

Speak to your physician before making changes to your diet.

Low AGE Meal Plan Instructions

There are four steps in this meal plan. It is important to follow these key steps to keep the amounts of Advanced Glycated Endproducts (AGEs) low in your diet.

1. Avoid large portion sizes of eggs, fish, poultry and meats. The daily total amount of these foods (breakfast, lunch and dinner combined) should not be greater than 6 oz for men and 5 oz for women. As a general guideline these foods should not cover more than 1/4 of the dinner plate. The remainder of the plate should be filled with vegetables and starches.
2. Cooking methods make a difference. Protein foods such as chicken and beef should be boiled, poached, steamed or stewed. Broiling, frying, grilling and roasting will produce more AGEs. Avoid blackened or charred foods.
3. Have at least four servings of fish weekly. Fish is lower in AGE than meat and poultry. Chicken and beef contain similar amounts of AGEs. Fillet cuts of fish require short cooking time and may be baked in the oven.
4. Have a minimum of two fruits and two cups of low fat milk/yogurt daily.
5. Cooking oils and spreads are high AGE foods. Use low fat mayonnaise and salad dressings. Vegetable sprays are good substitutes for oil in cooking.

Important

- Avoid breaded and fried or oven fried foods.
- Avoid broiled or grilled thick cuts of meat and poultry.
- Do not reheat protein foods like fish, meats or chicken in the oven, toaster, or microwave. The best way to warm foods is to use a double boiler. (The food is placed in a pot or pan and is placed onto a second pot that contains boiling water. The steam in the lower pot will gently reheat the food in the upper container).
- When you go out to eat or purchase take out foods, choose menu items that are described as poached, steamed or stewed.

Foods that may be reheated directly in a pot on the stove or baked in the oven include the following:

- All fruits
- All starches like pasta, potatoes and rice
- Soups
- All vegetables
- Water for tea or coffee

AGE Food List

Group 1 Low AGE

Carbohydrate foods

Breads

All breads, bagels and rolls. **Please do not toast.**

Cereals

Cooked- oatmeal, cream of wheat and cream of rice

Ready to eat-The best choices are Bran Flakes-Puffed Wheat and Puffed Corn.

Grains

Corn and rice

Pasta should not be cooked for more than 10 minutes.

Potatoes, boiled or mashed. They may be baked in the oven without added margarine or oil during cooking.

Dairy

Ice cream, milk, pudding and yogurt. Low fat cheeses.

Avoid all regular cheeses.

Fruit and Vegetables

All fresh, canned and cooked. All juices. Limit dried fruits.

Legumes (dried beans and lentils)

Good low AGE protein sources and can be prepared in the oven or any way you like.

This group is lowest in AGE but the more processed a food the higher the AGE. Convenience foods like frozen toasted waffles and fast food french fries are higher in AGEs than comparable cooked cereals and oven roasted potatoes. Crackers contain more AGE than slices of bread.

Condiments and Sweets

All. This includes honey, ketchup, mustard, sugar, soy sauce and vinegar.

Beverages

Limit hot cocoa mixes or chocolate drinks. All others are allowed as desired.

Examples are coffee, tea and sodas.

Group 2 High AGE

Protein foods and fats

Meats and other animal protein choices

Best choices

1. Fresh fish, baked or poached
 2. Pork and veal, baked, poached or stewed.
 3. Lean ground beef or chicken made into meatballs or baked into a loaf.
- Boiled, poached or stewed cuts of beef, chicken and all other meats.
 - Limit whole eggs to three times a week. Avoid frying. Egg whites can be prepared in any manner.
 - Avoid blackened, charred, crisped (this indicates frying) or grilled fish, meats and poultry.

Tofu

Avoid broiling or frying

Fats

Best choices

1. Cream cheese, light or reduced calorie. No regular cream cheese.
2. Margarine, soft, reduced calorie
3. Mayonnaise, low fat or diet only. No regular mayonnaise.
4. Salad dressings, low fat or diet.
5. Vegetable sprays

Avoid large portion sizes no matter how the food is prepared.

Snack Suggestions

Angel food cake

Baked corn chips

Dairy products-ice cream, pudding, yogurt (Avoid high fat choices)

Fruit

Granola Bars, soft type

Popcorn

Rice cakes

Soups

Whole grain breads with light margarine or low sugar spread if desired

Meal Suggestions

- Chicken, boiled or stewed
- Fresh Fish, baked or poached
- Meat Balls and meat loaf, made with lean ground chicken or turkey
- Salmon or Tuna loaf made with canned fish
- Soups
- Bean and pasta salads
- Tofu (not broiled or fried)
- Yogurt and salad

Remember the correct portion sizes. A good idea is to fill your plate half full with vegetables and $\frac{1}{4}$ full with a starch. That will help you limit the protein choice.

Sandwich Stuffing Suggestion

- Chicken slices made from boiled chicken with low fat mayonnaise if desired.
- Canned tuna or salmon. Try using light Italian salad dressing instead of mayonnaise.
- Fish loaf
- Smoked salmon. Use light cream cheese.
- Deli ham (boiled or smoked)

Use low fat mayonnaise or soft spread margarine if you need some kind of fat on your sandwich.

For a very low AGE meal try pita bread stuffed with vegetables (raw or cooked) dressed with low fat Italian salad dressing. You can add boiled chicken chunks or canned fish.

Fast Foods and Take Out

These foods are generally high in AGE and should be avoided.

If you find yourself in a situation where you will be eating foods in this category, lowest AGE fast foods are listed below:

- Burgers without cheese
- Corn
- Frankfurters that are boiled
- Steamed Chinese food
- Soups

Try new foods!

There are many ethnic foods that may be new to you but are very low in AGEs and high in nutrition value.

Gefilte Fish. These are fish patties sold in jars or cans in the Kosher food section.

Humus. This is a spread like peanut butter and is made of chick peas and sesame seeds. It is popular in North Africa and scooped with pita bread or raw vegetables. It is sold in the refrigerator case in the appetizing or salad section in supermarkets.

Recipes

Chicken Soup

- 1 Chicken (3 1/2 lb) cut into quarters
- 1 medium onion, peeled
- 2 carrots peeled
- 2 stalks celery
- 1 parsnip or medium turnip peeled
- 6 cups boiling water
- 1 tsp salt
- 1/4 tsp pepper

Place chicken and vegetables into a 4-quart pot. Pour boiling water over chicken and then add seasonings. Cover and simmer for 1 hour. Add cooked noodles or rice to individual servings. This will make 4-8 servings.

Chicken Stew

- 1 large onion, diced
- 1 3-4 lb chicken cut into eighths, skin removed
- 1/2 cup water
- 1/2 tsp salt
- 1/4 tsp pepper
- 3 Tbs all purpose flour
- 1 Tbs paprika
- 1/4 cup chicken sauce

Spray a heavy 4-quart pot with vegetable spray. Add onions and cook for five minutes. Stir often to avoid burning. Add water and chicken pieces and simmer 1 hour. Remove 1/4 of sauce from pot of cooked chicken. Add the seasonings and stir until smooth. Add this mixture to the liquid portion in the pot. Cook an additional 10 minutes.

This will make 6 servings.

Egg Salad

- 2 eggs cooked
- 2 egg whites cooked
- 1 tbs light mayonnaise
- 1 tbs diced onion
- 1 tbs diced celery

Mash eggs and mix with remaining ingredients.

Tuna Loaf

16 oz chunk light tuna in water
4 large egg whites
2 tbs lemon juice
2-tsp onion flakes
2 slice white bread grated into crumbs
1/8 tsp pepper
1cup milk

Heat oven to 350 degrees.

Flake tuna and add pepper

Beat egg whites and add lemon juice, onion, crumbs and milk. Add this mixture to fish.

Bake in a greased 9"x5"x3" loaf pan for 35-45 min.

Tuna Pasta Salad

6 oz canned tuna in water
1/4 cup diced onion
1/4 cup Italian salad dressing
2 cups pasta, elbows or rotini
2 garlic cloves mashed and minced
1/4 cup fresh parsley or basil

Cook pasta drain and toss with salad dressing.

Add remaining ingredients.

Humus

1 2/3 cup canned chic peas
1/4 cup sesame tahini
1/4 cup lemon juice
3 cloves garlic mashed and minced
1/2 tsp dried coriander or parsley
1/4 tsp ground cumin
1/4 tsp paprika
Dash red cayenne pepper

In blender or food processor, blend chickpeas, tahini and lemon juice in batches until mixture reaches consistency of a coarse paste. Add water if needed.

Add seasonings and garlic and process again to combine.

Marinades

Mix ingredients and marinate in the refrigerator for at least 8 hours.

For Fish Kebabs

1 tbs olive oil	2 tbs Dijon-style mustard
2 tbs honey	1 tbs dry sherry
1 tbs lemon juice	salt and freshly ground pepper to taste

For Fish Fillets

½ cup lemon juice	½ cup reduced sodium soy sauce
2 tsp Asian sesame oil	2 tsp peeled, finely chopped ginger root
Salt and freshly ground pepper to taste	

For Meat Kabobs

½ cup dry red wine	2 tsp minced garlic
2 tbs olive or canola oil	2 tsp peeled, finely chopped ginger root
1 ½ tsp curry powder	½ tsp freshly ground pepper to taste
2 tsp reduced sodium soy sauce	
2 tbs Ketchup or tomato sauce	

For Chicken and Pork

½ cup orange juice	1 tbs sesame oil
1 tsp finely minced garlic	
¼ cup sherry or rice wine	
¼ cup reduced sodium soy sauce	
2 tsp peeled, finely chopped ginger root	

For Vegetables

2 tbs olive oil	1 tsp Dijon style mustard
1 tsp minced garlic	¼ tsp salt
¼ cup white wine vinegar	
Tsp freshly ground pepper to taste	

Low AGE Sample Menus*

Day 1

Breakfast

Oatmeal (packet or regular)
Whole wheat bread
Soft margarine
Coffee or tea, 1 % milk

Lunch

Egg salad (1egg with 2 egg whites)
Light mayo
Onion chopped or celery
Lettuce and tomato
Large hard roll
Apple
Water or any beverage

Snack

Angel food cake, Herbal tea

Dinner

Poached salmon
Corn, canned or steamed
Green beans, steamed
Dinner roll or slice bread
Soft margarine
Fruit salad
Water or beverage

Snack

Low fat yogurt

Day 2

Breakfast

Puffed wheat
Non fat or 1% milk
Whole wheat bread
Fruit spread, low sugar
Grapefruit or melon
Coffee or tea

Lunch

Humus
Pita bread
Vegetable strips (cucumber, peppers, zucchini)
Water or any beverage

Snack

Pear, raw

Dinner

Chicken soup or stew
Noodles
Cooked carrots, celery, onion (any vegetables)
Tossed salad with light salad dressing
Dinner roll
Water or beverage

Snack

Ice cream

*Portion sizes to be adjusted to meet individual needs.

Low AGE Menus

Breakfast

Oatmeal	Cooked egg
Whole wheat bread	Bagel
Soft margarine	Soft margarine
Banana	Orange
Milk	Milk

Lunch

Light mozzarella cheese	Tuna salad (light mayonnaise)
Lettuce	Roll
Tomato	Green and red pepper strips
Light mayonnaise	Soft granola bar
Whole wheat bread	Water or any beverage
Apple	
Water or any beverage	

Snack

Cold cereal and milk	Yogurt
----------------------	--------

Dinner

Vegetable soup	Melon
Salmon loaf	Chicken a la king
Peas & carrots	Rice
Dinner roll	Green beans
Vanilla or chocolate pudding	Gelatin