March 2024

PREMIUM

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NEWSLETTER

Share with Your Clients:

- Pasta Fagioli Recipe
- Greek Cauliflower and Chicken Stew Recipe
- Red Curry Chicken & Brown Rice (butternut squash base) Recipe
- Nutrition Month Handout: Beyond the Table
- Reduce Salt Intake to Lower Blood Pressure - Research Plus Handout
- Connection between Ultra-Processed Food and Risk of Cancers of the Mouth, Esophagus, and Throat - Research Plus Handout
- Healthy Aging 101 Handout

Research Corner:

- Lipids and Dementia- A Complicated Situation

Editor's Note:

This issue contains many delicious easy recipes, a Nutrition Month Handout, and pairings of research and handouts. Enjoy!

-- Judy Doherty, MPS, PC II

Pasta Fagiole

INGREDIENTS

- 1 tsp olive oil
- 1 onion, peeled and diced
- 1 tsp minced garlic
- 2 cups low-sodium vegetable broth (or chicken broth)
- 2 boneless skinless chicken thighs, diced
- 1 14.5 ounce can pinto beans, drained
- 1 14.5 ounce can no-salt-added diced tomatoes, with juice
- 2 tsp Italian seasoning (salt-free)
- 1 pinch red pepper flakes or Aleppo pepper flakes
- 1/4 cup chopped fresh parsley

INSTRUCTIONS

1. Heat a large Dutch oven over medium heat. Add the oil and saute the onions and garlic for a few minutes.
2. Add the broth, chicken, pinto beans and all seasonings except the pepper and parsley.
3. Bring to a boil, cover, and lower the heat to a simmer.
4. Cook for 20 minutes or until the chicken is done.
5. Top with pepper flakes and chopped parsley and serve hot.
6. You can freeze leftovers in portion sized containers for future use.

Serves 46. Each 1 cup serving: 217 calories, 4 g fat, 1 g saturated fat, 54 mg cholesterol, 0 mg trans fat, 465 mg sodium, 28 g carbohydrates 8 g fiber, 7 g sugar, 18 g protein.

Greek Chicken Cauliflower Stew

Ingredients:

- 1 tsp olive oil
- 1 tablespoon minced garlic
- 1/2 onion, peeled and chopped
- 4 chicken thighs cut into bite-sized pieces
- 1 can black lentils, drained
- 1/2 head cauliflower cut into florets
- 2 cans diced tomatoes, no salt added
- 2 cups low-sodium chicken or vegetable broth
- Garnish: 1 kalamata olive, mint leaves, crushed red pepper or Aleppo pepper

Directions:

1. Saute the garlic and olive oil in a large Dutch oven pan over medium heat. Add the onion and chicken. Cook until golden
2. Add the lentils, cauliflower, tomatoes and broth, Bring to a boil then lower to a simmer. Cover and cook 25 minutes until the chicken and cauliflower are done. Stir occasionally.
3. Garnish with an olive, mint, and red pepper flakes. Serve hot.

Serves 4. Each 1 cup serving: 383 calories, 20 g fat, 5 g saturated fat, 110 mg cholesterol., 0 g trans fat, 404 mg sodium, 25 g carbohydrate, 8 g fiber, 26 g protein.

Red Curry Chicken & Brown Rice

Ingredients:

- 2 tsp olive oil
- 2 tsp minced garlic
- 1/4 cup minced red bell pepper
- 3 chicken thighs, cut into pieces
- 1 tablespoon Red Curry Paste
- 1/4 tsp fish sauce
- 2 cups pureed pumpkin or butternut squash
- 2 tablespoons cream or coconut milk
- 1 cup chicken broth, low sodium
- 2 cups fresh or frozen green beans cut into 2 inch pieces
- 2 cups cooked brown rice
- 1/4 cup basil leaves
- Pinch red pepper flakes for each plate

Directions:

1. In a large Dutch oven pan, saute the garlic and red pepper in the olive oil. Cook for a few minutes until nutty.
2. Add the chicken and sauté together for a few minutes.
3. Add the red curry paste, fish sauce, pumpkin or squash, cream, broth, and green beans. Bring to a boil. Lower to a simmer
4. Cook all together for 20 minutes until the chicken is cooked and the green beans are tender, stirring frequently.
5. Serve the red curry over the brown rice. Garnish with basil leaves. Top with a little crushed red pepper.

Serves 4. Each 2 cup serving: 397 calories,19 g fat, 6 g saturated fat, 83 mg cholesterol., 0 g trans fat, 209 mg sodium, 37 g carbohydrate, 5 g fiber, 19 g protein.

March: National Nutrition Month

Beyond The Table

The theme for National Nutrition Month, a registered trademark by the Academy of Nutrition and Dietetics, is Beyond the Table. This theme helps us make more informed choices while meal planning, shopping, and exercising. Many good decisions happen before we get to the table! And certainly, they are important afterwards.

Certainly! "Beyond the Table" is a great theme that encourages a holistic approach to health, extending beyond just the act of eating. Here are some tips to help you make more informed choices in meal planning, shopping, and exercising:

Meal Planning and Meal Prep

- Plan and prepare meals in advance to avoid the temptation of unhealthy, convenient options. Having nutritious options readily available makes it easier to stick to your health goals.

Food Shopping

- Take the time to read and understand food labels. Look for products with minimal additives, lower sugar content, and limited saturated and trans fats.
- Focus on the perimeter of the grocery store where fresh produce, lean proteins, and dairy are typically located. This helps you avoid the more processed, less nutritious center aisles.

Exercising

- Set achievable and realistic fitness goals. This could be a certain number of steps per day, a specific amount of time for workouts, or a target for strength or endurance.
- Find opportunities to move throughout the day, such as taking the stairs, walking during breaks, or doing quick home workouts. It all adds up!

Source: https://eatright.org

Reduced Salt Equals Reduced Blood Pressure

Reducing blood pressure is one of the top ways to reduce the risk of future heart attack and stroke. New research from Northwestern Medicine, Vanderbilt University Medical Center and the University of Alabama at Birmingham finds that reducing salt intake can drop blood pressure even among those taking medication for hypertension.

According to Dr. Deepak Gupta, associate professor of medicine at Vanderbilt University Medical Center and co-principal investigator, "Middle-aged to elderly participants reduced their salt intake by about 1 teaspoon a day compared with their usual diet. The result was a decline in systolic blood pressure by about 6 millimeters of mercury (mm Hg), which is comparable to the effect produced by a commonly utilized first-line medication for high blood pressure,".

Co-principal investigator Norrina Allen, professor of preventive medicine at Northwestern University Feinberg School of Medicine noted that in 70-75% of people, cutting back on sodium in their diet reduced blood pressure whether they were already on medications for blood pressure or not.

According to Allen who is also the Quentin D. Young Professor of Health Policy and director of the Center for Epidemiology and Population Health, "We previously didn't know if people already on blood pressure medication could actually lower their blood pressure more by reducing their sodium,".

The study presented at the American Heart Association Scientific Sessions 2023 in Philadelphia was published Nov. 11 in the Journal of the American Medical Association.

The American Heart Association advised 1500 mg of sodium or less per day for this study, though according to Allen, the study suggested an even lower amount. She notes, "It can be challenging but reducing your sodium in any amount will be beneficial."

High blood pressure is the leading cause of morbidity and mortality in the world. "High blood pressure can lead to heart failure, heart attacks, and strokes because it puts extra pressure on your arteries," Allen said. "It affects the heart's ability to work effectively and pump blood."

(Continued next page)

Salt Study Design

Allen's study included adults in their 50s to 70s from Birmingham and Chicago. Subjects were randomized to eat a high sodium diet (2200 mg per day above their usual diet) or a low-sodium diet (500 mg total daily) for one week. They then crossed over to the other diet for a week.

Participants wore blood pressure monitors on the day before each study visit and collected their urine for 24 hours. Among the 213 subjects, systolic blood pressure was significantly reduced by 7 to 8 mm Hg when they consumed the low-sodium diet compared to the high-sodium diet, and lower by 6 mm Hg compared to their typical diet.

On the day before each study visit, participants wore blood pressure monitors and collected their urine for 24 hours. Among 213 participants, systolic blood pressure was significantly lowered by 7 to 8 mm Hg when they ate the low-sodium diet compared with high-sodium diet, and by 6 mm Hg compared with their usual diet.

Compared with their typical diet, 72% of subjects had a lower systolic blood pressure with the low-sodium diet.

"The effect of reduction in dietary sodium on blood pressure lowering was consistent across nearly all individuals, including those with normal blood pressure, high blood pressure, treated blood pressure and untreated blood pressure," Gupta said.

He also notes, "Just as any physical activity is better than none for most people, any sodium reduction from the current usual diet is likely better than none for most people with regards to blood pressure,".

Allen added, "This reinforces the importance of reduction in dietary sodium intake to help control blood pressure, even among individuals taking medications for hypertension,"

The impact on blood pressure within a week using a low-sodium diet was reached quickly and safely.

"The fact that blood pressure dropped so significantly in just one week and was well tolerated is important and emphasizes the potential public health impact of dietary sodium reduction in the population, given that high blood pressure is such a huge health issue worldwide," said co-investigator Dr. Cora Lewis, professor and chair of the department of epidemiology and professor of medicine at the University of Alabama at Birmingham.

Lewis also notes, "It is particularly exciting that the products we used in the low-sodium diet are generally available, so people have a real shot at improving their health by modifying their diet in this way,".

The research was supported by a grant and contracts from the National Heart, Lung and Blood Institute of the National Institutes of Health.

By Lisa Andrews, MEd, RD, LD - see online for references.

How to Reduce Sodium Intake

It can be challenging but reducing your sodium intake in any amount will be beneficial. Excess intake of sodium causes blood pressure to rise. High blood pressure is the leading cause of morbidity and mortality in the world. High blood pressure can lead to heart failure, heart attacks, and strokes because it puts extra pressure on your arteries. It affects the heart's ability to work effectively and pump blood.

1. **Read labels for sodium content.** Anything below 140 mg per serving is considered low in sodium. Avoid foods with 15% or more of the Daily Value for sodium.

2. **Limit intake of fast food, frozen meals, restaurant meals, and salty snacks.** Boxed pasta and rice mixes also tend to be high in sodium.

3. **Taste** food first before adding salt.

4. **Use flavored powders** in place of salts such as garlic powder, onion powder, or celery powder.

5. **Go for low-sodium versions** of ketchup, soy sauce, fish sauce, BBQ sauce and other condiments. Many condiments and pickled foods are very high in sodium. Even the reduced sodium versions are very high in sodium so it is best to use them sparingly.

6. **Try citrus juice or flavored vinegar t**o season vegetables or meats in place of salty sauces or marinades.

7. **Make your own salad dressing** with lemon or lime juice, vinegar, dried or fresh herbs, and healthy oils like avocado, canola, or olive.

8. **Top dishes with fresh herbs** including basil, cilantro or mint.

9. **Season vegetables** or proteins with garlic, onions, ginger, mushrooms, or peppers.

10. **Use herbs and spices in place of salt** on beef, eggs, fish, pork, or poultry. Ideas include Italian Seasoning Mix, Granulated Garlic and Parsley, Aleppo or Korean pepper, Crushed pepper, paprika, and any favorite no-added-salt seasoning mix.

By Lisa Andrews, MEd, RD, LD

Connection between Ultra-Processed Food and Risk of Cancers of the Mouth, Esophagus, and Throat

Having worked at the VA Medical Center for a good chunk of my career, I've witnessed some pretty awful conditions, including multiple types of cancer. One of the worst ones I've encountered is mouth and throat cancers.

In addition to smoking and excessive alcohol consumption, new research links ultra-processed foods with mouth, throat and esophageal cancers.

According to research from the University of Bristol and the International Agency for Research on Cancer (IARC), consuming more ultra-processed foods (UPFs) may be linked with more risk of developing cancers of the mouth, esophagus, and throat. Diet and lifestyle data was analyzed in a global group of over 450,100 adults that were monitored for roughly 14 years. 2

While obesity related to UPF intake is a risk factor for these aerodigestive cancers, it's not the soul factor to blame. The study was published in the November 22 issue of the *European Journal of Nutrition*.

This is not the first study to link UPFs with cancer. The largest cohort study in Europe known as EPIC (the European Prospective Investigation into Cancer and Nutrition) found an association between UPF intake and 34 different cancers. 2

While more data comes out regarding the link between intake of UPFs and poor outcomes, scientists from the Bristol Medical School and IARC wanted to investigate this more

As several UPFs are high in fat and calories, Bristol's team wanted to connect the link between UPF intake and head and neck cancer and esophageal adenocarcinoma (a type of esophageal cancer) through EPIC and to see if this was due to increases in body at.

According to the team's data from EPIC, eating 10% more UPFs is linked with a 23% higher risk of head and neck cancer and a 24% higher risk of esophageal adenocarcinoma.

A small part of the statistical link between UPF intake and the risk of these types of cancers as linked to higher body fat.

According to Fernanda Morales-Berstein, a Wellcome Trust PhD student at the University of Bristol and the study's lead author, "UPFs have been associated with excess weight and increased body fat in several observational studies. This makes sense, as they are generally tasty, convenient and cheap, favoring the consumption of large portions and an excessive number of calories. However, it was interesting that in our study the link between eating UPFs and upper-aerodigestive tract cancer didn't seem to be greatly explained by body mass index and waist-to-hip ratio."

The authors believe other mechanisms could explain the link. Additives including emulsifiers and artificial sweeteners which have been linked in the past with disease risk, and contaminants from food packaging and the manufacturing process, may partly explain the association between UPF intake and upper-aerodigestive tract cancer in this study.

But Fernanda Morales-Berstein and colleagues did warrant caution regarding their findings and add that the links between UPF consumption and upper-aerodigestive tract cancers found in the study could be impacted by certain types of bias.

They found evidence of a link between higher UPF intake and higher rates of accidental deaths, which is very unlikely to be causal.

George Davey Smith, Professor of Clinical Epidemiology and Director of the MRC Integrative Epidemiology Unit at the University of Bristol, and co-author on the paper, said: "UPFs are clearly associated with many adverse health outcomes, yet whether they actually cause these, or whether underlying factors such as general health-related behaviors and socioeconomic position are responsible for the link, is still unclear, as the association with accidental deaths draws attention to."

Inge Huybrechts, Team head of the Lifestyle exposures and interventions team at IARC, added: "Cohorts with long-term dietary follow-up intake assessments, considering also contemporary consumption habits, are needed to replicate these study's findings, as the EPIC dietary data were collected in the 1990s, when the consumption of UPFs was still relatively low. As such associations may potentially be stronger in cohorts including recent dietary follow-up assessments."

More research is required to pinpoint other causes including food additives and contaminants, which could be the reason for the connection of UPFs and cancer.

Based on the evidence that body fat didn't exactly explain the link between UPF intake and upper aerodigestive tract cancers in this study, Fernanda Morales-Berstein, suggested: "Focusing solely on weight loss treatment, such as Semaglutide, is unlikely to greatly contribute to the prevention of upper-aerodigestive tract cancers related to eating UPFs."

Dr Helen Croker, Assistant Director of Research and Policy at World Cancer Research Fund, noted: "This study adds to a growing pool of evidence suggesting a link between UPFs and cancer risk. The association between a higher consumption of UPFs and an increased risk of developing upper-aerodigestive tract cancer supports our Cancer Prevention Recommendations to eat a healthy diet, rich in whole grains, vegetables, fruit, and beans."

Written By Lisa Andrews, MEd, RD, LD

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Reduce Your Risk for Stomach and Mouth Cancer

Mouth and throat cancer is no joke. To reduce your risk, follow the tips below:

1. **Don't smoke** or quit if you do. Smoking is linked with several types of cancer, including aero-digestive cancers.

2. **Drink alcohol in moderation or not at all.** Like smoking, alcohol intake is associated with several types of gastrointestinal and other cancers.

3. **Reduce or avoid Ultra Processed Foods**. This includes fast food, fried snacks, high fat/high sugar treats and snacks, and highly processed meats such as bacon, sausage, and lunch meat.

4. **Focus on fruits and vegetables**- especially those high in vitamin C and beta-carotene such as berries, melon, citrus fruit, green leafy vegetables, cabbage family vegetables and bell peppers.

5. **Reduce red meat and processed meat intake**. Both are associated with colorectal and other cancers.

6. **Include more beans and lentils** in your diet for adequate fiber and protein.

7. **Choose whole grains** over processed grains.

8. **Maintain a healthy body weight** if possible.

9. **Swap out** chips and other snacks with **nuts or seeds** which contain the antioxidants vitamin E and selenium.

10. **Do regular physical activity.** Find exercise you enjoy and be consistent with it.

Lisa Andrews, MEd, RD, LD

Healthy Aging 101

Staying healthy as you age involves adopting a combination of physical, mental, and lifestyle habits. Here are some important habits to consider for maintaining health and the quality of life in older age:

1. Regular Exercise:

Engage in regular physical activity, including both cardiovascular exercises (like walking or swimming) and strength training. Exercise helps maintain muscle mass, bone density, and cardiovascular health.

2. Balanced Diet:

Consume a well-balanced diet rich in fruits, vegetables, whole grains, lean proteins, and healthy fats. Adequate nutrition is crucial for maintaining energy levels, supporting the immune system, and preventing chronic diseases.

3. Adequate Sleep:

Aim for 7-9 hours of quality sleep each night. Good sleep is essential for cognitive function, emotional well-being, and overall health.

4. Social Connection & Mental Stimulation:

Stay socially active by maintaining relationships with friends and family. Social connections contribute to emotional well-being and may even have positive effects on physical health.

Keep your mind active with activities that challenge your brain, such as reading, puzzles, learning new skills, or engaging in hobbies. Mental stimulation is vital for cognitive health.

5. Limit Alcohol and Quit Smoking:

If you drink alcohol, do so in moderation. Avoid smoking, as it poses numerous health risks, including cardiovascular disease and respiratory issues.

6. Maintain a Healthy Weight:

- Strive to maintain a healthy weight through a combination of a balanced diet and regular exercise. Excess weight can contribute to various health problems, including cardiovascular issues and joint pain.

7. Fall Prevention:

- Take measures to prevent falls, such as maintaining a clutter-free home, using assistive devices if necessary, and engaging in exercises that improve balance and strength.

Remember that individual needs and circumstances vary, so it's important to tailor these habits to your specific health goals and requirements. Always consult with healthcare professionals for personalized advice based on your health status and any existing medical conditions.

Source: https://www.nia.nih.gov/health

Lipids and Dementia- A Complicated Situation

Many of us (myself, included) would prefer to keep our wits about us and avoid the development of dementia at all costs. Some behaviors include not smoking, staying social, and keeping blood lipids in check. But which lipids are we talking about?

Some research alludes that very high lipid levels may raise the risk of developing dementia and Alzheimer's Disease while other studies suggest that high LDL ("lousy") cholesterol or maybe triglycerides may be protective against dementia. Meanwhile, high levels of HDL (healthy) cholesterol which was considered protective may potentially have a negative impact.

Mills notes, "It depends on what lipids you're measuring, what you're using to measure those lipids, what age the person is, and multiple other factors,".

According to Mills, separating the factors and possible ways for a link between lipids and risk for dementia requires understanding the way lipids act in a healthy brain, the effect of brain lipid dysregulation, and the interactions between cholesterol in the central nervous system versus the rest of the body.

Not Just Amyloid

Scott Hansen, PhD, associate professor, Department of Molecular Medicine, Herbert Wertheim UF Scripps Institute for Biomedical Innovation and Technology, Florida believes lipids and their role in risk for AD have been bypassed.

Most recognize that amyloid is at the root of AD, which is true in familial AD. "It's been assumed that because amyloid deposits are also found in the brains of people with late-onset AD — which is the vast majority of cases — amyloid is the cause, but that's not clear at all."

He believes that because aducanumab has limited efficacy in treating amyloid plaques, there are other factors beyond amyloid affecting the risk for AD. Scientists like Scott are also noting the role of inflammation and lipids. Research from his lab suggests that cholesterol promotes the creation of amyloid through inflammation and inflammation in turn drives amyloid.

Invasion of Lipids

The brain is rich in lipids according to Mills and "any dysregulation in lipid homeostasis will impact the brain because cholesterol is needed for the myelin sheaths, cell membranes, and other functions."

Healthy lipid regulation is needed for a healthy brain. Hansen notes that the initial description of AD a century ago notes that AD is a disease linked with altered brain lipids.

Lipids and Dementia- A Complicated Situation

Hansen claims that brain cholesterol and body cholesterol are separate. "The brain produces its own cholesterol and keeps tight control of it."

Cholesterol from food does not enter the brain under normal conditions. “Each pool of cholesterol — in the brain and the periphery — has its distinct regulatory mechanisms, target cells, and transport mechanisms.", according to Hansen.

The BBB becomes permeable if compromised, letting LDL cholesterol into the brain. The brains lipoproteins then shuttle this cholesterol which allows absorption by neurons. As a result, neuronal amyloid levels increase, eventually leading to the development of amyloid-b plaques. It is also involved in tau phosphorylation, which are key features of AD.

When the BBB has been compromised, it becomes permeable, allowing LDL cholesterol to enter the brain, said Hansen. Then the brain's own lipoproteins transport the invading cholesterol, allowing it to absorbed by neurons. In turn, this causes neuronal amyloid levels to rise, ultimately leading to the creation of amyloid-b plaques. It also plays a role in tau phosphorylation. Both are important components of AD pathology.

According to Hansen, high cholesterol levels and other fats have been located in amyloid plaques. In addition, research on brains of AD patients have identified BBB damage.

Risk factors including aging, brain trauma, high blood pressure, stress, poor sleep, smoking, excess alcohol, obesity, diabetes and APOE genotype impact risk of BBB in addition to AD, based on the lipid invasion model paper cited by Hansen

Which Came First?

Mills notes the link between brain and heart health is strong. Risk factors such as diabetes, hypertension, high cholesterol and obesity also raise the risk for dementia, especially vascular dementia.

A lipid profile that is atherogenic leads to hardening of the arteries with reduced blood flow to the brain. This stress the brain, which may result in inflammation and pathology.

Hansen also adds that cholesterol alone has an important role in inflammation. “In the periphery, it is "part of an integral response to tissue damage and infection".

Once cholesterol is made into astrocytes in the brain, it is shuttled to neurons throughout the APOE protein, which affects the balance of brain cholesterol, according to Mills. Individuals who have the ε4 allele of APOE usually have damaged transport and storage of brain lipids compared to the other APOE variants.

Individuals with APOE4 are at higher risk for late-onset AD, according to Hansen. However, APOE2 has a protective effect. Most people are in between with APOE3.

Lipids and Dementia- A Complicated Situation

Hansen mentioned the “lipid invasion model” as a means of explaining dysregulation in lipids. This belief suggests that AD is influenced by alternate lipids that get to the brain due to damage of the blood-brain barrier (BBB).

Inflammation in the brain is driven higher when the uptake of “invading cholesterol” occurs in the brain. Amyloid as well as neuroinflammatory cytokines are made and a vicious cycle starts: Cholesterol releases cytokines and cytokines produce cholesterol. Hansen believes the BBB permeability lets inflammatory cytokines in from other parts of the body, which invade the brain thus raising inflammation.

Mills adds, "We know that generally, in dementia, there appear to be some changes in cholesterol metabolism in the brain, but it's a chicken-and-egg question. We know that as the disease progresses, neurons are dying and getting remodeled. Do these changes have to do with the degenerative process, or are the changes in the cholesterol metabolism actually driving the degenerative disease process? It's probably a combination, but it's unclear at this point."

Plasma vs CSF Lipids

Mills goes on to explain that particles of HDL in the brain are not the same as those in the periphery. "In the CNS, you have 'HDL-like particles,' which are similar in size and composition [to HDL in the periphery] but aren't the same particles." HDL-like lipoproteins are made by the brain’s astrocytes and other glial glands and located in cerebrospinal fluid (CSF).

Peripheral dyslipidemia can be a risk factor for cardiovascular disease. In the brain, Mills states, it can be an indication that there is active damage going on, depending on which compartment you're looking at."

She goes on to say that blood lipid levels and brain CSF lipids are quite different. Research suggests that HDL in the CSF act similarly to plasma HDL but shows up at 100-fold lower amounts when compared to plasma HDL and has unusual combinations of alternate proteins.

Lipid evaluation studies indicate these lipids get very different readings, in terms of the predominant lipid disease state, and they are regulated differently from the way lipids in the periphery are regulated."

Cholesterol in the brain has to be transported from glial cells to neurons and disruptions in this movement can impact overall brain balance. As the brain system is separate from the periphery system, monitoring plasma lipids is more likely going to suggest cardiovascular risk. Alterations in CSF lipids are "more indicative of alteration in lipid homeostasis in the brain.", according to Mills.

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What you can do to reduce your risk of Alzheimer's Disease:

· **Know your family history**. Ask your parents, aunts, uncles, and other family members about any known history of AD.

· **Eat a heart-healthy diet** to keep your blood lipids in balance.

· **Don't smoke and avoid secondhand smoke**. Smokers and those exposed to cigarette smoke have higher rates of dementia according to research. 2

· **Manage blood pressure** to prevent strokes. The BBB may be damaged due to stroke. 3

· **Avoid traumatic brain injuries** such as concussions or falls. These raise the risk of dementia.4

· **Limit alcohol consumptio**n. Alcohol passes the BBB and damages brain tissue over time. 5

· **Stay social!** We need social interaction daily. Research shows that older individuals with strong social connections have lower rates of AD. 6

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