Apple Balsamic Salmon with Whole Grains

Whole grains, such as quinoa, brown rice, bulgur, whole-wheat pasta, are known for their low scores on the Glycemic Index (GI). When cooking diabetes-friendly meals for you and your family, aim to incorporate these complex carbohydrates, as they will help to control blood glucose levels, manage cholesterol levels, and control appetite. People with diabetes commonly have high blood triglyceride levels. Healthy unsaturated fats, such as omega-3’s found in salmon, can help lower triglyceride levels. By preparing this salmon dish, with a serving of your favourite whole grains, you and your family can enjoy a delicious and diabetes-friendly meal.

makes 4 servings

Ingredients

• 4 (4-ounce) skinless salmon fillets, 3/4 to 1 inch thick
• 1/4 to 1 tsp fine sea salt (normal table salt can be used)
• 1/4 cup apple jelly
• 2 teaspoons aged balsamic vinegar
• 3/4 cup julienne-cut, unpeeled, Granny Smith or other green apple (1/4 x 1-1/2-inch-long slivers)
• 3/4 cup julienne-cut, unpeeled Gala or other reddish apple (1/4 x 1-1/2-inch-long slivers)
• 1/3 cup very thin sliced and quartered leek (white and light green portion only)
• Course-ground black pepper

Directions

1. Preheat oven to 450° F and prep 4 pieces of aluminum foil (large enough to completely cover salmon fillets).
2. Fold each piece of foil crosswise in half. Cut 4 half-heart shapes 7 inches longer and 4 inches wider than the fillets (the fold edges will be the centers of the hearts). Open each paper or foil heart; set aside.
3. Lightly sprinkle salmon with salt.
5. Fold opposite side of each foil heart up and over the fish and apple mixture. Starting at top of heart, fold edges to seal open sides by making small tight folds. Twist the tip of hearts to close packets. Place packets on baking sheet. Bake in preheated oven for 8 to 12 minutes until fish flakes easily. (Carefully open packets to check doneness.)
6. To serve, cut packets open by slashing a large X on the top of each, then fold back paper. Transfer packets to dinner plates and serve with your choice of whole grain (such as, long grain rice, polenta, whole-wheat couscous or quinoa) and a side of veggies.

Nutritional Information

per serving
Energy: 300 kcal
Total fat: 15 g
Saturated fat: 3.5 g
Protein: 23 g
Carbohydrates: 17 g
Cholesterol: 60 mg
Sodium: 70 mg
Diabetes

What is Diabetes?

There are three types of Diabetes, including type 1, type 2, and gestational. Type 1 and type 2 are the most common:

**Type 1 diabetes** usually occurs in children and young adults. In this case, the body does not produce the hormone insulin. Insulin enables our body’s cells to take sugar (glucose) from our blood (which is obtained from the food we consume), where it is converted into the energy required for our cells to work properly. People with this form of diabetes must take daily insulin injections in order to clear glucose from the blood and nourish the body’s cells.

**Type 2 diabetes** is typically found in adults, although it has become increasingly prevalent in children. In this case, the body is capable of making insulin (however sometimes it does not make enough), but it does not respond appropriately to the hormone. This is referred to as *insulin resistance* and this form of diabetes is challenging because the body’s cells are unable to take up glucose from the blood even in the presence of insulin.

When glucose cannot be transported into your cells, it builds up in your blood (hyperglycemia=high blood glucose levels) and can cause several serious problems, including damage to your eyes, kidneys, nerves and/or heart.

Preventing Diabetes

Type 1 diabetes cannot be prevented and it generally manifests itself early on in life. This form of diabetes must be managed through insulin therapy and proper blood glucose monitoring. On the other hand, type 2 diabetes can be preventing by leading a healthy lifestyle. If you have a family history of type 2 diabetes or if you are overweight, you may be at risk. It is possible to manage and/or reverse this form of diabetes by following these healthy lifestyle guidelines:

- **Consume a healthy diet**—Follow the suggestions on the next page. For a personalized approach, make an appointment with an HPC dietitian to learn more about making healthy food choices
- **Be physically active**—Aim for 20 minutes each day to begin with and increase the intensity of the exercise and frequency of your exercise sessions as you become more physically fit.
- **Maintain a healthy weight**—Being overweight increases your risk, and losing weight can improve your body’s response to insulin—Refer to the Weight Risk chart on the next page to determine if you are at risk.

**People with type 1 diabetes will also benefit from following these lifestyle recommendations. It is important to manage their blood glucose levels and their body’s ability to respond to insulin.**


**Diabetes Superfoods**

**Sweet Potatoes**  
Sweet potatoes are starchy vegetables full of vitamin A and fibre. Use these in place of your regular potatoes for a lower Glycemic Index (GI) alternative. Lower GI foods help prevent sudden increases in your blood glucose level, helping you to better maintain blood glucose control.

**Berries**  
All berries are full of antioxidants, vitamins and fibre. Try them in a parfait by layering berries and low fat yogurt for a healthier dessert.

**Beans**  
Their high fibre content gives you nearly one-third of your daily requirement in just 1/2 cup. Beans are also good sources of magnesium and potassium, which are nutrients that have been implicated to help reduce the cardiovascular risks associated with diabetes.

**Fish with omega-3s**  
Salmon, mackerel, halibut, and herring are high in omega-3 fatty acids, which are important for heart health.

**Nuts**  
An ounce of nuts provides key healthy fats along with hunger management. Nuts also give you a dose of magnesium and fibre. Some nuts and seeds, such as walnuts and flax seeds, also contain omega-3 fatty acids.

**Making Healthy Food Choices**

- Eat lots of fruits and vegetables. Choose a variety of colours to get a wide range of nutrients.
- Eat non-starchy vegetables like spinach, carrots, broccoli or green beans to help control your blood glucose level.
- Choose whole grain foods instead of processed/refined grain products. Try using brown rice or whole wheat spaghetti and bread instead of their white alternatives.
- Choose lower fat dairy products such as 1% or skim milk, low-fat yogurt and low-fat cheese.
- Choose lean meats like pork loin and sirloin, and remove the skin from chicken and turkey.
- Eat fewer high calorie snacks and desserts like chips, cookies, and ice cream.
- Reduce the amount of added sugar you consume.
- Consume 2-3 pieces of fruit each day (sugars found in fruits are fine, since they do not negatively affect your blood glucose levels and they are also consumed in the presence of fiber, which helps to slow their absorption).

**Did you know?**

Studies have shown that cinnamon can improve blood glucose control and reduce cholesterol levels. It is likely that cinnamon improves blood sugar levels by sensitizing insulin.  


**Fact or Fiction?**

*eating too much sugar causes diabetes*  
This is FALSE

Type 1 diabetes is caused by genetics and unknown factors that trigger its development.

Type 2 diabetes is caused by genetics and lifestyle factors, such as diet and exercise. Being overweight increases your risk for developing type 2 diabetes, and a diet high in calories, whether its from sugar or fat, can cause you to gain weight.
Did you find this newsletter interesting and helpful?
Do you have more questions on how to make healthy changes to your lifestyle?
Come see a Registered Dietitian at the HPC. Learn how much you need to eat, how to optimize your metabolism, prevent cravings, and increase your energy levels!

References and Further Reading

- Canadian Diabetes Association: www.diabetes.ca
- Diabetes Monitor: www.diabetesmonitor.com

Fitness & Nutrition Success

Healthy, Lifelong Results

Lose weight • Increase energy • Prevent disease • Improve cholesterol
Improve fitness • Control blood sugar • Lower blood pressure

Phone: 519-767-5011 (or ext. 53039 on campus) Website: www.uoguelph.ca/hpc