

# Curry's Nutrition Newsletter

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## What's on your grilled meat?

Reduce cancer-causing compounds in your grilled meat this season:

July 4th, the Independence Day is just around the corner. This means celebrations centering on barbecuing and grilling will have the focus, among other traditions. Among your friends and family, uninvited guests known as Heterocyclic Amines (HCA), and Polycyclic Aromatic Hydrocarbons (PAHs) will also come by to celebrate as well. HCAs and PAHs are the toxic compounds that are formed during grilling animal protein foods.

HCAs are known cancer-causing (carcinogenic) compounds that are easily formed during high heat grilling, broiling, and barbecuing due to the reaction between amino acids (building block of protein) and creatine (a chemical present in muscle) at high temperature. Similarly, PAHs, a group of over 100 chemical compounds, are naturally found in coals, and crude oils. They are released when these sources are burned. While grilling meat, the fat drips from your meat onto the burned coals and helps to release PAHs into the smoke. This results in meat with accumulation of PAHs from the smoke.

All of us like to see our grilled meat having some char marks on it. In order to get those char marks on your meat, you are cooking the meat at high temperatures for a long time and letting these toxic compounds to form on the meat. Numerous research reports demonstrate that the HCAs are the singled out factor associated with cancers of stomach, prostate, breast, bladder, colon, pancreas, and the esophagus. Although most of the studies were done on animal models, there is no doubt about the carcinogenic properties of these compounds. Therefore, taking precautions against formation of HCAs and PAHs is advisable.

So how can you reduce these cancer-causing compounds from your plate this summer? Consider the following tips while having cookout parties during this season:

1. Precook meat: Precook your meat under pressure or in an oven until half done before marinating it or before you rub your spice mixture on the meat. This will cook your meat quickly on the grill with quick developing grill marks. Bonus point: Due to quick grilling, your meat will remain moist with the entire flavor inside.

2. Spices reduce HCA Formation: Researchers from Kansas State University reported that using spices with high antioxidant activity such as turmeric, rosemary and ginger root on meat (especially beef) before grilling, can cut back the formation of HCAs by approximately 40%. Spices are naturally rich in cancer fighting antioxidants and these capacities are determined by a parameter called Oxygen Radical Absorbance Capacity (ORAC). The US department of Agricultural Research Services has published a list of these spices with their ORAC values. Click here to view the list:  
[http://www.ars.usda.gov/SP2UserFiles/Place/12354500/Data/ORAC/ORAC\\_R2.pdf](http://www.ars.usda.gov/SP2UserFiles/Place/12354500/Data/ORAC/ORAC_R2.pdf)  
(The list of spices is on Page 10).

Although the amount of the spices we include in our daily diet is very small to have a significant effect, including these healthy spices on a regular basis will definitely add health benefits to your diet. Bonus point: Spices add loads of flavor into your foods. Therefore, you can cut back excess salt in your meals.

3. Always grill meat with skin, when possible: Remove the charred or burnt skin (or, meat) before eating. By doing this, you will reduce a significant amount of HCAs and PAHs from your meat.

## Dangers of High Triglyceride Level

High triglyceride is as damaging as high cholesterol

People often talk about the risks associated with high cholesterol level and try to manage it effectively to prevent heart disease. But, triglyceride, another component in your lipid analysis report, is an equally serious issue to consider for total health. This component of lipid or fat has always been ignored and cholesterol has taken the lead role as the principal risk factor for heart disease. However, relatively recently, triglycerides are being given full attention due to its damaging effect on your total health. But what are triglycerides?

What are triglycerides?

Simply, triglycerides are fats present in our foods and in our stored body fats. It is also present in our blood, forming the plasma lipid in combination with cholesterol. Their main function is to provide you with energy. Our body is made in such a way that these fats can be stored inside the cells in our fat tissues so that in times of starvation we can survive by getting energy from these stored fats. We get double amount of energy per unit of fat than we get per unit of carbohydrate or sugar and protein foods. However, with increasing availability of foods, we no longer need to store large amount of fats in our tissues since our usual dietary habits provide enough energy giving nutrients in our diet. In reality, our calorie intake is far more than required for the type of activity we engage ourselves during the day. If you cannot burn all the calories during the day's activity, the remaining is converted to triglyceride, and stored in our fat tissues.

Control dietary fat to reduce triglyceride level?

Since, triglyceride is just fat, you would probably think that by controlling your dietary fat intake you could reduce the triglyceride level, as you would do with cholesterol. However, in case of triglyceride, the story is little different.

- We get pre-formed triglyceride from our dietary fats. But, it can also be formed from excess amount of simple carbohydrate or sugar in our diet.
- Simple carbohydrates include white or highly processed grain products like white rice, white bread, regular pasta, and potatoes etc, which do not have fiber (complex carbohydrates).
- Our foods based on these types of ingredients are immediately broken down to glucose for immediate energy requirement.
- After meeting the energy requirement, the excess glucose will be converted to triglyceride in few more chemical reactions, and be taken inside the fat cells to be deposited for later use.
- Reducing dietary fat alone, therefore, will not help you to reduce your triglyceride level in blood. Reducing excess sugar from your diet or controlling total calories will reduce the amount of triglyceride in your blood.

Remember: How much you eat is more important than what you eat. Always control your total calorie intake!

It does not mean that you can include all your favorite dessert items (even in small amount) in your daily diet. You should still choose a healthy mixed diet including foods from all the food groups recommended in the Food Guide Pyramid. Wrong kinds of foods, even in small amount, will do the same damage as right kind of foods consumed in large amount.

Risks associated with high triglyceride levels

With continued accumulation of triglyceride in your blood, you may pose high risks to your health. Check your lipid profile analysis from your blood test where the level of your triglyceride is also given along with your cholesterol level. Know the numbers and understand their severity.

Normal level: less than 150 mg/dL (Maintain your healthy diet and normal weight combined with a regular exercise program)

Borderline level: 150-199 mg/dL (You may bring the level back to normal by maintaining a controlled diet, body weight, and regular exercise including both aerobics and resistance exercises with your doctors advice)

High level: 200-499 mg/dL (You should combine restricted diet, change in life style habits, exercise level, and medication.)

Very High level: 500 mg/dL or more (Strict dietary control and medication is required along with regular exercise)

High triglyceride level is strongly associated with:

- high blood pressure
- diabetes
- obesity
- low levels of 'good' cholesterol (HDL)
- and high total cholesterol levels

These are all part of a condition called 'Metabolic Syndrome'. Therefore, it is important that if you have any of these above-mentioned conditions, be watchful of the other conditions as well in order to ensure your good health. For example, a person with diabetes should be careful about his diet to control his triglyceride level in blood. That is why you cannot treat high triglyceride level alone without checking for other conditions and treating for them if there is any.

So, next time you have your blood test done, check your levels carefully and consult with your doctor for immediate treatment plan if your level is higher than normal range. Untreated high triglyceride level may damage your health without acute symptoms for you to know before it is too late.

### American Heart Association Recommendation (AHA)

According to the AHA recommendation, life-style changes are the first step to take in order to control your high triglyceride levels.

- An overweight person should reduce body weight to his ideal weight by controlling total calorie intake from all sources such as fat, carbohydrates, protein, and alcohol.
- Reduce the saturated fat, trans fat, and cholesterol content of your diet.
- Reduce your alcohol consumption to minimum and avoid cigarette smoking.
- Increase your intake of fruits, vegetables, and nonfat or low-fat dairy products.
- Try to get at least 30 minutes of moderate-intensity physical activity on five or more days per week.
- Substitute your regular saturated fats such as butter, shortening, animal fat drippings with monounsaturated and polyunsaturated fats —such as those found in olive oil, canola oil, safflower seed oil, sunflower seed oil.
- Following a reduced fat, high carbohydrate diet (mainly with simple carbohydrates) may raise triglyceride levels and may reduce HDL ("good") cholesterol in some people. Try to balance all nutrients in your diet by choosing right kinds of foods.
- Increase your intake of fish especially those rich in omega-3 fatty acids found mainly in mackerel, lake trout, herring, sardines, albacore tuna, and salmon.

Remember, dietary management is still very important even when you are using medication to treat your high triglyceride levels. Work closely with your physician and dietitian for specific plan of your treatment.

## Natural Healing Powers of Spices

Apart from imparting color, flavor, and taste to a dish, spices may also provide health-promoting benefits. Since ancient times, natural healers have used spices for treating many illnesses. In India, spices such as cardamom, cinnamon, ginger, turmeric are mentioned as early as in the Aryurveda (The Great Book of Science of Medicine in Hinduism) for their healing properties. Aryurveda from the Eastern world is now a part of Alternative Medicine in the Western world. Many scientific research reports are now validating the historic use of different spices for their health benefits.

### Black Peppercorn

It gives relief from constipation, hemorrhoids, and gas. Regular consumption stimulates appetite and helps in digestion. It is believed that peppercorns can improve blood circulation and thus provides warmth especially in winter. Black pepper has antibacterial effects. One of the medicines for tuberculosis contains black pepper, and ginger for their anti-microbial properties.

### Cardamom

It is rich in antioxidants and has high ORAC (Oxygen Radical Absorption Capacity) values-a measure of the antioxidant activity. It strengthens the lungs and relieves coughing by removing mucus from the lungs. It also relieves gas pain by improving digestion. It is also considered a good dietary supplement for sharpening memory power.

### Cayenne/Chilies

Capsaicin, the active compound in chilies, is a proven anti-inflammatory agent that helps in pain relief. It also helps to evacuate the bowel and destroys parasite and worms. It cleanses the large intestine and is also a good remedy for the common cold, cough, and congestion and helps remove mucus from the lungs, and nose.

### Cinnamon

It is one of the spices with high antioxidant (highest ORAC value) content. It is believed to have detoxifying, anti-inflammatory, and anti-microbial effects that are helpful in fighting many kinds of diseases. One study showed that by using cinnamon oil extracts in carrot broth, the growth of microorganisms could be effectively stopped, extending its storage life.

Cinnamon has a natural cleansing action. Research findings report that it improves type-2 diabetes by controlling blood sugar level and increasing metabolism by 15% for 6 hours. Using 1 teaspoon of cinnamon regularly maintains levels of insulin (the hormone that controls blood sugar) and half a teaspoon of cinnamon daily will reduce your blood sugar levels and promote fat burning process. It also helps in lowering bad cholesterol (LDL), total cholesterol, and triglyceride levels.

Some reports suggest that cinnamon consumption or just smelling it may enhance brain function by improving cognitive processing, memory, and visual motor speed. Upon adding it in a cup of tea, cinnamon provides relief from cold, cough, flu, and congestion.

#### Clove

It naturally functions as a pain reliever. Therefore, clove oil is used in medicines meant for giving relief from any pains, especially toothache. Many medicines for toothaches contain the extract from clove oil. It is also a powerful remedy for cough, cold, and sinus problems. Clove is also very effective as a breath freshener.

While there are many beliefs and proven results about health benefits of our common spices, one should be careful while using it. It is not advisable to use any single spice for its health benefits in large doses, which can prove to be toxic. One should always consult with the naturopath physician before using such alternative medicines. However, regular use of various spices in every day's cooking definitely will promote health.

(Spice list to be continued in subsequent issues)

## Recipes

### 4th of July Flavor Burst - Tandoori Chicken

#### Ingredients

- 1 chicken, cut into 8 pieces, skin removed

#### Marinade 1

- 1 teaspoon chili powder (optional)
- 1/2 tsp salt
- 2 tbsp fresh lime juice

#### Marinade 2

- 1 tablespoon paprika
- Salt to taste
- 1 1/2 tbsp Curry's Tandoori Rub
- 1/2 teaspoon cayenne powder (optional)
- 1 tsp tomato paste or few drops of red food coloring (optional)
- 1/2 cup plain yogurt

#### Procedure

Make gashes or deep cuts into the thick parts of chicken pieces.

In a small bowl, mix chili powder, lime juice, and salt. Marinate the chicken in this mixture for about 15 min in room temperature.

In another bowl, mix rest of the ingredients until it forms a smooth paste. Pour this marinade over the chicken. Rub the spice mixture on the chicken especially into the gashes. Cover the bowl with plastic wrap and let it marinate for about 2 hours or overnight in a refrigerator. Turn the chicken pieces once in between.

Preheat a grill to medium heat.

Place the marinated chicken on the grill and discard the marinade. Cook for about 8 to 10 minutes.

Turn chicken and baste with melted butter or vegetable oil as needed, and cook for another 8 to 10 minutes. Continue turning and basting, as needed until the chicken is cooked through and nicely colored on all sides, about 30 to 35 minutes.

Alternative method:

Preheat the oven to 425 degrees F

Spread the chicken on a baking pan and cover with aluminum foil. Roast for about 15 min turning it once halfway through.

Remove the chicken from the pan and squeeze some fresh lemon juice over the chicken and grill it over medium heat until it cooks through and develops grill marks to give it an authentic tandoor grilled look.

Serve with onion slices and lemon wedges.

## Quick Chicken Curry

### Ingredients

2 chicken breasts, cut into cubes

1 cup chopped tomato

1/2 cup grated onions

1 tsp. tomato paste

1 tsp. turmeric powder

1 tsp. cayenne powder (optional)

2 tsp. Curry's Garam Masala

1/2 - 3/4 cup water

2 tbsp. oil

salt and pepper to taste

### Procedure

Season chicken with salt and pepper. Heat oil and sauté chicken cubes until lightly brown. Remove the chicken and sauté the onions in the same oil. Stir for 3-4 min or until light brown and aromatic. Add the chopped tomato and all spices. Stir for 2 minutes. Add water and cook under cover for 2 minutes. Add the chicken pieces and stir well until they are coated in the

tomato paste. Cover and cook at a simmer until chicken is done. You may have to add more water to make a gravy.

## Chai Latte Spiced Muffins

### Ingredients

2 cups all-purpose flour

3/4 tsp. Curry's Chai Latte

1/2 tsp. baking soda

1/2 tsp. baking powder

pinch of salt

1 stick of butter or margarine, at room temperature

1 cup sugar

1 cup ricotta cheese

1 egg, beaten

1/4 cup Curry's Flavored Sugar - Chai Latte (optional)

### Procedure

Preheat the oven to 350° F. Prepare a medium sized muffin pan with 12 wells with liner. Mix flour, chai latte, baking soda, baking powder, and salt in a medium bowl. Separately mix sugar and butter in a large bowl until smooth. In another bowl, mix ricotta cheese and the egg. Add this mixture to the butter mixture. Add the flour mixture gradually until well blended. Do not over-mix. Spoon mixture onto the muffin pan, almost to the brim. If using, sprinkle the flavored sugar on top to give the muffins a crusty texture. Bake for 20 minutes. Remove onto a wire rack and let cool.