



NUTRITION NOTES

GEORGIA NUTRITION COUNCIL

2020 Spring

Happy Spring, GNC!

Wow! What an eventful start to 2020. We kicked off the year with our annual conference, held on February 27th & 28th, at Georgia Southern University in Statesboro. This year's conference was focused on the "Culture of Food and Nutrition". We also celebrated two anniversaries - the 70th anniversary of the Georgia Nutrition Council (1950) and the 80th anniversary of its predecessor the Georgia Committee for National Defense (1940). What a great conference it was!

Thank you to our past President, Joelle Romanchik-Cerpovicz, for organizing. Joelle selected a wonderful panel of speakers and experts to present on diverse topics of culture, food and nutrition. As always, our conference was concluded with the swearing in of our 2020-2021 Executive Board and it is my great honor and privilege to serve as your 2020-2021 GNC President. I am excited to work with such a talented and dedicated team of individuals. While I can't promise smooth sailing with the current state of our environment, I can promise that GNC is committed to consistently improving our outreach and support. We are hoping to implement and provide these opportunities to our student and professional members in the forms of outreach grants, student scholarships, poster presentations and research competitions.



As a reminder, Georgia Nutrition Council has rolling membership enrollment which means you can enroll anytime throughout the year. Our goal is to continue increasing the membership and annual conference attendance. The constitution of the organization states: "any person interested in food and nutrition in Georgia is eligible for membership". That same philosophy is true today, as the current membership includes both nutrition professionals and Georgia's own nutrition enthusiasts. Our hope is for GNC to grow can be achieved with the help of our wonderful members. So, I challenge each of you to reach out to your friends, coworkers, colleagues, and classmates. Please share all that GNC has to offer and how you have benefited from being a member. An organization can't grow without its members, and each one of you plays a huge role in our success.

As we navigate through the unknown of this challenging season, I want to leave you all with this positive note: **"Despite all that is going on, we still have the gift of life. Let's make the best of it!"**

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Container Gardening!!

You don't need a lot of space to grow your own food

Container gardening is a hot trend during the quarantine days we are all in. Gardening has been shown to reduce stress and anxiety as well as providing a practical purpose. Container gardens can grow in windowsills, back patios or as a part of curb appeal on a front porch. Container gardens are an inexpensive, removable way to prepare produce for fresh dishes!

Foods that grow well in containers:

- Herbs
- Tomatoes
- Garlic
- Green Onions
- Peppers

Things you can use for containers

- Plastic buckets
- Inside pots
- Cups/glassware
- Fabric pots

Currently it is the perfect season to start growing some veggies like tomatoes, peppers, spring onions and cucumbers!





Antioxidant and Nephroprotective Effects of Okra Pods Extract (*Abelmoschus esculentus* L.) against Lead Acetate-Induced Toxicity in Mice.

In this study, we determine the curative effects of okra pods (*Abelmoschus esculentus* L.) extract against lead acetate toxicity in mice kidney. *n*-Hexane, ethyl acetate, and methanol solvent were used for extracting okra pods. The role of the extract as an antioxidant was tested by DPPH and FRAP methods. The methanol extract was used for experiments in animals. A total of 30 male BALB/c mice were randomly divided into six equal groups: normal control, negative control (lead-induced), and treatment groups (lead-induced for 28 days and administration of methanol extract at doses of 50, 100, 200, and 400 mg/kg BW for the 28 days). The following were analyzed in all groups: activity of the antioxidant enzymes, namely, superoxide dismutase (SOD) and catalase (CAT); oxidant level, namely, malondialdehyde (MDA) and nitric oxide (NO); and markers of kidney injury, namely, blood urea nitrogen (BUN) and creatinine (Cre). Kidney histopathology was also evaluated. This study showed that the methanol extract showed the highest antioxidant activity (IC_{50} is 35.21 μ g/mL, and FRAP is 57.58 μ M Fe^{2+} /g). The CAT and SOD activities increased significantly in okra-treated groups ($P < 0.05$). The okra administration groups experienced a significant decrease in MDA, NO, BUN, and Cre levels ($P < 0.05$). Thickness of the epithelial proximal tubule, diameter of the proximal tubule, and percentage of necrotic cells in proximal tubule decreased, but the diameter ratio of glomerular Bowman's capsule in mice treated with okra was optimally improved and repaired like normal control ($P < 0.05$). The results of this study reveal that methanol extract has a very strong antioxidant effect and can reduce the influence of toxicity induced by lead acetate in mice kidney.

Antioxidant and Nephroprotective Effects of Okra Pods Extract (*Abelmoschus esculentus* L.) against Lead Acetate-Induced Toxicity in Mice. (2020). Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/32318309>

Okra with Tomatoes

Ingredients:

4 cloves garlic
3 Tbsp olive oil
4 cups okra
1 small onion
1 pt cherry tomatoes
1 tbsp vinegar

Method:

Saute 4 smashed garlic cloves in 3 tablespoons olive oil over medium heat until golden.

Add 4 cups okra (halved length-wise) and 1 small onion (cut into wedges); season with salt and pepper and cook until the okra is tender and bright, 10 to 12 minutes.

Add 1 pint halved cherry tomatoes; cook until just bursting, 3 minutes. Finish with a splash of cider vinegar.



Food Network Magazine (n.d.). Okra and Tomatoes. Retrieved April, 20, 2020 from <https://www.foodnetwork.com/recipes/food-network-kitchen/okra-with-tomatoes-recipe-2103770>

Muscadine Pie

Ingredients:

Filling:

6 cups muscadine grapes
½ cup water
1 cup sugar
¼ cup cornstarch
1 large egg, lightly beaten
1 tsp orange zest
1 tsp vanilla extract
½ tsp ground cinnamon
1 Tbsp heavy cream
2 Tbsp turbinado sugar

Method:

Separate hulls from pulp of grapes. Place grape hulls and ½ cup water in a medium saucepan. Place grape pulp in a separate medium saucepan. Bring both pans to a boil over medium-high heat. Cook for 15 minutes. Remove from heat. Stir sugar into hull mixture. Strain pulp mixture through a fine-mesh sieve, discarding solids. Add pulp juice to hull mixture.

Place hull mixture in the container of a blender, and pulse several times to break hulls into smaller pieces. Pour mixture into a large bowl. Stir in cornstarch, egg, zest, vanilla, and cinnamon. On a lightly floured surface, roll half of dough into a 12-inch circle. Transfer to a 9-inch pie plate, pressing into bottom and up sides. Pour filling into prepared crust. Roll remaining dough into a 12-inch circle, and cut dough into 1½-inch-wide strips. Arrange strips in a lattice design over filling. Brush dough with cream, and sprinkle with turbinado sugar.

Bake for 20 minutes. Reduce oven to 375°, and bake until crust is golden brown and filling is bubbly, about 30 minutes more. Let cool on a wire rack for at least 45 minutes before serving.



MUSCADINE PIE. RETRIEVED APRIL 20, 2020. FROM <https://www.tasteofthesouthmagazine.com/muscadine-pie/>

Synergistic Action of Stilbenes in Muscadine Grape Berry Extract Shows Better Cytotoxic Potential Against Cancer Cells Than Resveratrol Alone.

Muscadine grape is rich in stilbenes, which include resveratrol, piceid, viniferin, pterostilbene, etc. Resveratrol has been extensively studied for its biological activities; however, the synergistic effect of stilbene compounds in berry extracts is poorly understood. The aim of this study was to evaluate the anti-cancer activity of stilbene-rich muscadine berry extract and pure resveratrol. Stilbenes were extracted from ripened berries of muscadine grape cultivars, Pineapple, and Southern Home. HPLC analysis was performed to determine quantity of stilbenes. The extracts were tested for their cytotoxic activity against A549 (lung carcinoma cells), triple negative breast cancer (HCC-1806) and HepG2 (human liver cancer) cells. The stilbene-rich extracts of the muscadine berry extracts showed cytotoxic activity against all of the cells tested. The extracts at 1 µg/mL induced death in 50-80% of cells by 72 h of treatment. About 50 µg/mL of resveratrol was required to induce a similar response in the cells. Further, modulation of genes involved in tumor progression and suppression was significantly ($p < 0.0005$) higher with the HepG2 cells treated with stilbene-rich berry extracts than the pure resveratrol. This shows that the synergistic activity of stilbenes present in muscadine grape berries have more potent anti-cancer activity than the resveratrol alone.

Balasubramani, S. P., Rahman, M. A., & Basha, S. M. (2019). Synergistic Action of Stilbenes in Muscadine Grape Berry Extract Shows Better Cytotoxic Potential Against Cancer Cells Than Resveratrol Alone. *Biomedicine*, 7(4), 96. <https://doi.org/10.3390/biomedicine7040096>

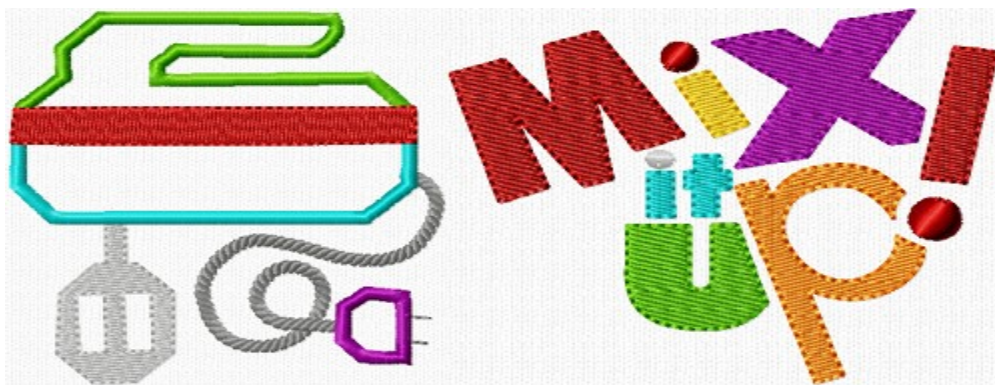
MUSCADINE

Turn Mundane into Marvelous

By: Candace Tucker, Family & Consumer Sciences Agent, UGA Extension Coweta County

Most of us can say that we are creatures of habit. We stick to our daily routines to stay within our comfort zone. Oftentimes, the same happens when it comes to the types of food we eat. Think about it. How many times a week do you eat, for example, chicken, beef, green beans, broccoli, etc.? Why not breathe some life into these everyday foods? Here are some tips to turn your go-to favorites into culinary masterpieces:

- **Get Saucy.** Be sure to look for options that are low-sodium and/or contain little to no added sugar. Experiment with different sauces like tomato sauce, BBQ sauce, pesto, soy sauce, salad dressings that can be used as a sauce.
- **Stir it up.** Consider mixing your favorites to make a stir-fry and take your one-pan meal to the next level. Pick a meat, some veggies, rice and soy sauce – sauté all together and bam! - taste the flavor explosion.
- **Be fruitful with fruit.** Add some fruit into your salad to give it just the right amount of sweetness. You can even pair your fruit with poultry or beef! Try adding pineapple to your chicken tacos or cook your beef with peaches. The opportunities are endless.
- **Take on a new texture.** Shred, slice, cube, dice, mince and mash your fruit, veggies and meat to experience a new form of it.
- **Find your favorite spices and herbs.** Instead of reaching for the saltshaker, try using a combo of spices and herbs. Not sure where to start? Use a little at first, then add more when you are sure you like the flavor. To substitute dry herbs for fresh, use 1/3 teaspoon powder or 1/2 teaspoon crushed for 1 tablespoon fresh chopped herbs.



How to prevent the spread of: **CORONAVIRUS DISEASE 2019** (COVID-19)

INFECTION PREVENTION STEPS

- ✓ **Wash your hands often** with soap + water.
- ✓ **Avoid touching** your **eyes, nose + mouth** with unwashed hands.
- ✓ **Cover** your **cough or sneeze** with a tissue, then **throw the tissue** in the trash.
- ✓ **Avoid close contact** with people **who are sick**.
- ✓ **Get a flu shot!**
- ✓ **Clean + disinfect frequently touched objects and surfaces** such as counters, door knobs, desks, keyboards, tablets and phones.

Keeping hands clean is one of the most important things we can do to stop the spread of respiratory illnesses like flu and COVID-19.



USE SOAP



PALM TO PALM



BACK OF HANDS



FINGERS INTERLACED



BASE OF THUMBS



FINGERNAILS



WRISTS



RINSE HANDS



DRY HANDS

PROPER HANDWASHING TIPS

- Wash hands **thoroughly** with soap + warm water.
- Wash for **20-30 seconds** or sing "Happy Birthday" two times through.
- Soap and warm water are the best way to clean your hands, but if they aren't available, **use an alcohol-based hand sanitizer**, that contains at least **60% alcohol**.

HOW TO USE HAND SANITIZERS

- Apply the sanitizer to the **palm of one hand** (follow label directions on how much to use).
- Rub hands together.
- Rub the sanitizer over **all the surfaces** of your hands + fingers until your hands are dry.

For more information: dph.georgia.gov/novelcoronavirus
cdc.gov/coronavirus/2019-ncov/index.html

Why Join the Georgia Nutrition Council?

Joining the GNC gives you opportunities to:

- Earn CEU's for attending the annual GNC Conference
- Present workshops or posters in a professional venue
- Apply for student scholarships
- Apply for an Outreach Grant to fund projects aimed at helping the nutritional health of Georgians
- Network with others in the profession

Contact Us

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PLACE
STAMP
HERE