

2023 Forum on Aging in Rural Oregon

Strengthen Your Body: A Muscle-Building Checklist for Older Adults

Erin Fredericks, MScN
FAMILIAR Foods



Thank you to our partners:



LEARNING OBJECTIVES

understand risk-factors for sarcopenia
& special circumstances with higher-protein
requirements

recognize several Nutrients of Concern for Older Adults,
like Protein, B12 & B6 – and their primary dietary sources

identify the ways we counter muscle loss
through nutrition & basic exercise

A PUBLIC HEALTH PILOT

With every decade, our health needs change.
We may feel these differences in our bodies –
but don't always know how to adjust our daily routines.

produced in partnership with Villages NW

January 2021 – ongoing

over 225 adults 65+ have completed
the six-week, twelve-hour series

monthly online meet-ups for past participants

let's get
FAMILIAR 

With every decade, our health needs change. And while we often feel these differences in our bodies, we were never taught how to adjust our daily routines. FAMILIAR is an online workshop dedicated to the variety of simple foods and lifestyle practices which support a healthy aging plan.

FAMILIAR teaches people how their bodies work (and evolve) --- encouraging participants to take a more informed and positive role in their own health:

come learn the hows and whys to:

- IMPROVE YOUR DIGESTION
- DIVERSIFY YOUR MICROBIOME
- GAIN MUSCLE & BONE STRENGTH
- BALANCE YOUR BLOOD SUGAR
- BUILD BRAIN RESILIENCY
- TEMPER INFLAMMATION
- SLEEP BETTER
- MOVE YOUR BODY

taught by Erin Fredericks, MScN
two-hour class, six sessions
small-group format, conducted live/online
take home workbook
recipes & resources
all cooking skills welcome
erin@thrivewithfamiliarfoods.com

Food **A**s **M**edicine for **I**ndependence and **L**ongevity **I**n **A**ging & **R**etirement

AN AGE-FRIENDLY MODEL

to help: improve older adult nutrition status, reverse sarcopenia,
preserve bone health, minimize fall risk, maximize cognitive function,
reduce chronic disease burden

MOBILITY:

building muscle & bone strength
easing joint pain, hydration

MEDICATION:

identifying nutritional deficiencies,
reducing supplement polypharmacy,
(screenings)



FAMILIAR

MENTATION:

blood sugar control for brain health
the MIND diet, sleep hygiene, hydration

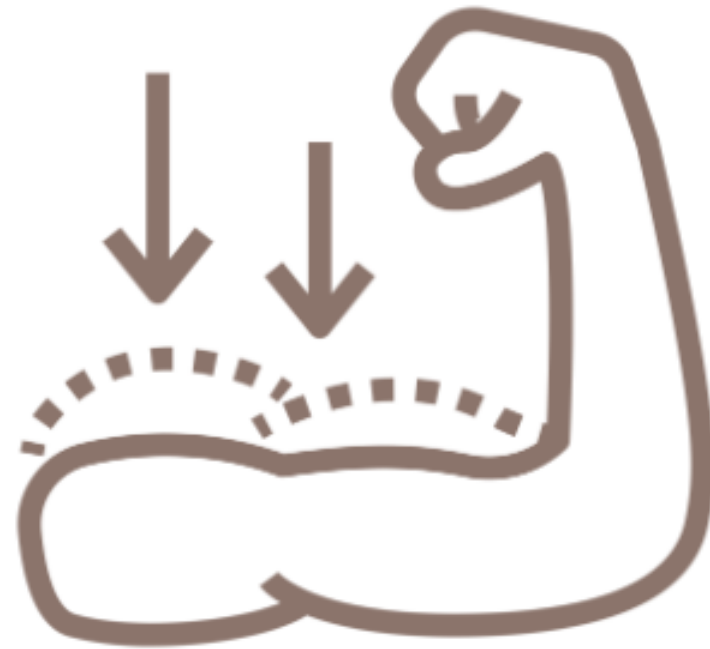
WHAT MATTERS:

self-directed
small group, capacity-enhancing

WHOLE BODY APPROACH:

FUNCTIONAL & LIFESTYLE MEDICINE, INFORMED BY CURRENT CLINICAL EVIDENCE

WHAT DOES A PRACTICAL CURRICULUM & COACHING STRATEGY FOR OLDER ADULTS LOOK LIKE?



SARCOPENIA



only became billable (ICD-10) in 2016

clinical diagnosis - expensive, inconsistent benchmarks
(MRI, CT, DXA, BIA)

increases risk of:

falls & fractures, cardiac & respiratory disease,
cognitive impairment, mobility disorders, frailty,
loss of independence & QoL

occurs in 10-27% of adults ≥ 60 *

increases hospitalization costs by 34%*

onset at 40 ---- accelerates at 60

STRENGTHEN YOUR BODY: THE HOWS & WHYS TO REBUILDING MUSCLE AS WE AGE

how muscle changes over time + what we can do about it

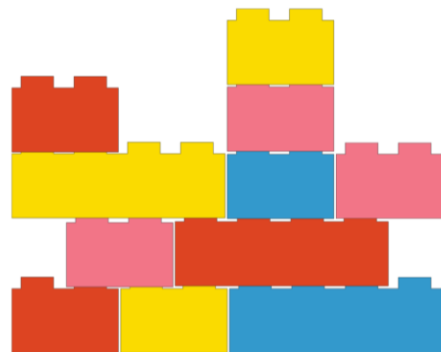
why protein is so important + how much we should eat

what role does exercise play



PROTEIN

20 Amino Acids



= 1000s

of protein combinations

zzZ

regulatory

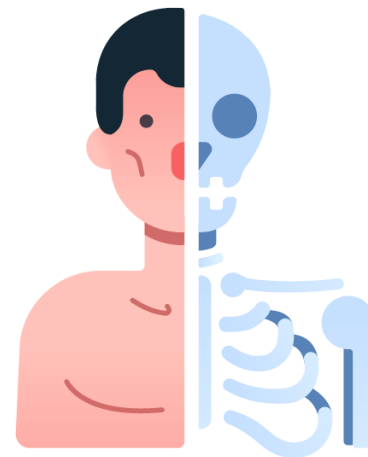
MOOD



transport



structural



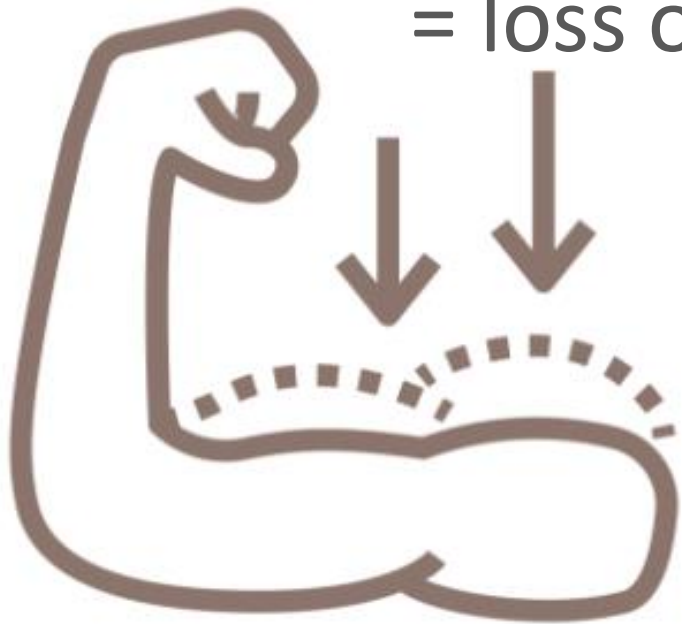
immuno



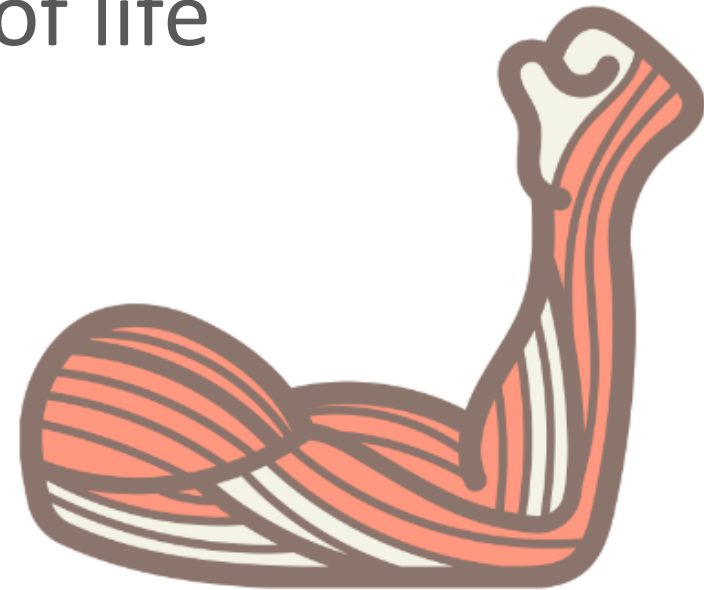
~~sarcopenia~~

loss of muscle mass & strength

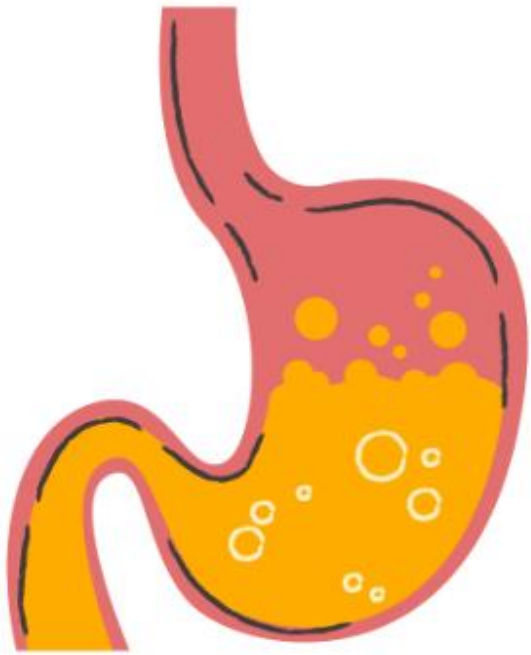
= loss of independence & quality of life



IT'S REVERSIBLE!



our protein needs increase as we get older



reduced stomach acid
= we have a hard time
digesting protein



chronic inflammation
= we need extra protein



anabolic resistance
= we “forget” to rebuild

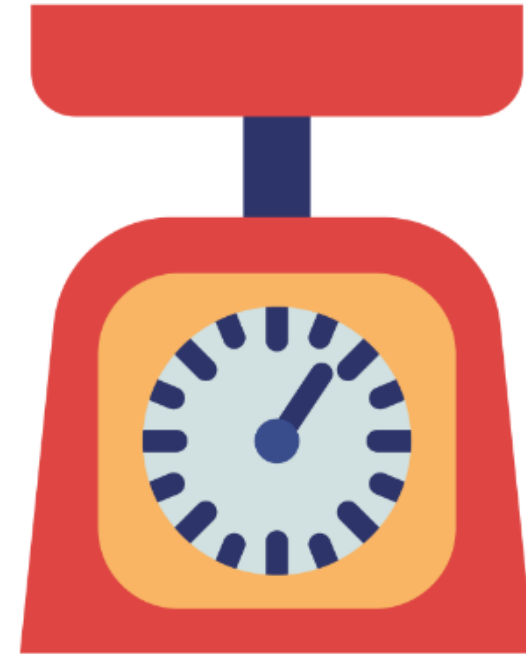
30 g
protein



(including 3 g Leucine)

at every meal, 3x day
total > 90 g daily

BREAKFAST
LUNCH
DINNER



AMONG POST-MENOPAUSAL WOMEN

higher protein intake

better physical function & slower rates of functional decline

lower BMI, higher upper & lower extremity strength

HIGH PROTEIN BREAKFASTS (vs high protein dinners)
improve muscle volume & grip strength

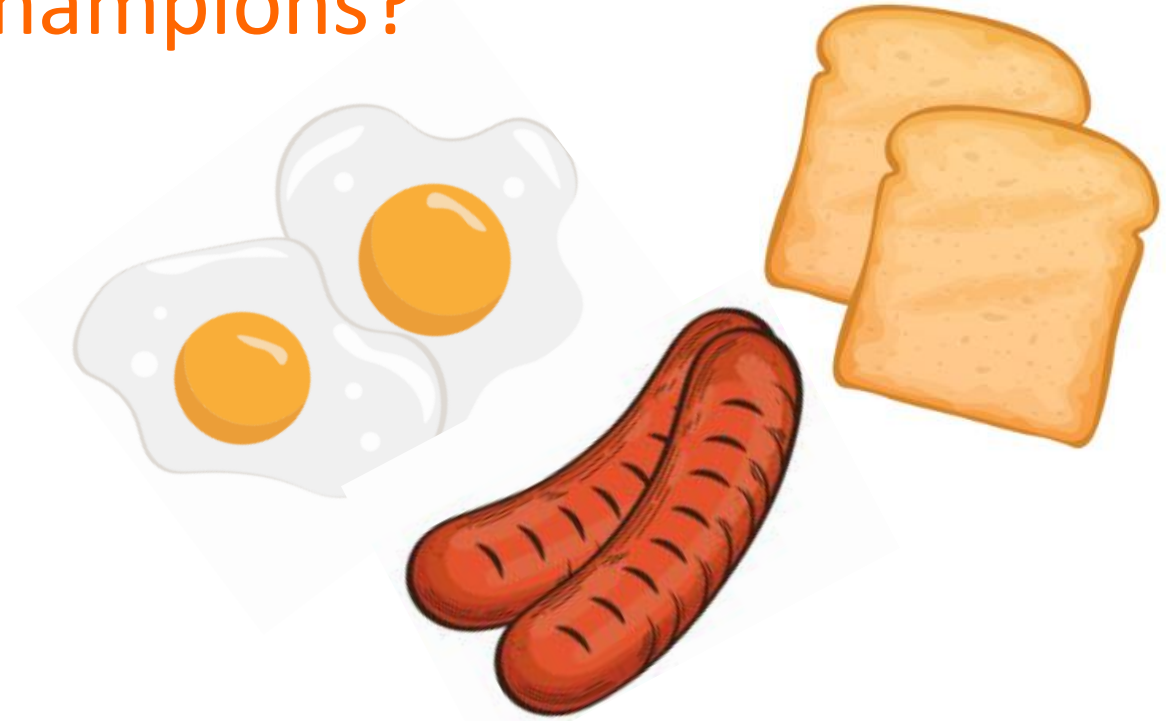


breakfast of champions?



Cheerios = 12 g protein, 3 fiber
All-Bran = 15 g protein, 16 g fiber
= 1.7 g BCAAs

too little protein, possibly low fiber
HIGH SUGAR (25 g)



= 26 g protein, 4 g fiber
= 3.5 g BCAAs

good protein, low fiber
HIGH FAT (27 g)

LOW-FAT COTTAGE CHEESE WITH CEREAL, NUTS, SEEDS & FRUIT

cottage cheese = double the protein of milk with low sugar



= 19 g +



= 24 g



= 30 g protein
(3 g BCAAs)
9 g fiber

+

12 g



swap in
cottage cheese



SWAPS TO CONSIDER



sausage links
5 g protein, 17 g fat
.8 g BCAAs



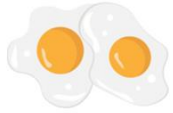
ground turkey
16 g protein, 6 g fat
2.7 g BCAAs



tempeh
11 g protein, 3 g fat
5 g fiber



baked beans
8 g protein, 1 g fat
9 g fiber



eggs
13 g protein, 9 g fat
~2.6 g BCAAs



tofu
15 g protein, 7.5 g fat
~2.6 g BCAAs

bean soup for breakfast!



bone broth – 1.5 cups
23 g protein, 0 g fiber



lentils – ½ cup
9 g protein, 8 g fiber



wild rice – ½ cup
4 g protein, 3 g fiber



swiss chard – 1 cup
3 g protein, 4 g fiber



yogurt – ¼ cup
4 g protein, 0 g fiber

43 g protein, 15 g fiber

HUEVOS RANCHEROS



= 17 g



½ cup black beans
8 g protein

= 29 g protein
4 g BCAAs
14 g fiber

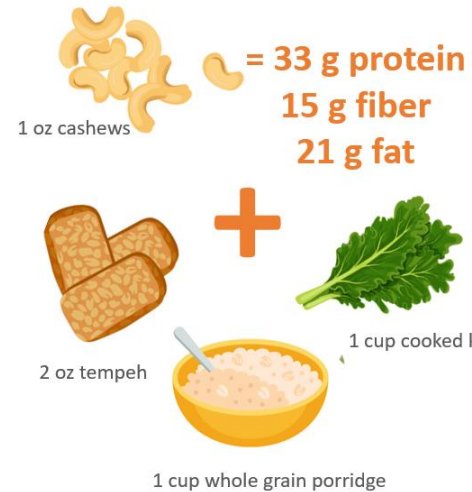


½ ounce pumpkin seeds
4 g protein



and/or

1 ounce cheese
7 g protein + 1.3 g BCAAs



= 33 g protein
15 g fiber
21 g fat

= 29 g protein
16 g fiber
35 g fat



everything seed mix
(hemp & pumpkin)



¼ cup hummus
½ cup cucumber



2 T peanut butter
½ cup berries

2 slices whole grain toast

if you supplement....



choose whey protein OR a pea & rice blend (vegan)
look for leucine (3 g) or BCAAs (4-5 g)

swish it around your mouth, then swallow
watch out for too much sugar
limit added ingredients like gums, flavorings, thickeners
(collagen peptides aren't the same thing)
no more than one serving/day

other sarcopenic risk factors:

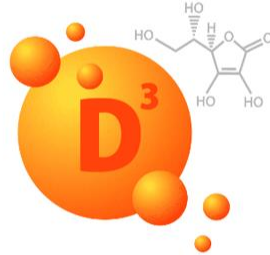
hormonal changes
inadequate nutrition
age

limited physical activity



essential bone, immune, hormonal & cardiovascular health

limited access from
sun or diet



talk to your doctor:
D3 (+ K2) supplementation

get your levels tested: don't guess your supplement dose



FAMILIAR™

vitamin B6

vital for a healthy cardiovascular & nervous system

counters inflammation

deficiencies will impact our brain & mobility

AT 50+, YOUR BODY NEEDS MORE!

don't supplement without talking to your doctor



best sources:

animal protein, starchy vegetables, beans & whole grains

FAMILIAR™

vitamin B12

vital for liver detoxification,
DNA repair, red blood cell production, nerve function

very common deficiency:
Absorption changes with age, side effect of medication

**ask your doctor to check your levels;
consider a sublingual supplement or shot**

best food sources:
exclusive to animal protein
(though may not be readily absorbable
as we get older)



FAMILIAR™



MOVEMENT IS A GAME-CHANGER

SIGNIFICANT & MEANINGFUL muscle gains
with high-protein + strength training combo

DO SOMETHING DAILY

strength training 2-4x weekly (total body)
housework, sitting/standing exercises, stairs, lifting groceries
flexibility & balance practice – tai chi, qigong
avoid sitting more than 7 hrs./day (doesn't have to be consecutive!)





LET'S GET FAMILIAR

bring back food as community

bring forward food as culture



UP NEXT: MEASUREMENT

new diagnostic guidelines, such as TUG, gait and grip strength
+ quality of life

seeking community partners

UPCOMING PROGRAM EXTENSIONS

Family Caregiver Program (virtual) - debuting July 2023 with Oregon Care Partners
- adaptable for community health care workers & in-home caregivers

Independent Living/Assisted Living Model (in-person) - est. Fall 2023
- 90-minute nutrition & workout combo program with on-site fitness trainer

Expanded 12-Week Program – (virtual or in-person) est. Fall 2023
- 90-minute, 12-week with enhanced exercise modules & action planning

APPENDIX - A PUBLIC HEALTH PILOT

PROGRAM OBJECTIVES



- increase consumption of unprocessed foods, especially leafy vegetables, fruits, legumes, whole grains, nuts, lean protein, while reducing consumption of added sugars, saturated fats and sodium
- improve nutritional literacy, including understanding food labels, portion size
- promote revised RDIs for older adults, and bring awareness to nutrients of concern, like B12, B6, Vitamin D
- enhance menu planning skills, with emphasis on high-protein, high-fiber, nutrient-dense choices
- encourage healthy lifestyle behaviors, especially exercise, sleep, mindfulness, sunshine
- promote community health improvements and social inclusion through interactive, small-group, person-centric model
- provide an accessible (virtual) learning environment which promotes health and capacity-enhancing behaviors through weekly goal setting & action planning

FAMILIAR aligns with principles established by the Action Plan for an Age-Friendly Portland (2013), most especially: helping to improve older adult wellness and preventative health care, and to encourage social participation and life-long learning opportunities. FAMILIAR recognizes the diversity of our older adult population, respects personal decision-making and honors participants' individual contributions.

APPENDIX – CURRENT SIX WEEK SYLLABUS

the mind-body connection: improving digestion & diversifying the microbiome

strengthen your body: (re)building muscle & bone

protect your brain & heart: finding blood sugar balance

what heals (& what harms): quieting chronic inflammation

elimination organs: supporting gallbladder, liver & kidneys

getting physical: lifestyle techniques to improve sleep & stress



APPENDIX – TAKE HOME RESOURCES

Participants receive a 60-page printable workbook with lecture notes, nutritional charts, menu ideas, self-assessments and goal-setting suggestions. Dozens of recipes, videos and other external resources expand each weekly chapter into practical, at-home terms.

STEP 2: GO FIBER-FORWARD

Fiber is a well-known digestive health aid, and a fundamental food source for our gut bacteria. Fiber-rich foods provide the fertile, prebiotic landscape for our bacteria's survival – yet these can be elusive in our diets, as fiber is found exclusively in plant foods. Eating beans, ideally 2+ servings a day, will make a measurable dent in your daily requirements. Layering in a variety of fruits and vegetables, whole grains and nuts will close the gap. Consider how and where you might include more fiber-rich plant foods in your day – with some gradual changes and a little attention, you can readily meet your daily fiber goal (and will start feeling positive changes in your body).

Women 21 grams Men 30 grams

*Institute of Medicine

Recommended (Minimum) Fiber Intake at 50+ Years of Age*

TAKE ACTION:

This week, think about adding 5-10 extra grams into your day. Review the enclosed chart for ideas. You'll want to be moderate here, increasing your consumption over several weeks; this minimizes your physical discomfort as your body acclimates to its higher fiber intake. **And please remember to drink plenty of water – it's a necessary component of fiber digestion and will help to prevent constipation.**



Step 3: It's All About the Alliums

Our gut bacteria will flourish with all kinds of fiber – but they have particular fondness for a specific-type called Inulin - found in the bulb structure of different plant foods. And while the edible bulbs of Sun Chokes and Artichokes are a gut bacteria favorite – a more consistent way to increase your Inulin intake is through the bulbs of the

Allium family: Onions, Garlic, Leeks, Scallions, Shallots.

Luckily, these are integral ingredients of countless recipes, so this might be an easier-to-execute dietary enhancement.

Enjoy them Raw or Cooked

Their Flavor Softens when Cooked

A Savory Backbone of Stews and Braises

Raw Shallot takes Vinaigrette to a new Level

Sliced Scallions are Subtle

Red Onion sweetens Salsas and Slaws



Tip: To maximize their nutritional value, allow your alliums to rest for about 10-15 minutes after you've sliced/diced them. While this won't affect your onion's fiber content – alliums contain potent phytochemicals (why your eyes sting; why they have so much flavor, etc.) which provides additional health benefit. Some of these nutrients may be destroyed by heat – but a brief stopover on the cutting board leaves time for a protective enzyme to go to work, saving some vital nutrients from the impact of heat. This is an unnecessary step if you're serving these raw.

Copyright FAMILIAR™. DO NOT DISTRIBUTE. See a physician before undertaking any dietary change.



DAILY SQUARES



BEING BONE-FRIENDLY

Calcium is the most prevalent mineral in our bodies; we store nearly all in our bones and teeth, while the remainder circulates through our blood, vitally aiding muscle contraction, nerve signaling, hormone secretion, blood pressure regulation and blood clotting. Our bodies will release calcium from our bones when our calcium blood levels get too low – putting our bone health (and our overall health!) at risk when we don't consume enough in our diet. Calcium supplementation may contribute to cardiovascular plaque formation, so is not recommended.

Calcium can be found in dairy products, like plain yogurt and cheese (harder cheeses especially) – but try not to rely on dairy to meet your calcium needs. Introduce more cooked cruciferous* vegetables to your diet - this family of vegetables delivers the most highly absorbable form of calcium to the body. Cooked bok choy, broccoli, kale and collard greens are important foods to keep in regular rotation. Other noteworthy calcium sources to include: white beans, almonds, tahini, flax seed, chia seed, sardines (with bones)

say* - tempeh, edamame, tofu



*Those with thyroid disorders should exercise caution with soy & cruciferous consumption

Protein provides the physical foundation to every part of our body. More than just our muscular structure, there are 20 different amino acids which comprise the backbone of our very functioning. We need proteins to make antibodies and hormones, to heal from illness or injury, AND MUCH, MUCH MORE. We risk losing muscle mass as we get older, particularly as our bodies become less inclined to rebuild muscle tissue. Muscle loss makes us more vulnerable to falls and frailty.



vegetable-based proteins

can be easier on the digestive system, especially in old age. Increased vegetable protein consumption is consistently linked to a healthier aging experience and increased longevity. This is likely due to the wide range of amino acids found in vegetables, as well as the unique array of antioxidants, phytonutrients, and fiber, found in plant foods...and because plant foods support a healthy microbiome. Soy, quinoa, lentils, and buckwheat are the only complete vegetable proteins. Vegetarians need to eat complementary vegetable proteins: i.e., beans and whole grains together – in order to satisfy their essential amino acid requirements.



animal proteins

may be an important component of a muscle-building diet, because they have the distinction of being "complete", meaning they contain all 9 of the essential amino acids that we must find from our diet (vs make internally). Small portions of animal protein, preferably grass fed, can be a dense source of protein, vitamins, healthy fats, and minerals.



APPENDIX – TESTIMONIALS

This class was the most valuable and informative class I have taken in years. I strongly recommend it to any person interested in improving their health. – Chris

I highly recommend this class. Very clearly presented, highly approachable, and a great way to kick-start good eating habits – Helen



As a retired RN and someone interested in health for most of my life, I found this class to have much to offer, and would highly recommend it. The positivity, the accessibility and the great presentation visuals --- teaching adults, especially us older ones, is an art. Recipes are fantastic. - Phyllis

I feel a dramatic difference in my well-being --- and a comfort I haven't felt for awhile. - Margaret

Thank you for this marvelous class on food health! I have learned so much and plan to incorporate many of these ideas into my daily diet. I so appreciate this gift! - Sue



I am grateful to be able to participate and love the sense of community. – Janet

This is a valuable resource, and every class is so motivating. I've set some new health goals and keep the handouts on my fridge for daily reference. - Diana

2023 Forum on Aging in Rural Oregon

Thank you!

Erin Fredericks, MScN
erin@thrivewithfamiliarfoods.com

