

LESSON 2: HEALTH BENEFITS & PREPARATION

TOPICS IN THIS LESSON:

- Rice Nutrition
- Rice & the Food Industry
- How to Cook Rice

HAND-OUTS:

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- Rice Wordsearch



LESSON 2: HEALTH BENEFITS & PREPARATION

RICE NUTRITION 101

Rice is a naturally nutritious grain, and the foundation for healthier eating for all dietary patterns and lifestyles. Research shows that consumers who eat rice have diets closer to the recommended U.S. Dietary Guidelines for Americans.

The U.S. Dietary Guidelines recommend that consumers eat more nutrient-dense foods, meaning those that deliver ample vitamins and minerals with relatively low amounts of calories. The Guidelines also recommend that carbohydrates such as rice make up 45-65 percent of the daily diet, and suggest an average of five servings (more or less depending on calorie needs) of grains each day, with whole grains making up at least half of grain servings.

Did You Know?



Rice Offers Good Nutrition and Top Value for the Food Dollar

A half-cup cooked serving of white or brown rice costs less than 10 cents, and provides vitamins, minerals and nutrients. One pound of uncooked rice makes over two pounds of cooked rice. High satisfaction and good nutrition make rice an essential ingredient in foodservice, where customer satisfaction and operational profitability are critical to success.

RICE IS NATURALLY NUTRITIOUS BECAUSE IT:

- Is sodium- and cholesterol-free.
- Has only a trace of fat, no cholesterol-raising trans fats or saturated fat.
- Is gluten-free and the least allergenic of all grains.
- Is nutrient dense and contributes over 15 vitamins and minerals, including folic acid and other B-vitamins, iron and zinc.
- Has approximately 100 calories per half-cup serving.
- Is comprised of complex carbohydrates that are more slowly digested.
- Triggers the neurotransmitter serotonin in the brain that helps regulate and improve mood.
- Is an energy food, supplying carbohydrates that fuel the body's physical activity.

FAST FACT: RICE IS GLUTEN FREE!



ARKANSAS GROWN RICE KERNEL SIZE COMPARISON

KERNEL SIZE	DIMENSIONS	EXAMPLES	COOKED DESCRIPTION	USAGE EXAMPLES
 Long Grain	3 to 4 times as long as it is wide	<ul style="list-style-type: none"> • Long grain brown • Long grain white • Della • U.S. basmati • U.S. aromatic red • U.S. jasmine 	Fluffy separate grains <i>While classified as long grain, jasmine rice's characteristics resemble medium grain's moist, clingy texture</i>	Entrees, Soups, Salads, Pilafs, Side Dishes, Rice Bowls, Fried Rice
 Medium Grain	2 to 3 times as long as it is wide	<ul style="list-style-type: none"> • Med. grain brown • Med. grain white • Calrose • Premium med. grain • U.S. arborio • Black japonica • Mahogany japonica 	Moist and slightly sticky	Sushi, Asian Dishes, Risotto, Paella, Soups, Salads, Rice Pudding

DISCUSSION ACTIVITY: ASK STUDENTS TO SHARE THEIR FAVORITE WAYS TO EAT RICE!

RICE CO-PRODUCTS

- **Rice Flour**—Broken kernels of rice (white or whole grain) are separated from whole kernels during milling and are ground into rice flour, also called rice meal.
- **Rice Bran**—Rice bran removed during milling contains dietary fiber and antioxidant-rich phytochemicals that have been found to help reduce the risk of heart disease, certain cancers and type II diabetes.
- **Rice Bran Oil**—Oil extracted from rice bran has unique nutritional and culinary properties. It has a nut-like flavor, good shelf stability and is favored by some chefs for applications such as frying.
- **Rice Syrup**—Mild flavored sweet syrup from rice (with range of concentrations and sweetness levels) can be substituted for sugar, honey, corn syrup, molasses or maple syrup in recipes.



COOKING RICE

There are many different methods for cooking rice. It is important for students to learn multiple ways of cooking rice so that they are able to choose the best method for each situation and recipe.

When deciding which method to use, consider:

- Type and form of rice being used
- Recipe and desired finished product
- Cooking equipment available
- Time available
- Skill level of person cooking rice

PROPORTION OF RICE & COOKING LIQUID

Most methods of cooking rice require a measured amount of liquid to ensure a properly cooked product. The general 'rule of thumb' is 2 to 1 (2 parts liquid to 1 part rice by volume). **However, it is important to note that different rice types may require slightly less or slightly more liquid.**

Check the package instructions to verify the proper ratio of liquid to rice and cooking time for the specific rice you are using.

RICE COOKING METHODS

SIMMERING OR STEAMING

Simmering/steaming can be done in a pot on the stove, in a hotel pan in the oven or in a rice cooker.

PILAF METHOD

The pilaf method begins by sautéing rice in butter or oil, often with herbs or aromatic vegetables (onions, celery, garlic, etc.), and then adding a measured amount of flavorful liquid (usually stock) for simmering.

BOILING METHOD

The boiling method, sometimes referred to as the "pasta method," produces tender grains of rice that are completely separate and not sticky. The method is sometimes used for rice that will be used in soups and salads.

RISOTTO METHOD

The risotto method cooks rice at an active simmer while stirring in hot flavorful liquid (usually a combination of stock and wine) in small increments until the rice is tender.

ACTIVITY: BRING IN DIFFERENT TYPES OF RICE FOUND IN STORE, INCLUDING MICROWAVABLE RICE AND OTHER SPECIALTY RICES TO LET STUDENTS OBSERVE THE DIFFERENCES AND SIMILARITIES!

LESSON 2: HEALTH BENEFITS & PREPARATION QUIZ

1. Rice is the least allergenic of all grains because it is _____.
a) Low Starch b) Gluten Free c) Slowly Digested
2. The two types of grains grown in Arkansas are _____ and _____.
a) Tall and Short b) Long and Medium c) Tall and Medium
3. What are the four co-products of rice?
4. Rice is budget-friendly.
TRUE FALSE
5. Rice is an _____ food because it supplies carbohydrates that fuel the body.
a) Energy b) Fun c) Sedentary
6. What is the general rule of thumb of rice to liquid when cooking rice?
7. Approximately how many calories are in a half-cup serving of rice?
a) 250 b) 90 c) 100
8. What is NOT something to consider when cooking rice?
a) Type of Rice Used b) Time Available to Cook c) Height of Person Cooking
9. The cooked description of medium grain rice and long grain rice are the same.
TRUE FALSE
10. Name four most popular rice cooking methods:

LESSON 2: HEALTH BENEFITS REVIEW QUIZ ANSWERS

- Rice is the least allergenic of all grains because it is _____.
a) Low Starch b) **Gluten Free** c) Slowly Digested
- The two types of grains grown in Arkansas are _____ and _____.
a) Tall and Short b) **Long and Medium** c) Tall and Medium
- What are the four co-products of rice?
Rice Flour, Rice Bran, Rice Bran Oil, Rice Syrup
- Rice is budget-friendly.
TRUE FALSE
- Rice is an _____ food because it supplies carbohydrates that fuel the body.
a) **Energy** b) Fun c) Sedentary
- What is the general rule of thumb of rice to liquid when cooking rice?
2 parts liquid to 1 part rice, by volume.
- Approximately how many calories are in a half-cup serving of rice?
a) 250 b) 90 c) **100**
- What is NOT something to consider when cooking rice?
a) Type of Rice Used b) Time Available to Cook c) **Height of Person Cooking**
- The cooked description of medium grain rice and long grain rice are the same.
TRUE **FALSE**
- Name four most popular rice cooking methods:
Simmering/Steaming, Pilaf, Boiling, Risotto

WORD SEARCH

ARKANSAS RICE



Arkansas Rice

Z S T E A M I N G P
A Y A R I S O T T O
Q N S S S I A E W I
E E R F N E T U L G
U Q G G Y A P M I R
P A D R Y N K J B A
G N I L I O B R L I
J C C E G P L F A N
E H M G W J G F I D
N U T R I T I O U S

ARKANSAS
GRAIN
RISOTTO

BOILING
NUTRITIOUS
STEAMING

GLUTENFREE
RICE

SIMMERED/STEAMED LONG GRAIN RICE

YIELD: 3 PT. (1.5 L)

INGREDIENTS:

1 QT. WATER
1 PT. LONG GRAIN WHITE RICE
1 TSP. SALT

FOR STOVE TOP:

1. Combine water, rice and salt in a heavy pot; bring to a boil.
2. Cover the pot and simmer over low heat for 15-20 minutes, or until rice is tender and water is absorbed.
3. Remove from heat; let stand 5 minutes. Remove cover and fluff with a fork to help release steam.

Note: Brown rice may be substituted for this cooking method; consult directions on product package.



RICE PILAF

YIELD: 3 PT. (1.5 L)

INGREDIENTS:

2 OZ. BUTTER
2 OZ. ONION, SMALL DICED
1 PT. LONG GRAIN WHITE RICE
1 QT. STOCK (CHICKEN, BEEF, VEGETABLE)
1 EA. SALT & WHITE PEPPER (TO TASTE)

FOR STOVE TOP:

1. Melt butter in a heavy saucepan over medium-low heat. Add the onion, stir to coat with fat, cover the pan and cook until onion is translucent (do not allow to brown).
2. Add rice and stir to coat with the butter. Saute briefly to lightly toast rice.
3. Add stock and bay leaf and season to taste. Stir to moisten rice, and bring to a simmer.
4. Cover the pot and simmer over low heat for 15-20 minutes until rice is tender and liquid is absorbed.
5. Remove from heat; let stand for 5 minutes. Remove cover and fluff with a fork to help release steam.

Note: Brown rice may be substituted for this cooking method; consult directions on product package.



BOILED RICE

YIELD: 3 PT. (1.5 L)

INGREDIENTS:

1 GAL. WATER
1 TBSP. SALT
1 PT. MED. OR LONG GRAIN WHITE RICE

FOR STOVE TOP:

1. Combine water and salt in a large pot and bring to a rapid boil.
2. Add rice, stir, cover and return to a boil.
3. Uncover and boil until rice is tender.
4. Drain off water. Serve immediately or rinse the rice in cold water.

Note: Brown rice may be substituted for this cooking method; consult directions on product package.



RISOTTO METHOD

YIELD: 3 PT. (1.5 L)

INGREDIENTS:

2 QT. STOCK (CHICKEN, BEEF, VEGETABLE)
TO TASTE SALT & WHITE PEPPER
3 OZ. BUTTER
2 OZ. ONION, SMALL DICED
1 PT. MEDIUM GRAIN OR U.S. ARBORIO RICE
1 C. DRY WHITE WINE
3 OZ. GRATED PARMESAN CHEESE

FOR STOVE TOP:

1. Bring chicken stock to a simmer and season with salt and pepper; keep hot.
2. Melt 2 oz. (60 g.) butter in a heavy saucepan over medium-low heat. Add the onion, stir to coat with fat, cover the pan and cook until onion is translucent—do not allow to brown.
3. Add rice and stir to coat with the butter.
4. Add wine; raise heat to medium and stir until most of the wine is absorbed.
5. Add about 1 pt. (500 ml.) of hot stock. Stir until most of the stock is absorbed.
6. Repeat step 5 until all the stock is absorbed and the rice becomes tender.
7. Finish the risotto by stirring in the remaining butter and the Parmesan cheese. Serve immediately.



GET SOCIAL

Everyone can be an advocate for Arkansas rice by engaging on social media.

Give students a few minutes to Follow, Like, Retweet or Share each day to spread the word about the benefits of agriculture in our state.

Don't forget...social media involvement can make teachers eligible for rice prizes and gear, too!

 **@ARKANSASRICE**

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