

PLANT-RICH AGING

YOUR GUIDE TO **INCREASED WELLNESS** FOR OLDER ADULTS



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THANK YOU

Thank you for your commitment to improving the lives of the people you serve!



In an era of widespread diet-related disease, we believe that everyone deserves access to healthy food, no matter the circumstance.

Like you, we understand the intimate connection between food and health. In an era of widespread diet-related disease, we believe that everyone deserves access to healthy food, no matter the circumstance. Moreover, we believe that the healthiest choices should be easy and convenient to make, which is possible when great organizations like yours help their clients adopt a more balanced, plant-forward way of eating.

At Balanced, we understand the challenges of today's modern food system, and like you, we're determined to overcome them for the sake of improving public health.

In providing older adults with food each week, your organization has an incredible opportunity to mitigate diet-related disease, disability, and premature death among our elderly population.

We know this is not an opportunity or responsibility you take lightly. This is why we're so grateful to collaborate with visionary leaders like you as we work together to change menus and improve lives.

WHO WE ARE

Balanced is a network of public health professionals, nutrition science experts, and everyday people from around the world fighting for a healthier food system one menu at a time.



Together, we work to restore balance to institutional food environments and menus to make healthy eating easier and more realistic. In working with food service providers that communities and individuals depend upon, we aim to help people everywhere live longer, fuller lives.

Balanced is honored to collaborate with your organization to help provide more plant-forward, health-promoting meals to older Americans, 80% of whom are living with at least one diet-related disease.



More than other segments of the population, older adults are often reliant on industry-driven food environments—such as fast food restaurants and corner stores—for their meals. The dominance and convenience of this highly processed, nutrient-poor diet and the lack of an accessible alternative are why unhealthy food has become the single greatest contributor to chronic illness, disability, and premature death in the United States.

Thankfully, from the best nutrition science, we now know how to prevent, treat, and reverse these conditions in our senior population through simple dietary shifts. Thus, in this collaboration, your organization and Balanced will work together to make these dietary changes a delicious, low-cost, healthy option accessible to older Americans. With the guiding resources included in this toolkit, community volunteers will learn why and how to implement plant-rich options in their local food delivery operations.

WHY ADD MORE PLANT-RICH MEALS?

Why should you offer more balanced, plant-rich meal options to older Americans?

1

In the aggregate, reducing animal products and increasing plant foods lowers the cost per meal, which means funding can be stretched further to reach more clients.

2

Health-boosting, plant-rich meals are an option all people should be able to access, especially older people who want to make the best choices for their health, the planet, and farmed animals.

3

Older people experience high rates of diet-related chronic illness that can be mitigated—or even reversed—by a diet composed largely of whole plant foods.

Effective programming is driven by following the numbers, and the potential cost savings per meal are significant when dishes contain more plant foods like beans, nuts, and whole grains in place of meat, poultry, and fish. In terms of cost per calorie, plant-source proteins like these offer greater value than eggs and dairy and are less than half the cost of all meats.

Similarly, in terms of cost per gram of protein, grains and legumes are significantly less expensive (see table). Thus, swapping out animal products for calorie- and nutrient-dense plant proteins has the potential to generate significant savings, which can be used to (1) expand the number of clients served, (2) invest in higher quality ingredients, and (3) purchase greater quantities of the fruits and vegetables often lacking in the diets of aging Americans.





In an era of consumer empowerment and choice, a growing number of older people expect services tailored to their specific needs and desires. At the same time, many consumers of all ages are actively choosing to reduce the meat in their diets, eat healthier, and lower their carbon footprints.

For example, physicians increasingly recommend that older adults eat more plant-based foods, though the lack of healthy, convenient options remains a barrier.

Moreover, many older Americans of immigrant backgrounds prefer plant-rich dietary patterns that are more similar to those of their countries of origin. Others, whether for religious or moral reasons, are looking for options that meet their ethical principles and dietary restrictions.



For older adult health, medically tailored meals may prove more beneficial than medication alone in the treatment and management of chronic illnesses. **Small studies have shown that medically tailored meals can reduce hospitalizations and the use of specialized care by more than 50%.**

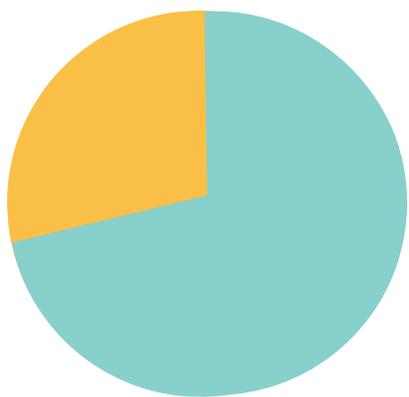
Although these meals vary for each patient and each condition, they generally contain lower sodium, lower saturated fat, and healthier sources of carbohydrates, protein, and micronutrients. The beauty of plant-rich meals is that they encompass all of these health-promoting qualities and more, and they help to truly uproot the major cause of chronic disease—an imbalanced dietary pattern.

IMPROVED NUTRITION IMPROVED HEALTH

The rates of chronic, diet-related disease among older Americans has never been higher.

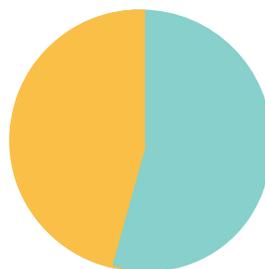
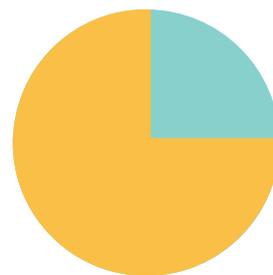
Eighty percent of older adults suffer from one or more chronic illnesses while 77 percent suffer from two or more such illnesses. Although this can be explained in part by greater life expectancy, these high rates are fundamentally a result of lifestyle factors—especially diet. The typical American consumes a diet composed almost entirely of highly processed foods (e.g., chicken nuggets, frozen pizza, and pastries) and animal products higher in saturated fats and cholesterol.

The following figures were reported by the National Council on Aging:



Over 70% of Americans aged 75 or older have **hypertension**, the number one risk factor for **stroke and cardiovascular events**, which in turn can lead to physical and **cognitive disability and loss of mobility**.

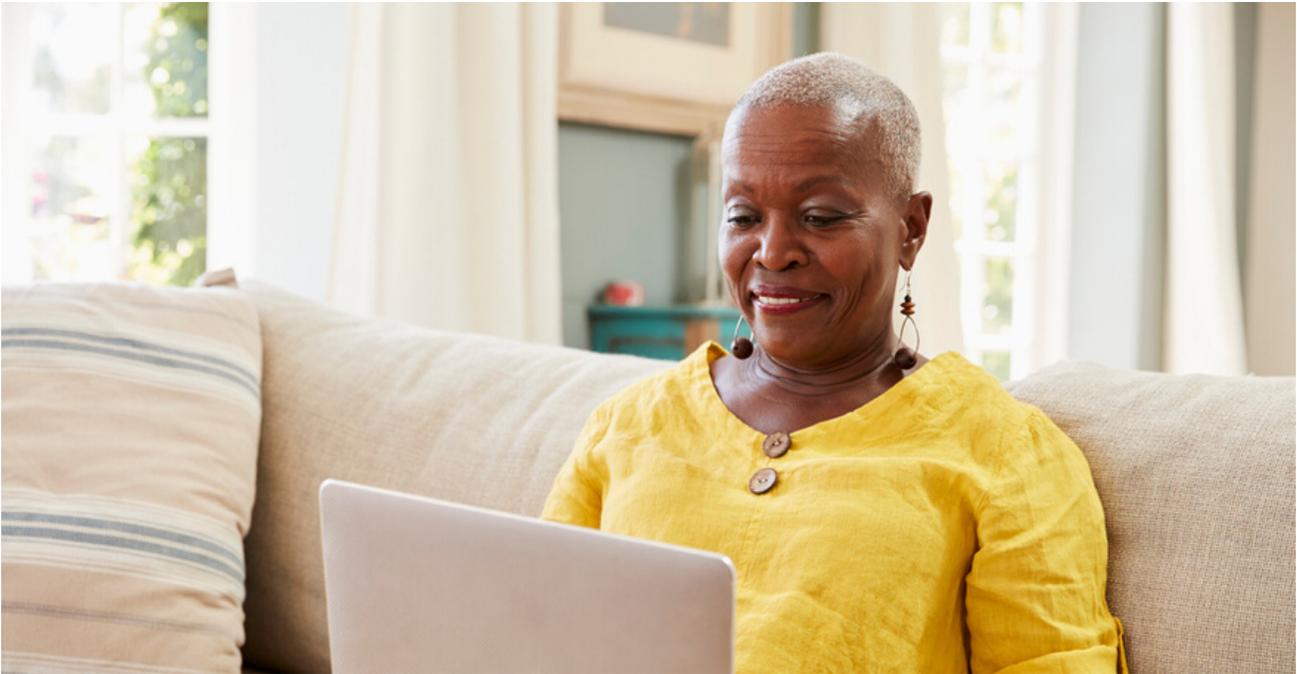
One-quarter of Americans aged 60 or above have **type II diabetes**, and many more have **pre-diabetes**. These figures are projected to rise in coming decades.



More than half of Americans aged 75 or older have **cardiovascular disease**.

NUTRITION FOR BRAIN HEALTH

Cognitive impairment is a major health concern among older adults.



More research is emerging to show diet's role in the development, prevention, and treatment of cognitive decline. **Diets rich in fruits, vegetables, whole grains, and other plant-based foods and low in animal proteins have a protective effect** and may potentially help slow cognitive impairment.



In the section that follows, you'll learn more about how diets contribute to disease and disability in older age. We'll also touch on additional nutrition-related concerns among older adults.

NUTRITION AND DIET-RELATED DISEASE

Dietary Contributors Impacting the Body

1

Saturated Fats

There is a robust causal link between saturated fat intake and elevated LDL cholesterol levels, a well-established marker for risk of heart disease and cardiovascular events. In a 14-year follow-up to the Nurses' Health

Study, findings revealed that reducing total energy intake from saturated fats by five percentage points could lower risk of developing coronary heart disease by 42%. That such a relatively modest drop in saturated fat intake can substantially lower heart disease risk speaks to the potency of saturated fat's toxic effects on the body. Both saturated and trans fats—found most commonly in animal-source and processed foods—damage the lining of blood vessels, and consuming either in significant quantities creates unhealthful blood lipid profiles.

In addition to increasing risk for cardiovascular diseases, higher saturated fat intake is a significant risk factor for systemic inflammation, insulin resistance, and obesity. Moreover, biochemical pathways involving saturated and trans fats implicate both in the progression of chronic inflammatory diseases, including autoimmunity, allergies, cancers, hypertension, atherosclerosis, enlarged heart, and neurodegenerative diseases. Higher saturated fat diets also produce unhealthful changes to the gut microflora make-up, which were associated with elevated endotoxin levels, fat mass, weight gain, liver fat content, insulin resistance, and risk of diabetes.

2

Cholesterol

Our bodies naturally produce all the cholesterol we need to be healthy, and dietary sources are nutritionally unnecessary. Furthermore, the oxidation of dietary cholesterol, through cooking or metabolic processes once ingested,

poses significant potential health risks. Cholesterol oxidation products (COPs) are likely involved in both initiation and progression of chronic diseases, including atherosclerosis, neurodegenerative disease, kidney failure, and diabetes. Cholesterol intake, an indicator of animal product consumption generally, has also been associated with greater risk of numerous cancers, including stomach, pancreas, colon, rectum, kidney, bladder, breast, and lung cancers and non-Hodgkin's lymphoma.

NUTRITION AND DIET-RELATED DISEASE

Dietary Contributors Impacting the Body

3

Sodium

There is a vast amount of research linking dietary sodium to cardiovascular diseases like high blood pressure and to increased risk of stroke, heart attack, and other cardiovascular events.

Consumption of high-sodium meals results in oxidative damage throughout the circulatory system, in the stiffening and constriction of blood vessels, and in impaired blood flow—all of which characterize the initial development of atherosclerosis. In interventional studies, dietary salt reduction improves blood vessel dilation and blood pressure in subjects with and without hypertension.

Research suggests that “modest and long-term reduction in population salt intake” could cut stroke deaths immediately by about 14% and cardiovascular deaths by about 9% in those with hypertension; in those without hypertension, stroke and cardiovascular deaths could decrease by approximately 6% and 4%, respectively.

The average sodium intake in industrialized countries—between 2800 and 4000 mg per day—far exceeds the AHA limit of 1500 mg. Researchers have implicated our high-salt diets in a number of autoimmune and inflammatory conditions, including asthma, multiple sclerosis, type 1 diabetes, and rheumatoid arthritis, among many others.

4

TMAO - Trimethylamine N-oxide

The regular consumption of animal-source proteins within a diet that lacks sufficient fiber—in other words, the Standard American Diet (SAD)—promotes the growth of gut bacteria that are capable of metabolizing specific dietary

components found largely in animal products. Simultaneously, SAD discourages the growth of gut bacteria that preferentially digest plant matter. As a result, people who regularly consume animal proteins and those whose diets are low in animal proteins have marked differences in gut bacteria composition.

NUTRITION AND DIET-RELATED DISEASE

Dietary Contributors Impacting the Body

4

TMAO - Trimethylamine N-oxide (cont.)

Emerging research reveals how SAD contributes to the development of vascular diseases through this manipulation of gut bacteria composition.

People who consume SAD metabolize the nutrients choline, lecithin, and carnitine differently from those consuming a fiber-rich, balanced diet. Specifically, the gut bacteria in those eating SAD convert these nutrients into a substance called TMA, which is later oxidized in the liver to TMAO. Through its toxic and inflammatory effects on the body, TMAO directly contributes to the formation of atherosclerotic plaques. In fact, TMAO levels in the body are associated with an increased risk of having a major cardiovascular event, such as heart attack.

Further complicating these metabolic changes is the fact that animal proteins—meats, seafood, dairy, and eggs—tend to be rich in choline, lecithin, and carnitine relative to plant-source foods.

Not only do consumers of SAD have higher levels of disease-promoting bacteria in their guts, but they also consume more of the specific nutrients these bacteria metabolize into toxic TMA. We can only stop this vicious cycle when the balance in our diet shifts toward fiber-rich plant proteins like 100% whole grains, legumes, nuts, and vegetables. Such a shift promotes the growth of beneficial fiber-fermenting bacteria and reduces the overall dietary burden of choline, lecithin, and carnitine.

5

Processed Meats

Across dozens of studies, the preponderance of evidence strongly suggests that consuming processed meats contributes to heart disease and increases the risk for a long litany of chronic illnesses, including type 2 diabetes

and cancers of the throat, esophagus, stomach, colon, rectum, lung, pancreas, breast, prostate, and bladder, among others. Researchers conclude that processed meats—those cured, smoked, and treated with nitrates or other preservatives—constitute a “powerful multi-organ carcinogen” and that “clinical and public health guidance should especially prioritize reducing processed meat consumption.”

NUTRITIONAL NEEDS OF OLDER ADULTS

According to a study evaluating the diets of Americans over age 70, more than 90% of older adults are not consuming adequate amounts of fiber, potassium, and vitamin D in their diets. Furthermore, over 50% are not consuming enough magnesium, calcium, vitamin E, and vitamin K. Incidentally, these are nutrients that are largely concentrated in whole plant foods like dark-green vegetables, nuts, seeds, mushrooms, and fortified beverages like orange juice and soy milk. Not only can plant-rich meals help older adults improve their intake of critical micronutrients, but also prevent or treat chronic illness, improve immunity, and help preserve physical strength and cognitive functioning.

Due to the aging process and a greater burden of chronic disease and disability, older adults often have individual nutritional needs that may differ from their younger counterparts. Here, we'll highlight some of the potential nutrition-related issues to understand in order to better meet clients' needs.



Protein Needs

From the results of early research on protein intake and health, it was once thought that adults aged 65 and older needed more protein than younger adults. However, according to more conclusive research on the subject, older adults do not have higher protein needs, and optimal daily intake ranges from approximately 0.6 to 1 g of protein per kilogram of body weight—substantially lower than the average protein intake among Americans. Moreover, increasing protein intake from sources like egg whites does not appear to enhance muscle growth among older adults who follow a resistance training regimen.

Protein source (plant vs. animal) may ultimately be the more important factor among older Americans.

NUTRITIONAL NEEDS OF OLDER ADULTS

Protein Needs (cont.)

Aging naturally results in muscle loss through a process of metabolic acidosis. **While animal proteins tend to exacerbate acidosis, plant-based proteins —particularly from vegetables and beans—have an alkalizing effect that combats acidosis.**

As noted previously, greater consumption of vegetables helps preserve muscle mass, and research has shown that diets composed of more plant-based foods like fruits, vegetables, and plant proteins correlates with greater muscle mass throughout the life cycle, regardless of total protein intake or physical activity level. In addition to combatting acidosis, these foods supply nutrients key to our muscles like potassium and magnesium—two minerals in which most older Americans are deficient.



Fiber Deficiency and Constipation

Survey data on the prevalence of constipation show that older adults suffer higher rates of constipation than younger people. While up to a third of those aged 60 to 69 are constipated, around half of those aged 80 to 89 report constipation. Moreover, older women report significantly higher rates of constipation than do older men. While impaired mobility is a major factor in chronic constipation, the near-universality of fiber deficiency among older adults is perhaps a bigger issue. As previously noted, over 90% of adults over age 70 do not consume enough fiber. Fiber adequacy is only possible when consuming a diet containing whole plant foods, especially legumes and 100% whole grains.

NUTRITIONAL NEEDS OF OLDER ADULTS



Inflammation and Lower Immunity

Chronic low-grade inflammation is a natural consequence of aging and is responsible for both the higher rates of chronic inflammatory conditions and the impaired immune function experienced by older adults. Here, dietary patterns critically influence this process and can serve to either worsen or minimize it. **Meat-based or “Western” diets are associated with higher inflammation while the diets containing more fruits, vegetables, and plant proteins are associated with significantly less inflammation.**

This is unsurprising given that plant-based foods are typically good sources of antioxidants and other health-promoting compounds that boost immunity while fighting inflammation. In fact, research has shown that older people can improve their immune responses to vaccinations by consistently consuming more servings of fruit and vegetables.

Given that (1) plant-based foods support immune function, (2) less than half of older Americans consume the recommended intake of produce, and (3) infections like influenza and pneumonia constitute a leading cause of death among older people in the United States, there is an enormous potential to improve the long-term health of older Americans simply by improving their access to and consumption of fruits and vegetables.

NUTRITIONAL NEEDS OF OLDER ADULTS

Dysphagia

Dysphagia is physical difficulty swallowing and eating, often a result of stroke or dementia among older adults. A conservative estimate puts the prevalence of dysphagia at 15% of older adults, although some studies indicate much higher rates.

Calorie and nutrient deficits often accompany dysphagia, and foods must be prepared in a manner tailored to each individual's degree of dysphagia severity. For those with very limited chewing and swallowing ability, foods should be pureed with a smooth texture. These might include thick pureed soups, pureed cooked cereals, mashed potatoes, fruit smoothies, and refried beans. A pudding-like consistency is optimal.

For those with moderate dysphagia, foods should be soft and moistened but can have slight texture to them. These might include soft-cooked vegetables, soft fruits or canned fruits, oatmeal or similarly-textured cooked cereals, and chunkier soups that require minimal chewing. Overall, foods should be semi-solid and cohesive. For individuals with mild dysphagia, soft solid foods are acceptable. These could include moistened breads, rice, or other grains, soft or cooked fruits and vegetables, and tender-cooked proteins. Stay up to date on clients' health and ability to chew and swallow to ensure they are fully benefiting from their meals.

Dysgeusia and Taste Disorders

There are several ways in which taste can become distorted, known as dysgeusia, in older age and affect one's diet. Factors and conditions contributing to dysgeusia include upper respiratory infections, chemo- and/or radiotherapy, many types of medications, diabetes, certain viral infections, acid reflux, thyroid disorders, epilepsy, surgeries, and more. In addition, taste perception naturally declines with age. These combined factors can negatively affect dietary choices, eating habits, and appetite among older adults, leading to nutritional deficiencies, weight loss, or anorexia. On the other hand, some people with dysgeusia rely too heavily on salt and sugar to make their food more palatable, exacerbating chronic conditions many older adults already have. Although it is relatively uncommon, dysgeusia should be accommodated to ensure clients meet their nutritional needs. Individual sufferers of dysgeusia will have unique taste perceptions and flavor intolerances, so it is important to gather information from affected clients regarding their preferences. If you are not sure how to accommodate a client with dysgeusia, first try emphasizing tart, sweet, and sour foods, or season foods with herbs, to help stimulate appetite. Avoid bitter foods, particularly meats, which are more likely to taste metallic.

NUTRITIONAL NEEDS OF OLDER ADULTS

Chronic diseases are nearly universal among older adults, and nearly all of the most prevalent ones are diet-related to one degree or another.

Addressing the High Prevalence of Diet-Related Disease



As we have demonstrated, heart disease, cancer, stroke, diabetes, Alzheimer's, infections, and falls—leading causes of death and disability among older adults—are directly and indirectly linked to nutritional status throughout the life cycle. Balancing an imbalanced diet is never too late, and doing so can dramatically improve quality of life in older age. For example, research has demonstrated that healthy, plant-rich eating can arrest and reverse coronary heart disease, hypertension, high cholesterol, and type II diabetes.

Simple dietary shifts toward whole, plant foods and away from highly processed foods, animal proteins and fats can address the most prevalent chronic diseases among older adults.

NUTRITIONAL NEEDS OF OLDER ADULTS

Addressing Misconceptions

There are two myths regarding plant-rich diets that are worth debunking here.

First is the notion that plant-rich diets have inadequate protein quantity or quality.

Whole grains, beans, nuts, seeds, and many vegetables contain high levels of protein that, combined, easily exceed the minimum daily protein requirements of older adults. Moreover, a high intake of plant protein is not associated with chronic illness. On the other hand, due to their role in disease development, animal protein and fat should be limited to no more than 5-10% of daily calories.



Another common misconception is that a diet composed mostly of plants contains inadequate mineral content, namely iron and calcium. **In reality, whole plants are more nutrient-dense than animal-based foods.**

The only nutrients that may be lacking in plant foods are vitamin B12, vitamin D, and iodine. Adequate B12 can be attained through fortified foods and beverages like soy milk, some enriched cereals, and nutritional yeast. Dietary vitamin D can be acquired from certain mushrooms (namely the brown varieties) or from fortified foods and beverages like non-dairy milks or orange juice. Our bodies also make vitamin D when we spend time outdoors in enough sunlight. Finally, adequate levels of iodine are easy to achieve with light use of iodized table salt as well as through the regular consumption of sea vegetables.

PLANT-RICH MARKETING & PROMOTION

Marketing Strategies to Promote Healthy Eating



Stealth Health

In many cases, the improvements your team makes to the menus won't need to be promoted at all because the changes won't impact the flavor or quality of the foods you serve. Perhaps some changes, simply by virtue of their being new, might feel like they should be promoted, but that's not always the case and could even backfire. **Stealth health improvements can be made without fanfare and without impacting the overall experience of your customers.**

For example, let's say you reduce or replace some amount of meat in a chili dish. Subtle changes to the menu from "Beef Chili" to "Hearty Chili," or even simply calling the improved dish "Chili," are almost certain to go unnoticed.

Other stealth health changes could include:

- Replacing unhealthy salad toppings like bacon with sunflower seeds or crunchy chickpeas, and using vinaigrettes in place of cream-based dressings.
- Switching to 100% whole grain products instead of refined or partially refined grains.
- Using plant-based milks or an egg substitute like aquafaba in a recipe that calls for dairy or eggs.
- Reducing the portion size of animal products and processed food items.
- Many other subtle changes we can help you design!

PLANT-RICH MARKETING & PROMOTION

Marketing Strategies to Promote Healthy Eating



Watch Your Language

For a long time, we've known people eat their meals twice: first with their eyes, then with their mouths. Now, new research is showing that the ways in which food is described has an impact on the dining experience as well. As a food industry professional, this is likely not news to you, and you probably already use this strategy in your work.

Here are a few of the most recent findings to be aware of:

- The descriptor “healthy” is likely to dissuade many customers from selecting a food item, as many people view the term as signaling deprivation or blandness.
- The terms “vegan” and “vegetarian” have a significant impact on the marketability of a product—and not in a good way. Unless the majority of your customer base identifies as vegan or vegetarian, those labels do more harm than good.
- Use positive descriptive language to increase the value and desirability of a healthier food choice. Instead of “healthy green beans,” try “Fresh and zesty green beans.”
- Applying the previous two tips, replace the descriptors “vegetarian/vegan” with positive language. Hearty Lentil and Tomato Basil Marinara over Pasta, for example, doesn't need the word vegetarian between hearty and lentil.
- Communicate value through words like “Premium,” “Featured,” “Seasonal,” “Fresh,” and “Local” when appropriate and authentic. Make sure the promise of those terms matches the quality of the product customers are expecting.



PLANT-RICH MARKETING & PROMOTION

Marketing Strategies to Promote Healthy Eating



Frame Healthy Eating as the Norm

Prosocial messaging—that is, messaging that makes a person believe “everyone else is doing it”—is a powerful behavior change motivator. Norms are influential, and people are motivated to maintain a positive, valued identity.

Good thing for us, it’s easy to make that happen. On your menus, in your conversations, and/or on any promotional materials you develop, it’s easy to use prosocial messaging, and more and more food service professionals are doing just that to increase their sales.

So, what does prosocial messaging sound like? Here are some examples:

- More people are choosing the quinoa bowl than ever before!
- We know you and your classmates love to eat the veggie soup on cold winter days.
- Lots of people pick the chickpea curry when they want energy for later!
- Since its debut, the veggie pot-pie has only gotten more popular.
- More people are opting to swap their greasy burgers for fiber-rich bean burritos.

Prosocial messaging is especially powerful when you have an audience of customers who are likely to be influenced by the positive choices their peers are making.

PLANT-RICH MARKETING & PROMOTION

Marketing Strategies to Promote Healthy Eating

Highlight the Impact

A now notorious Frosted Mini-Wheats commercial from 2008 claimed eating the cereal boosted student attentiveness by 20%. Obviously, that was not the case and was, in fact, a blatant lie and a misrepresentation of data. But! It was effective at getting parents to purchase more cereal. Why? Because they, too, wanted that increased boost of attentiveness for their child.

And that commercial provided a valuable lesson for other companies marketing food products. People want to know how their choices will positively impact them. For those parents, the positive impact was the alleged improvement in their child's chances of academic success. For us, it is the very real reduction and prevention of disease and an increased sense of well-being for the people and families you serve.



So how can you apply this strategy to your food service? Here are some tips:

- Highlight the nutritional impact of swapping one food item for another. Choosing Jackfruit over Pork boosts your fiber intake by XX%.
- People who eat one plant-based lunch a week reduce their cholesterol intake by X% on average.
- Gather anecdotal evidence or testimonies. For example: "When I picked the [healthy food item] I noticed a difference in the way I felt all afternoon. It was nice not to experience a slump at 3 o'clock."
- Collect and share survey data showing the positive impact on mood, energy, experience, etc., after a customer selected a healthier food option.

HOW TO MAKE PLANT-RICH DISHES

Elevating Plants in Conventional Recipes

Many people, regardless of age, feel uncomfortable making significant changes to their diets if they believe they are losing something they value, even when they have so much to gain in return. However, it's possible to have your cake and eat it, too. Most of the comforting but unhealthy meals people love to eat can be reformulated and reborn into a dish that's comparably delicious and also health-promoting.

American

Burgers with fries, pizza, mac 'n cheese, meatloaf, ice cream, loaded baked potatoes, chicken sandwiches, sloppy-joes, mashed potatoes and gravy, cole slaw. Incredibly, all of **these American favorites and more can be reformulated around plant-based proteins that are rich in nutrients, high in fiber, and low in saturated fat.** Clever usage of legumes, whole grains, nuts, mushrooms, vegetables, fruits, and seasonings can turn bland, heavy American fare into satisfying, filling, and health-promoting dishes that taste just as good, if not better, than the originals.



Breakfast

Hearty American breakfasts tend to center around some of the least healthy foods in our diets, namely refined grains, processed meats, and eggs.

Adding plant-rich alternatives might seem impossible, but it's easier than you think. In place of scrambled eggs, try scrambling tofu or chickpea flour batter. Breakfast burritos are popular hot items that can be made with beans and veggies. Try refried pinto beans, potatoes or sweet potatoes, onion, garlic, bell pepper, and salsa. Serve up a quintessential English breakfast with hearty whole-grain toast and baked beans. Try smearing hummus or another bean spread on bagels instead of cream cheese, or use nut-based spreads and top with fresh fruit. Try overnight oats or baked oatmeal with fruit. Whole-grain baked goods, pancakes, and waffles can easily be prepared with healthier alternatives to eggs, butter, and cow's milk. These breakfast alternatives to the standard American breakfast are sure to please any time of day.

HOW TO MAKE PLANT-RICH DISHES

Elevating Plants in Conventional Recipes

Casseroles

Casseroles are both convenient and filling, but they often contain red and processed meats—think shepherd’s pie, Greek moussaka, or sausage and egg breakfast casseroles. The meat in these dishes can easily be replaced with lentils, beans, soy crumbles, additional servings of vegetables, or other meat substitutes.

Tex-Mex

This cuisine is one of the most beloved across the country, especially in the South and Southwest. Most conventional Tex-mex or Mexican-inspired dishes in food service follow the combination of “beef + cheese + salsa + white flour tortilla.” With so many plant-based swaps to choose from, it’s easy to reformulate your current Tex-mex dishes with beans in place of beef and additional vegetables in place of cheese. Try caramelized onions, roasted veggies, or even a drizzle of cashew cream, use whole-grain tortillas from corn or wheat, and add more herbs like cilantro and oregano and more spices like cumin and chili powder.



Pasta

Pasta is one of the most versatile ingredients to work with. With a simple sauce, such as marinara or pesto, and endless combinations of vegetables, greens, beans, and nuts to add, it’s easy to serve pasta on a regular basis while still maintaining a sense of variety in flavor and texture.

INGREDIENT SWAPS MADE EASY

Healthier menus don't have to be complicated.

1

Eggs

Applesauce (baked goods)
Aquafaba (baked goods, meringues)
Banana (baked goods)
Chia seeds (baked goods)
Chickpea flour (scramble, quiche)
Ground flaxseed (baked goods)
Pumpkin purée (baked goods)
Tofu (scramble, quiche)

2

Chicken

Chickpeas, hummus, falafel
Other bean spreads
White beans (cannellini, navy, butter, etc.)
Tofu, tempeh, edamame
Seitan

3

Dairy

Hummus and other bean spreads (cheese)
Plant-derived milks and creams, e.g. soy
Blended cashews or other nuts (cheese, cream)
Reduced fat coconut milk (milk, cream)
Tahini (cheese, cream)
Avocado (cheese)

4

Ground Beef/Pork

Black beans
Chickpeas, falafel
Crumbled tofu or tempeh (seasoned, baked)
Jackfruit
Kidney beans
Lentils (all colors)
Seitan
Textured vegetable protein (TVP)



5

Mayo/Sauce

Egg-free aioli
Hummus
Muhammara or romesco sauce
Baba ganoush
Tahini

MORE IDEAS!

How to make the most of specific plant-based proteins.

Chickpeas

Chickpeas are an incredible source of iron, fiber, and protein.

Whether roasted, cooked whole or mashed into a hummus, chickpeas are a hearty alternative to chicken, beef, and pork. Add them to a stir-fry or enrich a veggie wrap with hummus. With over 7 grams of protein and 6 grams of fiber per serving, your guests are sure to leave feeling full.

You can even use aquafaba, the water from a can of chickpeas, as an egg replacement in baked goods!



Nutritional Information

per serving (1/2 cup cooked)

| | |
|---------------|--------|
| Calories | 134 |
| Fat | 2.1 g |
| Protein | 7.3 g |
| Carbohydrates | 22.5 g |
| Fiber | 6.2 g |
| Saturated Fat | 0.2 g |
| Cholesterol | 0.0 mg |

Try These

- Roasted Chickpeas
- Vegetable and hummus wrap
- Chickpea and tofu stir fry
- Chickpea curry
- Chickpea "chicken" salad
- Falafel and pita sandwich
- Italian-style balsamic chickpea and tomato salad



MORE IDEAS!

How to make the most of specific plant-based proteins.

Beans

Beans of all varieties are jam-packed with protein, fiber, iron, and other nutrients like magnesium and folate.

The wide selection of beans ranging from black and red, to pinto and white, make beans a versatile, cost-effective, and delicious protein. Like lentils and other legumes, beans have more than 7 grams of protein per serving and you'll be hard pressed to find a bean that has less than 6 grams of fiber.

Chilis, stews, burritos, summer salads, and burgers are just a few of the ways you can use beans on your menu.



Try These

- Black bean and walnut burgers
- White bean and kale soup
- Refried beans and cashew cheese burritos
- Black bean and spinach enchiladas
- Red beans and rice
- Red bean jambalaya
- Three bean salad



Nutritional Information

per serving (1/2 cup cooked)

| | |
|---------------|--------|
| Calories | 114 |
| Fat | 0.5 g |
| Protein | 7.6 g |
| Carbohydrates | 22.5 g |
| Fiber | 7.5 g |
| Saturated Fat | 0.0 g |
| Cholesterol | 0.0 mg |

MORE IDEAS!

How to make the most of specific plant-based proteins.

Lentils

Another miracle legume, lentils are a heart-healthy alternative to ground beef or pork.

Simmer in a red sauce for a delicious spaghetti marinara or use them as a base in your favorite chili. You can even sauté cooked lentils with taco seasoning to spice up a make-your-own-taco bar.

Depending on the type, each serving has between 9 and 13 grams of protein, and between 7 and 14 grams of fiber. All the benefits of a traditional ground meat without the cholesterol or saturated fats!



Try These

- Lentil marinara and penne
- Lentil chili
- Pumpkin and lentil curry
- Lentil and black bean burgers
- Quinoa and lentil stew
- Lentil tacos

Nutritional Information

per serving (1/2 cup cooked, brown - red)

| | |
|---------------|---------------|
| Calories | 115 - 150 |
| Fat | 0.4 - 0.5 g |
| Protein | 9.0 - 12.0 g |
| Carbohydrates | 20.0 - 25.0 g |
| Fiber | 7.8 - 4.0 g |
| Saturated Fat | 0.0 g |
| Cholesterol | 0.0 mg |



MORE IDEAS!

How to make the most of specific plant-based proteins.

Tofu

Seasoned properly, tofu and other soy proteins like tempeh are awesome additions to any dish.

Scramble tofu like an egg.

Fry it like a nugget.

Add it to lo mein.

Marinate and grill it!

Tofu is incredibly versatile and used in dishes on menus across the globe in place of chicken, fish, and eggs. Although nearly flavorless raw, tofu absorbs the flavors of any seasoning used -- and with 7 grams of protein per serving, that combination is win-win.



Nutritional Information

per serving (1/2 cup cooked, brown - red)

| | |
|---------------|--------|
| Calories | 70 |
| Fat | 3.0 g |
| Protein | 7.0 g |
| Carbohydrates | 2.0 g |
| Fiber | 1.0 g |
| Saturated Fat | 0.0 g |
| Cholesterol | 0.0 mg |



Try These

- Tofu, pepper, onion, and mushroom scramble
- Tofu scramble breakfast tacos
- Fried tofu nuggets
- BBQ tofu "ribs"
- Tofu kabobs
- Spicy tofu crumbles
- Kung Pao tempura tofu

MORE IDEAS!

How to make the most of specific plant-based proteins.

Mushrooms

Craving something savory? Good news! Mushrooms are a great source of that natural umami flavor.

You can't go wrong when mushrooms are sliced and sautéed with a delicious sauce or diced and blended into a burger. Use portobello mushrooms as a meaty substitute to ground beef.

With almost 2 grams of protein per serving, and an equal amount of fiber, mushrooms are a great way to balance your menu.



Nutritional Information

per serving (1/2 cup cooked, brown - red)

| | |
|---------------|--------|
| Calories | 19 |
| Fat | 0.3 g |
| Protein | 1.8 g |
| Carbohydrates | 3.3 g |
| Fiber | 1.1 g |
| Saturated Fat | 0.0 g |
| Cholesterol | 0.0 mg |

Try These

- Blended mushroom burger
- Mushroom and bean chili
- Portobello burger
- Diced mushroom and avocado tacos
- Mushroom and cashew cheese quesadillas
- Breaded and baked mushroom caps
- Risotto-stuffed portobello caps

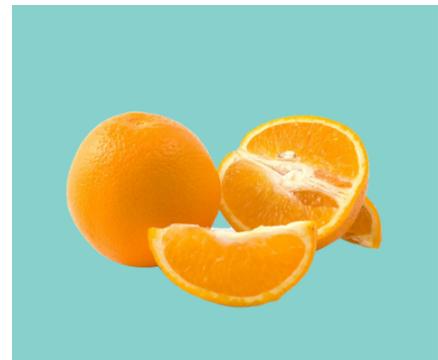


THE MOST AFFORDABLE OPTIONS

Nutrient-dense, lowest-cost.

In an ideal world, each of us would have access to all the diversity of fruits and vegetables our producers have to offer throughout our entire lives. However, for organizations and institutions seeking to provide the most nutrient-dense, healthy meals for the lowest price, it can be difficult to judge which of the cheapest foods offer the most nutritional value.

The following fruits and vegetables were determined to be among the most nutrient-dense according to their “combined affordability metric,” which creates a ranking of the lowest-cost fresh produce highest in Vitamin C, Vitamin A, fiber, folate, potassium, calcium, and magnesium.



Fresh Fruits

- Navel oranges
- Kiwis
- Bananas
- Tangerines
- Watermelon
- Grapefruits
- Mangoes
- Cantaloupe
- Pears
- Honeydew melon

Fresh Vegetables

- Sweet potatoes
- Carrots
- Potatoes
- Broccoli
- Cabbage
- Collard greens
- Lettuce
- Turnip greens
- Celery
- Cauliflower
- Kale
- Onions
- Spinach
- Mustard greens
- Brussels sprouts

SECURING STAFF AND VOLUNTEER BUY-IN

Promoting Balanced Menus & Training Your Team

Overhauling your entire menu overnight and not investing your team in changes is a recipe for disaster.

Unrealistic expectations set you and your team up for failure, but building consensus around the changes you're making removes the pressure to overhaul everything all at once, and getting staff buy-in makes the entire process easier.



To set you up for success at this stage, we will help you:

- build and execute a promotional plan, including gathering testimonials and allies within the constituency,
- respond to constituency feedback, and
- complete any necessary staff trainings.

There is no one right way to roll out menu changes, and there is not an exact or scientific timeline either. You and your team probably have a lot of experience marketing and promoting the menus you've created, so we've designed the tools and resources on the following pages in the hopes of helping you build on the successes you've already had.

SECURING STAFF AND VOLUNTEER BUY-IN

Menu Change Considerations

Think about Your Messaging

Making a big deal of change might not always pay off. Researchers at the London School of Economics found that by removing the labels "vegetarian", "vegan", or "meatless" from their menu items and integrating them into the regular menu, their sales increased by more than 55%.

Instead of talking about and/or labeling what your new dishes don't have, play up the exciting flavors and nutritional benefit of the dish. Using words like balanced, enriched, flavorful, energy-boosting, fiber-rich, nutrient-dense, and other positively-associated phrases is a great way to start investing your team, customers, and other stakeholders in the menu changes from the very beginning.

If you can help them see how the menu changes will improve some part of their life, you'll be on track to winning them over!

Find an Ally on Your Team

Change is always easier when you're not doing it alone. Chances are, someone on your team or in your community is on board with the very reasonable improvements you want to make to your menus. It likely won't be hard to find someone who agrees that improving the healthfulness of your menus is a good thing for everyone. You probably already know who on your team you can count on to be excited about the changes. Tell them about your plans early and encourage them to share their excitement with the rest of the team.

Building a positive consensus around menu changes will make the inevitable road-blocks easier to get around and when changes feel more like a team effort than a top-down mandate, they happen much more smoothly.



SECURING STAFF AND VOLUNTEER BUY-IN

Menu Change Considerations

Gather Testimonials

Is one of your team members or customers really passionate about the changes you're making? Ask them to write up a few sentences why or to record a small video to share with others. Interview a nutrition expert or food service professional whose opinion is credible and enthusiastic.



Share the quotes as part of the lead-up to the new menus or early in the marketing campaign.

As the menu changes roll out, ask the people you serve to share a testimonial and post the quotes around your cafeteria or in a newsletter. Build positive momentum around the changes by regularly updating the testimonials and make your customers feel important, heard, and celebrated.

SECURING STAFF AND VOLUNTEER BUY-IN

Example Messaging

As you roll out the changes, it's important that everyone on your team - not just the customers - understands the value. The changes you're making impact individuals as well as your organization, so make sure all messaging around this issue are positive and emphasize the exciting opportunities that comes with newer, healthier menus.

You might start by sending a quick email or memo about the upcoming changes. Here's an example of how that message can be communicated:



"At [organization name], we strive to better our services and prioritize the health and wellbeing of our clients. That's why we are adding more plant-rich meals to our menus.

With the addition of more health-boosting meal options, we will simultaneously improve client choice and combat diet-related disease, all while lowering our operational costs, increasing our reach, and reducing our carbon and water footprints.

For you, our dedicated staff and volunteers, this shift presents a new, exciting opportunity to expand your repertoire of culinary skills for both personal and professional enrichment.

Over the course of the next few weeks/months, we'll begin rolling out these changes, but rest assured, we'll keep you in the loop every step of the way!

We thank you for the good work you've already done for the older adults in need in our community, and we look forward to doing even better with your help!"



EXTERNAL RESOURCES FOR STAFF/VOLUNTEER TRAINING

Online Courses for Plant-Rich Food Service

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Rouxbe Online Culinary School

Plant-Based Cooking Course

<https://rouxbe.com/cooking-courses/plant-based-cooking-level-1/details>

Rouxbe Online Culinary School

Plant-Based Certification Course

<https://rouxbe.com/plant-based-certification-course/>



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Forks Over Knives

Plant-Based Cooking With Confidence

<https://www.forksoverknives.com/cooking-course>

Coursera & Stanford

Nutrition and Cooking

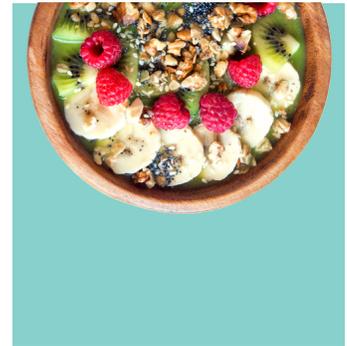
<https://www.coursera.org/learn/childnutrition>

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Udemy

Cook Real Food: How to Make Simple Plant-Based Meals

<https://www.udemy.com/cook-real-food/>



Chef Ann Foundation

Plant-Forward Menus

<https://www.schoolfoodinstitute.org/course-catalog/>

CLIENT-FACING MATERIALS

On the following pages, we've created a number of materials you can use to educate and influence your customers about the benefits of plant-rich diets.



These materials include a brochure that can be easily printed and shared, as well as a survey that can be administered to help you understand the needs and concerns your customers may have regarding menu changes.



PLANT-RICH MENU SURVEY

This short survey collects client satisfaction data and measures self-reported health/wellbeing. It can be administered in paper format or verbally with the help of volunteers.

1. On average, are you able to eat the recommended 5 servings of fruits and vegetables per day? [yes, no, not sure]
2. Do you feel that there are any foods or food groups lacking in your diet? [yes, no]
 - a. If yes, which foods or food groups do you feel are lacking in your diet?
3. Do you feel you are able to get enough to eat to feel full and energized everyday? [yes, no, not sure]
 - a. If you answered 'no' or 'not sure,' please elaborate below.
4. Do you ever struggle to eat the meals you receive due to disability or lack of appetite? [yes, no, not sure]
 - a. Disability, lack of appetite, or both? [disability only, lack of appetite only, both]
 - b. Is there anything that could help you to eat more of the food?
5. Which foods or flavors do you wish you could eat more often but aren't currently available or accessible to you (if any)?
6. Which foods would you like to eat more of in order to feel healthier (if any)?
7. Would you be interested in receiving meals that contain more fruits and vegetables? [yes, no, not sure]
8. If you have religious or ethical preferences and/or dietary restrictions, do you feel you are able to access meals that meet your values and needs? [yes, no, not sure]
 - a. If not, please elaborate.
9. Has a physician or other medical or nutrition professional counseled you to follow a specific dietary plan, such as a Mediterranean diet, DASH diet, or a low-protein diet? [yes, no, not sure]
 - a. If so, which diet was prescribed to you and why?
10. In terms of taste and flavor, how satisfied are you overall with the meals you receive? [scale 1-5]
11. In terms of healthfulness, how satisfied are you overall with the meals you receive? [scale 1-5]
12. In terms of quality, how satisfied are you overall with the meals? [scale 1-5]
13. In terms of quantity, how satisfied are you overall with the meals? [scale 1-5]
14. In terms of meeting your specific dietary needs or restrictions, how satisfied are you overall with the meals you receive? [scale 1-5]
15. Is there anything else you would like to share regarding the meals you receive? Please elaborate below.

THANK YOU



Again, thank you for your continued efforts to improve the health and wellbeing of the people you serve. If there are any additional resources you need - now or in the future - please reach out. Our team is available to support you and we are excited to provide the tools, resources, and/or connections you need to be successful.

Our team is best reached by email at menus@balanced.org or on our website at balanced.org

Plant-rich aging is a program supported by the team at Balanced.

Balanced is a registered 501(c)3 nonprofit organization. For more information about this and other programs, visit balanced.org

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