

# The Grenada Food & Nutrition Council



## Nutricator

HEY, I LIKE YOU.  
DO YOU LIKE  
ME?



# CASSAVA

### Inside this issue:

GFNC message	2
SURVEY RESULTS	3
"Brain Food"	4
Recipes	6
Matching	7
Curious Little Hands	7
Captain Nutrition	8
GFNC Root Crop Corner	9
Reading Comprehension	10
GFNC Feedback Corner	11



*Grenada Food & Nutrition Council* 

Dear readers,

Food and nutrition has become buzz words on our island as we join the rest of the world to combat hunger and mal nutrition. The nutrition challenge is clear with the younger population trending toward overweight and obesity. Knowing the associated risks of obesity, and its link to chronic diseases, it is definitely time to take action.

The Ministry of Agriculture in recent years, driven by economic concerns has been promoting the cultivation and use of root crops like cassava, tannia and eddoes to name a few. Grenada Food & Nutrition Council being a statutory body under this ministry has embraced the opportunity to highlight the nutritional benefits of these crops.

In this issue of Nutricator we bring to light the diversity and versatility of cassava, showing the link between *variety of foods produced and consumed* and **balanced nutrition and health status**.

As you enjoy the several inspiring articles in this issue with your children/students, it is our hope that you would become more aware of that link between food, nutrition and health, and be a part of this growing thrust that promotes the use of our local foods in the fight to reduce the incidence of non-communicable disease (NCD) risk factors among our younger population.

Let us take a glimpse back, as we prepare for the future there are valuable diet related lessons to be learnt from our past. Cultivate diversity from farm to plate.

It is our pleasure to share this first issue of the Nutricator for 2015 with you. It is a publication geared toward providing nutrition education in a fun way to school aged children, their parents, teachers and guardians.

Happy reading!

N.Purcell  
Product Development & Training Officer

## GFNC 2014 NUTRITION PRE-SCHOOL SURVEY



Ah glad! Ah glad!



What you Glad about ? What happen?



I have normal Nutritional status.



What is that? You going away or what ?



No boy I have Healthy weight for my height.



How you know that ? Is mine normal too ?



Miss tell mommy in PTA yesterday, your parents must go to meetings so they will get information.



But how Miss know that?



The results came back from Food and Nutrition. You remember when they came to measure us last year.



Oh yes! I cried when the put me on the scale.



Well they said that 2483 children our age were measured. A lot were obese , some over weight and some at risk of becoming over weight or obese. That means they can get chronic disease like sugar and thing when they get older.



So only fat heavy children They find?



No! Some were under weight And a few short for their age. I am one of the normal ones tra la la . I have good weight for my height. Oh yea! Oh yea!



I am going by Miss to find out mine. Later alligator.

### Findings in the 2014 pre-school survey:

- 85% of the children measured had normal nutritional status for their age.
- There is a relatively low level of children of small status (stunted 1.8%) attending pre schools in Grenada, Carriacou and Petite Martinique.
- Compared to results from 2010 an increase from <1% to 1.8% was seen.
- There was an increase in overweight among preschoolers from 2% to 3.9%. (2010-2014)
- The trend of children with low BMI-for-age (wasted) among the preschoolers is decreasing. ( 7.5% in 2010 to 2.5% in 2014).



## **BRAIN FOOD: PINKY AND THE BRAIN**



Hi! I am Pinky. I will like to conquer the world.



Hi! I am the brain and everyday I am coming up with new ideas to defeat the odds in this world.

**PINKY:** Hi Brain, Do you have some time for us to chat. I want to be like you. You are so smart and talented.

**BRAIN:** Pinky, thank you for the compliment but I believe that it did not all happen by accident.

**PINKY:** What do you mean?

**BRAIN:** You see Pinky. I ensure that I eat healthy every day, exercise and have enough sleep. Therefore, I am always alert and ready to analyze any situation that comes my way.

**PINKY:** You mean food; , exercise and sleep could do all that?

**BRAIN:** Yes Pinky, They work wonders in your life. I cannot believe that you did not know that.

**PINKY:** Well!!!! I never had that conversation with anyone before and at school I concentrate on my sciences because I want to become a doctor.

**BRAIN:** It is very important that you make time for your health because you may never live to see the completion of your studies as a doctor and besides there are certain foods that will assist you with getting better grades.

**PINKY:** Yes!!! Well don't hesitate I will like to know so that I can start making changes.

**BRAIN:** First of all you will have to start by ensuring that you have a balance diet everyday with foods from the six food groups.

**PINKY:** Ok. Hold up. When you say balance diet, what you mean?

**BRAIN:** Wow Pinky. I really need to spend some time with you because this is important. To balance anything, you will have to make sure that you have a variety meaning different types in required amounts. It is the same thing with foods: you can use the six food groups to categorize them into different types and the amounts will be in order of benefits or importance to the body. It is also important to analyze which ones are harmful because you will want to consume less of these and which ones are rewarding to the body so that you can consume more of these.



**PINKY:** JEEZZZ! That is a lot of work. What are the six food groups? I am lost here.

**BRAIN:** The six food groups are Fruits, Vegetables, Staples, Legumes, Food from Animal and Fats & Oils.

**PINKY:** That is a start. However, I will like to also know which foods are directly related to the brain because like I told you earlier. I want to be smart like you.

**BRAIN:** LOL! There are many foods that are directly related to brain health. Remember, the brain is made up of nerves, cells and blood vessels and they need to be fed in order to function properly and effectively.

**PINKY:** Ok, I think I do understand now. So tell me more about these foods that fuel the brain.

**BRAIN:** The ability to concentrate and focus comes from the adequate, steady supply of energy - in the form of glucose in our blood to the brain. Whole grains will help to release glucose slowly into the bloodstream, keeping you mentally alert throughout the day.

Omega-3 fats from sources such as linseed (flaxseed) oil, soya bean oil, pumpkin seeds, walnut oil and oily fish (mackerel, herring and sardines) support healthy brain function.

Lycopene, a powerful antioxidant found in tomatoes can help against free-radical cell damage in the brain.

Vitamin B6, B12 and folic acid may reduce levels of homocysteine in the blood. High levels of homocysteine are associated with increased cognitive impairment and Alzheimer's disease.

Dark green leafy vegetables are great sources of vitamin K, which are known to enhance cognitive function and improve brainpower.

Foods rich in vitamin E might help to prevent cognitive decline, particularly in the elderly. Nuts are great sources of vitamin E along with leafy green vegetables, seeds, eggs, brown rice and whole grains.

**PINKY:** You are the best! I have never had someone explain it to me in such depth before?

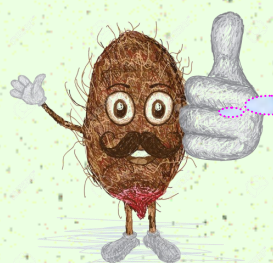
**BRAIN:** I am so good at explaining my secret to great brain health because it has become my lifestyle. I eat smart for breakfast, snack, lunch and dinner and I have no regrets.



Written by:  
Cristina Swan Hinds  
Communications Officer  
Grenada Food and Nutrition Council

## Knowledge Quiz 1

1. What is the brain made up of?
2. What does the brain need to function properly?
3. What is a balanced diet?
4. What are the six food groups?
5. Name three vitamins that are essential to brain development.



Did you know that I am used worldwide to treat headaches and pain?

## GFNC RECIPE CORNER



### CASSAVA PIZZA



#### TOPPINGS

1 cup pizza sauce or mango ketchup  
4 oz grated cheese  
1 onion chopped  
1 cup cooked meat or fish (stripped)

#### INGREDIENTS

2 lbs cassava  
1 cup flour  
½ tsp baking powder  
3 Tbsp butter  
2 garlic cloves  
Salt and pepper to taste  
2 Tbsps. chopped flavouring herbs

#### METHOD

Peel and cut cassava into rough 2-inch chunks. Place in a steamer and steam until tender.

In a food processor, pulse cassava, adding little dabs of butter as you go, along with flour, baking powder, some of the flavouring herbs and garlic. Remove and adjust salt and pepper.

Roll out on a floured board and place on a greased pizza pan.

Put on topping and place in a hot oven till cheese is melted. And slightly browned.

### CASSAVA PONE



#### INGREDIENTS

2 medium sweet cassava  
1 small dried coconut  
2 tbsp butter or margarine  
6 oz sugar  
¼ tsp spice and black pepper  
½ tsp essence  
¼ tsp salt

#### METHOD

Peel, wash, grate and mix the cassava and coconut together. Work in the butter with a fork.

Add the other ingredients and enough water to bind stiffly.

Put the mixture into a greased dripping pan, where it should be about 1 inch thick.

Bake in a moderate oven until crisp and brown on top.

Cut into 1½ to 2 inch squares before serving.



## **CASSAVA VARIETY MATCHING WITH YEAR & COUNTRY OF DEVELOPMENT YOU CAN RESEARCH THE INTERNET FOR**

Abbreviation Meaning:

(1) "TMS" means Tropical Manihot Species: A prefix used for all Cassava lines developed by IITA.

(2) "IITA" means International Institute of Tropical Agriculture

Please re-arrange the year and country of development to match the accurate variety.

Variety	Year	Country
TMS 91/02322	2006	Cameroon
TMS 92b/00061	2007	Nigeria
TMS M94/0177	2004	Cote d'Ivoire
TMS 91/02324	2000	Ghana
TMS 96/0023	2003	Burkina Faso
TMS 97/3982	2008	Central African Rep
TMS 98/0002	2005	Liberia
TMS 98/0581	2002	Burkina Faso
TMS 88/00158	2003	Guinea Conokry
TMS 4(2) 1425	2009	Togo



## **CURIOUS LITTLE HANDS IN THE KITCHEN SUMMER SESSSIONS**

CLHK inspires children to learn to cook easy, inexpensive, tasty foods through participation thus providing the foundation for healthy eating. Participants are provided with information about nutritious food choices and opportunities to practice food preparation techniques. Classes are open to children ages 7-12.

**one week classes** will run from July13, 2015 to July 31, 2015, in three different parishes;

**Registration:** \$ 25.00 per child (non- refundable)

**Tuition:** \$75.00 per child (Price includes all ingredients for preparation.)

Participants will receive all recipes to take home with them, and at the end of the week, participants will receive a Curious Little hands in the kitchen certificate of completion. Light snack provided, but please have your children walk with lunch.

**Call the Grenada Food and Nutrition Council at 440-2126 to reserve your space.**

# THE ADVENTURE OF CAPTAIN NUTRITION

Read the following story and find words that are linked to the following

- Common symptoms of type one and type two diabetes:
- Management tools to prevent complications:
- Common risk factors for diabetes:
- Words linked to increased blood sugar:

In the land of Healthy lived a captain called Nutrition. He grew up in the village called Food and attended the school of Wellness. Nutrition loved to read and look at news on television.

Nutrition became fascinated by a television documentary on an island called Diabetes. According to this documentary, the people of Diabetes were accustomed to drinking obesity, sweet tooth, family history and inactivity. Their dinner tables were almost always graced with the delicacies of fateful, fast foods, veggie less, carbs—a—lot and Fibreless Grains.

The population of diabetes was being plagued by disaster after disaster. After a prolonged drought of thirsty they faced severe famine of increased appetite and boniness; then high winds of hunger brought waves of regular wee-wee and tiredness. Heavy rains of mucho calories caused floods of fatigue, and landslides of obesity. The people were struggling to stay alive. Their wounded land now had problems healing and became prone to infection syndromes. Diabetians were so overwhelmed, they experienced blurry vision and became agitated.

Being a member state of Healthy, Diabetians reached out to them for assistance but the battle against these disasters forged on in spite of the support given to them from Healthy. They seemed unable to emerge from the effects of their unfortunate demise. They lived in constant fear, because they knew that if they did not protect the land of Diabetes, they were in danger of being hit by a grade complications hurricane.

During one of the commercial breaks, one of the captions read **'You are what you eat'**. A light went on in the captain's head.

Woo Hoo! Wait just a second! Said captain Nutrition, 'If this is true the Diabetian children are in big trouble.' That's when he decided to go on this notorious voyage to reform the land of Diabetes. His plan was to impart knowledge and skills to the Diabetians that would empower them to fight the elements of nature that came up against them, and protect them from grade complications hurricane. Captain Nutrition named his vessel INTERVENTION. His crew consisted of three members, first mate DIET, second mate EXERCISE and a look out Medication.

The Intervention sailed from the ports of Healthy through the gulf of mouth to the Pancreas dock. From the dock the Intervention crew went to the river of cells via *insulin* rafts carrying a gift from diet called Cassava. Cassava proved to be a champion in the fight against the invasion. So much so that it was given the high honour of "food security crop" for its resistant starch in combat.

From this point Captain Nutrition and his crew, Diet, Exercise and Medication were able to help the Diabetians. They signed the treaty of will power in the court of Lifestyle Change giving captain Nutrition the right to be on the management team of Diabetes.

## Knowledge Quiz 2

1. What are the common symptoms of type one and type two diabetes?
2. What are the management tools to prevent complications?
3. What are the common risk factors for Type 2 diabetes?
4. Name three (3) words linked to increase blood pressure?



## GFNC ROOTCROP CORNER

My name is **SWEET CASSAVA** sometimes people call me Manioc.

I am originally from South America however I enjoy travelling therefore I have moved through Portugal, tropical Africa and the Caribbean just to name a few places.

I come from a very large family with lots of varieties of brothers and sisters: I grow from the planting of my relative stem, I am not labour intensive and I do not need rich soil. I can be harvested after 6 months of planting.

I am very precious, I can go bad, if not cared for within a short space of time after harvesting.

However, I am a very good friend to have because I am rich with nutrients such as potassium, carbohydrates, calcium, vitamin B & C and other essential minerals that can strongly support your development and growth.

I am a versatile staple food, you can include me in almost all areas of your cooking and preparation within your kitchen.

I can assure you food security and wealth.



I am the best root crop ever.

I am the best alternative in making gluten-free products.

I can be prepared in many ways such as: boiling, roasting, frying, baking, made into drinks and much more.

I have a wide variety of nutrients inside me. I can help with diabetes, cholesterol, cancer, inflammation arthritis and more!

I Have!  
Carbohydrates  
Potassium Calcium  
Vitamin A, B's, C, E,  
Folate Fiber Protein  
Magnesium Resistant  
starch Antioxidants  
Saponins Iron

MATCHING ANSWERS

Variety	Year	Country
TMS 91/02322	2002	Central African Rep
TMS 92b/00061	2003	Burkina Faso
TMS M94/0177	2003	Burkina Faso
TMS 91/02324	2007	Guinea Conokry
TMS 96/0023	2004	Cameroon
TMS 97/3982	2005	Ghana
TMS 98/0002	2006	Nigeria
TMS 98/0581	2008	Liberia
TMS 88/00158	2009	Cote d'Ivoire
TMS 4(2) 1425	2000	Nigeria

# Reading Comprehension



Read the story and answer the questions to test your comprehension.

Cassava root, which is grown mostly in Africa, is a starchy food that is the third largest source of carbohydrates on the planet. These white or off-white roots are very high in calcium and vitamin C, as well as energy. Cassava is a perennial plant that grows best under tropical, moist, fertile, and well-drained soils. Completely grown plant reaches to a height of about 2-4 m. Under the cultivation fields, its cut-stem sections are planted just as in the case of sugarcane. After about 8-10 months of plantation, long, globular roots or tubers grow in a radial pattern downwards deep into the soil from the bottom end of stem up to the depth of 2-4 feet. If the roots are processed, ground up and dried out, their flour is used to make tapioca!

1. Where is cassava root grown?
  - a. Africa
  - b. Mexico
  - c. Italy
2. What is the cassava root a source of?
  - a. Protein
  - b. Carbs
  - c. Fat
3. What does dried cassava flour make?
  - a. Dressing
  - b. Pudding
  - c. Tapioca

## CASSAVA FLOUR PUDDING

### INGREDIENTS

3 cups whole milk  
 1/2 cup cassava flour  
 1/2 cup sugar  
 1/4 teaspoon salt  
 2 eggs, beaten  
 1/2 teaspoon vanilla extract  
 1 medium mango, peeled and diced  
 1/2 cup shredded coconut, toasted

### METHOD

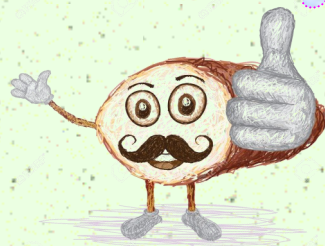
1. Stir together the milk, cassava flour, sugar, and salt in a medium saucepan. Bring the mixture to a boil over medium heat, stirring constantly. Reduce heat to low; cook and stir 5 minutes longer.
2. Whisk 1 cup of the hot milk mixture into the beaten eggs, 2 tablespoons at a time until incorporated. Stir the egg mixture back into the cassava until well mixed. Bring the pudding to a gentle simmer over medium-low heat; cook and stir 2 minutes longer until the pudding becomes thick enough to evenly coat the back of a metal spoon. Remove from the heat and stir in the vanilla. The pudding may be served hot or poured into serving dishes and refrigerated several hours until cold. Top each serving with diced mangoes and toasted coconut..



1. Fatigue, Boniness (unexplained weight loss) thirst; regular wee—wee, increased appetite, poor wound healing; infections: agitation, blurry vision, hunger.  
 2. Check blood sugar and pressure level at least twice a year, take medicated pills and prepare a meal plan for your diet.  
 3. Being overweight, inactivity, family history, age.  
 4. Stroke, hypertension and coronary heart disease.

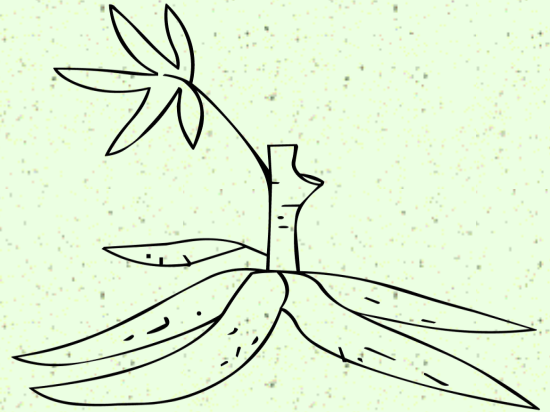
### QUIZ 2 ANSWERS

Read Comprehension Answer  
 1. A  
 2. B  
 3. C



Did you know that I  
am the third largest  
source of carbohy-  
drate in the world?

# Colour The Cassava!

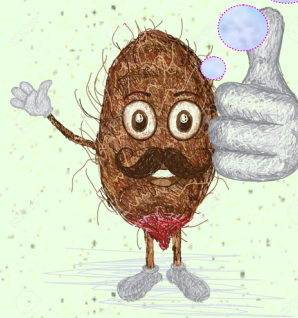


## GFNC WILL LIKE TO HEAR FROM YOU

In an effort to provide our readers with age appropriate nutrition education material, it is important that your views are heard. Please give some feed back on the following.

1. Was the information in each article clearly understood? If no, please explain?
2. Were the questions asked, too difficult?
3. Did you have difficulty reading the prints in the magazine?
4. How will you rate the articles in this magazine?
5. What other topics will you like to see published within this magazine?
6. How do you rate the activities? Easy , just right or Difficult.

Stay Healthy and  
Thank You For  
Reading!!!



You can choose to respond to the above questions via email: [gfn08@gmail.com](mailto:gfn08@gmail.com) or mail to: The Grenada Food & Nutrition Council, Upper Church Street, St. George's or make it available to our Nutrition Officers.





**Grenada Food and Nutrition Council** started as a National Nutrition Committee under the Ministry of Health, but was later upgraded to the Grenada Food and Nutrition Council in 1980 by Peoples' Law No. 32. The Ministries of Education and Health have been homes to the Council. However in 1984 the government placed the Council as a statutory body under the Ministry of Agriculture.

### **The Grenada Food and Nutrition Council's Mission Statement**

“To promote the nutritional well-being of all segments of the population of Grenada, Carriacou and Petite Martinique through analyzing, managing and preventing nutrition-related problems and to enhance the quality of life of our people through the promotion of good nutrition and healthy lifestyle behaviours.”

