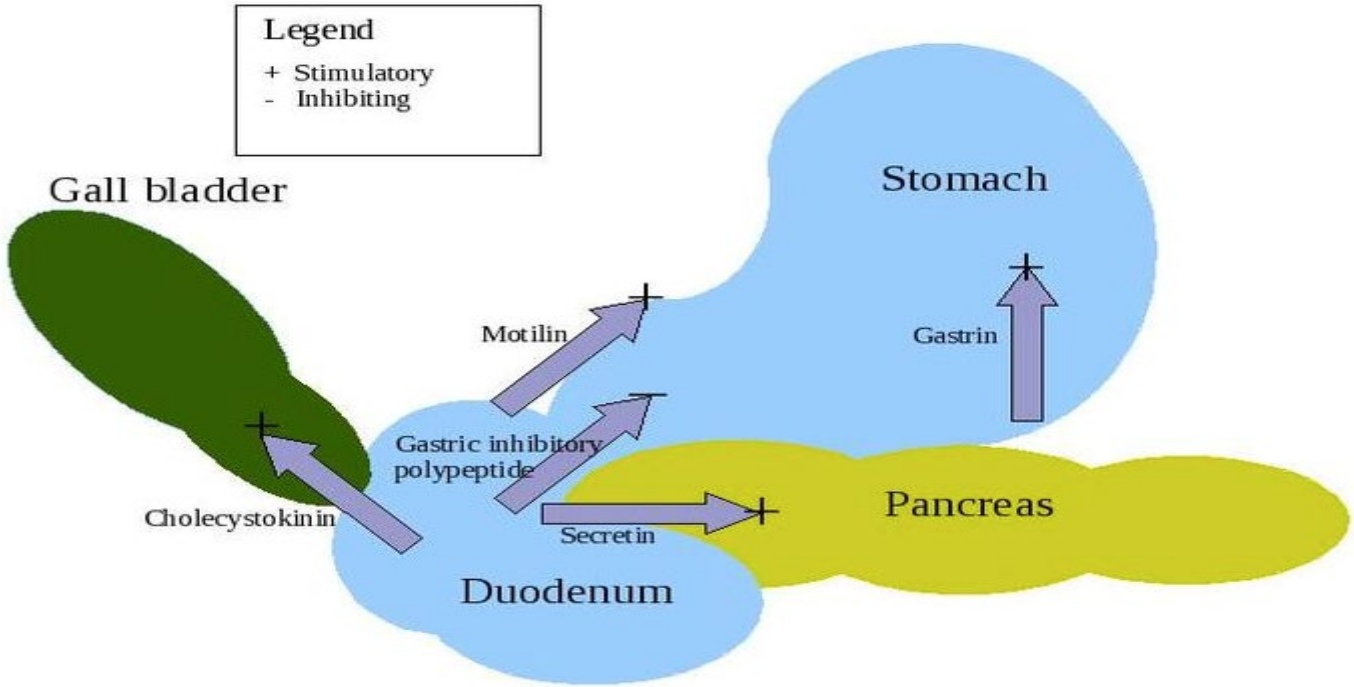
The Digestive Process: Gastric Phase



Tests of Gastric Neuromuscular Function
Parkman, Henry P. et al.
Gastroenterology, Volume 136, Issue 5, 1526 - 1543

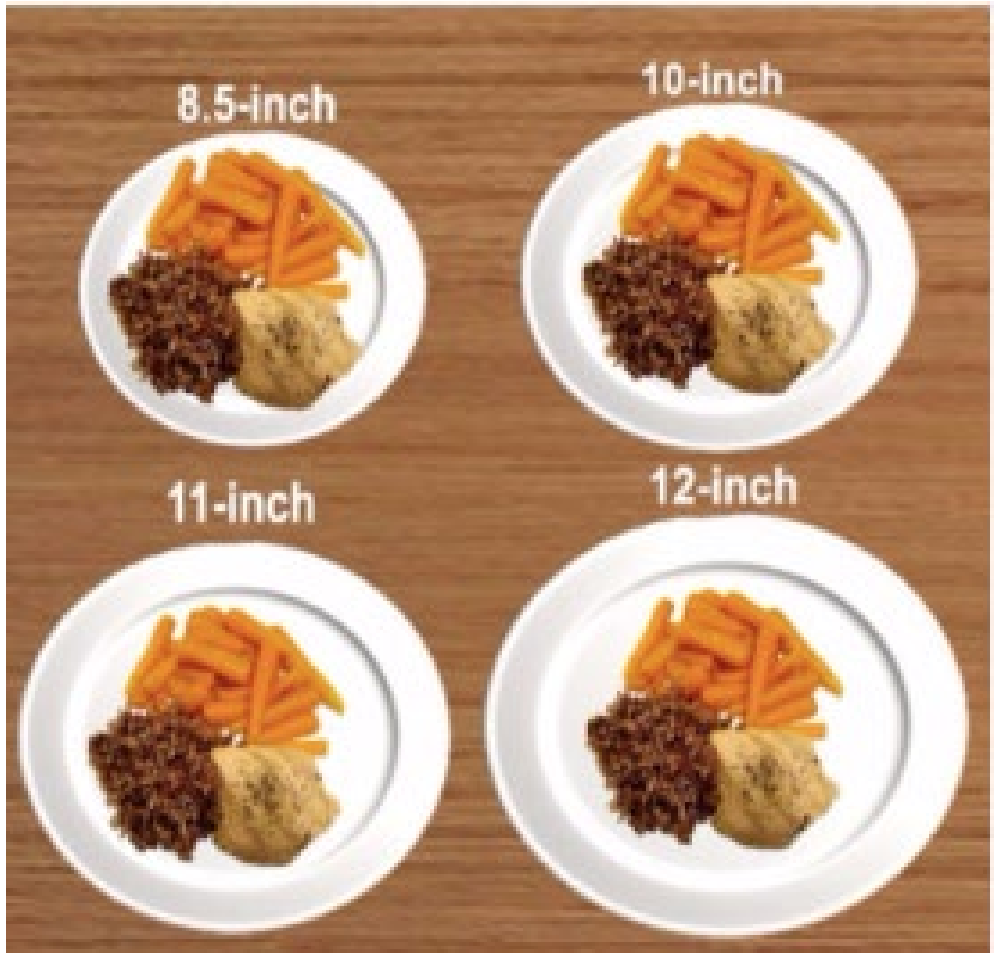
UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

The Digestive Process: Intestinal Phase



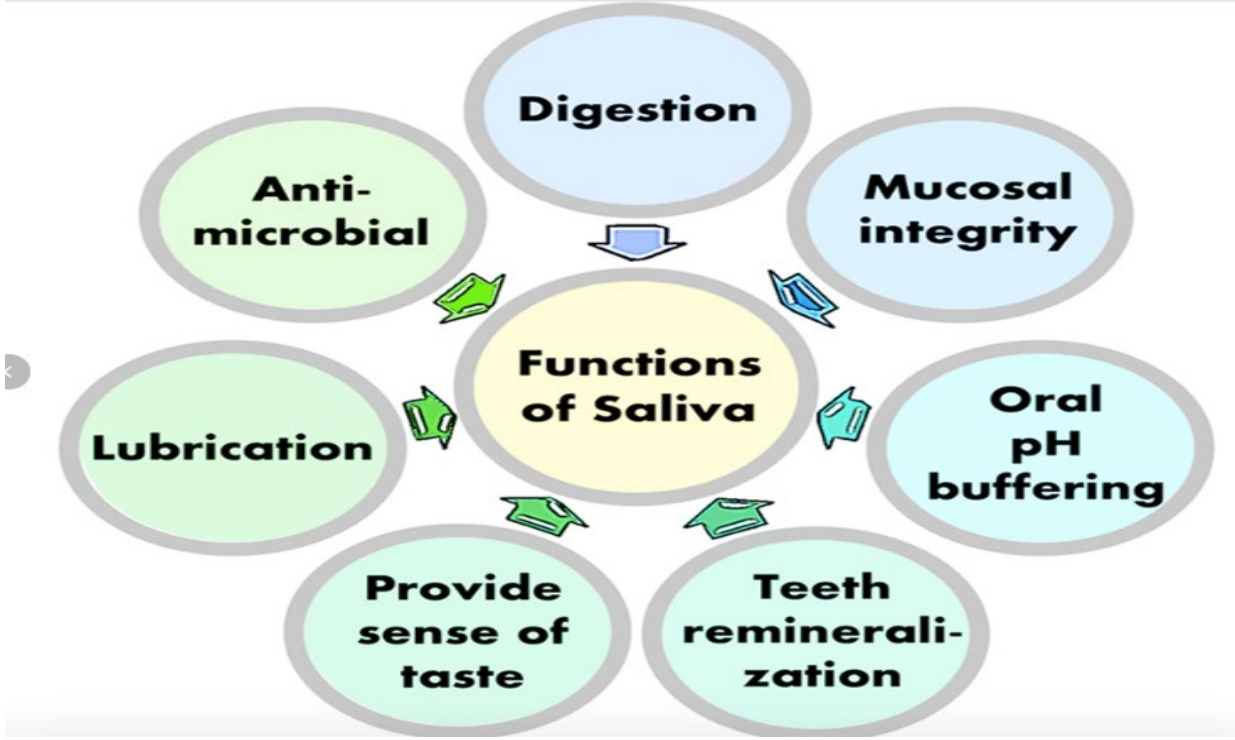
UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH



UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

Saliva: Worth More Than a Lick of Spit!



Razzaque, Mohammed. (2022). FASEB BioAdvances.

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

Chewing Tips

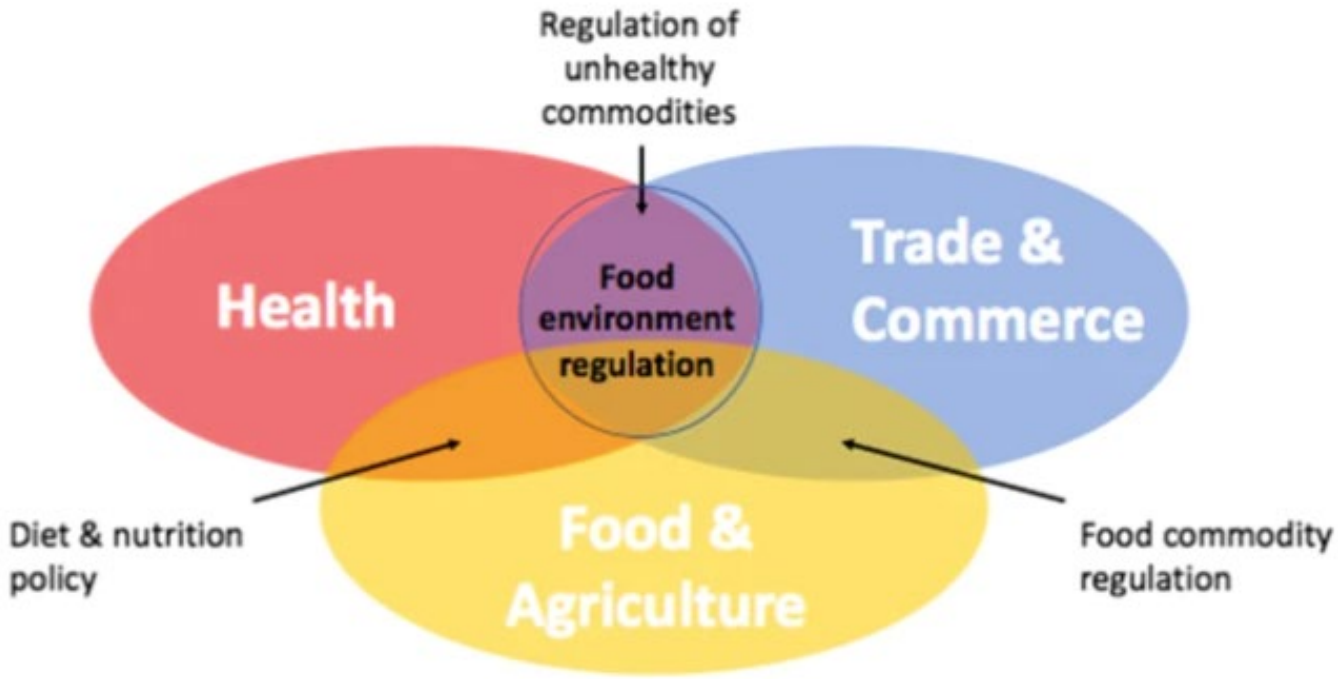
- Mix up textures
- Move food around your whole mouth while eating
- Smaller bites
- Do not drink while food is in your mouth
- Don't talk and eat at the same time!
- Regular dental care vital
- If any difficulties with chewing/swallowing, medical and speech therapy evaluation essential

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

Pace of Eating: Slow and Steady

- Most of us benefit from **better coordination** of stomach emptying → intestinal transit
  - Chronic diarrhea, IBS, SIBO, chronic nausea, etc.
  - There are NO benefits to **rapid eating** (even in situations of unusually slow stomach emptying like gastroparesis)
- Rates of common digestive conditions such as IBS are higher in self-described "fast eaters"

Making Changes and Policy Advocacy



Garton, K., Swinburn, B. & Thow, A.M. Global Health 17, 118 (2021)

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH

Social Eating

UW Medicine
OSHER CENTER FOR INTEGRATIVE HEALTH