

Module 3, Lesson 3 Handout:

Physiological Changes with Age Cheat Sheet

As we age, our bodies change in so many ways. Our bones, muscles and joints get weaker; our skin loses elasticity; our brain function and metabolism decline - let's face it, the physical changes can be tough. Here's a run through of the physiological changes that happen with age and some recommendations you can make to support your clients along the way.

Cardiovascular System

As we age, the cardiovascular system is going to see stiffening of the blood vessels and arteries, which makes your heart work harder to pump blood through them. Just like your skin loses elasticity, so do your arteries. Heart muscles are going to change to compensate for the increased workload. Your heart rate at rest may stay about the same, but it won't increase during exertional activities as much as it used to. These changes up your risk of high blood pressure and other cardiovascular problems and we know that heart disease risk increases with age. Work with clients to develop a solid plan that promotes heart health (discussed in Module 1.) Promote cardioprotective foods, develop a workout plan clients can stick to, emphasize sleep and work on stress management. Those things make a difference!

Bones

Let's talk calcium. You store most of the calcium you're going to store in your bones by your third decade of life. While we need calcium to maintain strong bones, we also need it in our blood for vital processes like nerve function and muscle contraction. When it comes down to it, your blood will always win over bone. If you're not consuming enough calcium in your diet, your blood takes calcium from your bones, which is why it's so important to get enough calcium through food. In general, bones shrink in size and density and get weaker as we age and risk of bone fracture increases as we get older. In one Australian study, for males and females, respectively, the risk of being hospitalized due to bone fracture was 11.8% and 6.3% by the age 18, 23.8% and 11.4% by age 45 and increased 37.4% and 37.6% by age 80. Make sure clients are getting plenty of calcium in their diets, found in dairy and some dairy alternatives, dark green leafy vegetables, salmon, almonds, beans, chia and sesame seeds, figs, oranges and tofu. Additionally, emphasize the importance of strength training exercise. A systematic review on bone health and exercise concluded that resistance training can increase bone mineral density in middle-aged and older men, while a different meta-analysis found similar results in post menopausal women.

Muscles & Joints

Muscles generally lose strength, endurance and flexibility as we age and that can affect coordination, stability and balance. This is why we hear so often of elderly people falling and breaking a hip or knee. Again, weight bearing exercises are clutch in preventing losses in muscles, as is aerobic exercise like jogging or walking. One study in older adults found that a home based walking and resistance training program was effective on lab tests related to muscle strength. As for diet, research has linked the Mediterranean diet with better muscle function in older adults. There's also research indicating that higher intake of fruits and vegetables, fatty fish, and whole grains is beneficial for preserving muscle mass and that aiming for 30 grams of protein per meal may be helpful for maintaining muscle in older adults.

GI Tract & Appetite

As we age, we may have dramatic changes in our appetites. They can be from social issues, such as not wanting to eat or shop alone and also from physical changes. Both taste and smell can diminish as we age, making food less appetizing and changes to our digestive tract happen too. There's a slight decline in the function of the esophagus, stomach, colon, pancreas and liver, which can lead to constipation and loss of nutrient absorption abilities. It's also common for older adults to skimp on drinking fluids, or eating enough fiber, fruits or vegetables. Medications, such as diuretics and iron supplements and certain medical conditions, such as diabetes, can also contribute to constipation and absorption issues. Work with an older client to come up with a plan that takes his or her specific needs into consideration. Come up with easy to shop for and easy to cook meal ideas, use herbs and spices to enhance the flavor of foods, find new ways to add in fruits and vegetables and come up with strategies for drinking fluids throughout the day.

Skin

Skin can be the biggest giveaway to our age, despite all of the money, treatments and time we spend on beauty products and skin care essentials. Our skin is one organ that seems to steadily decline with every year of life and this doesn't just lead to cosmetic issues. As we get older, our skin degrades both structurally and functionally, leaving us prone to various infections and conditions. Skin progressively thins an average 6.4% per decade, enzymatically active melanocytes (melanin producing cells) decrease 8% to 20% per decade, sebum (a skin oil) production decreases up to 60% and lipid content can drop by 65%. Most older adults have at least one skin complaint. The best foods for skin health are covered in a different handout.

Weight

Most clients will be thinking “I’m going to gain weight when I’m older because it happens to everyone,” but remind them that this doesn’t have to be the case. Research finds our metabolic functioning slows down as you age, meaning we require fewer calories to keep us going. If you decrease activities as you age, but continue to eat the same as usual, you’ll likely gain weight. Help clients adjust their diets and habits as their bodies adapt too. Preventing weight gain at an older age can take a lot of fine tuning. Throughout this journey, keep in mind that the scale may not be the best indicator of your client’s health. Loads of research says that elderly people with a few extra pounds on them have better health outcomes than leaner elderly folks. BMI is not the best tool, so focus your attention on healthy diet shifts and behaviors and amazing outcomes will follow.

Sexual Health

Yes, clients sometimes cringe when we have conversations about what’s going on between the sheets, but it’s important to remember that sexual health is a part of your wellness profile. This is all a part of the Love More pillar that is so vital to living a Nutritious Life. As we age, sexual needs and performance might change. Illness or medication might impact your ability to enjoy sex and might change your sex drive. Don’t forget to ask those questions.

Putting it Into Practice

So, what does all of this mean for you? You’ll definitely see clients who are super frustrated by all these changes that go hand in hand with aging. Some people get depressed about it. Work with them on adapting to these changes and on making healthy lifestyle shifts to support aging in the most healthful way possible. Getting ahead of it is also super important, which is all a part of prevention in nutrition. There are some things we just can’t avoid, but there are many changes such as weight gain that can be avoided or lessened with your lifestyle guidance.