

PENNY SAVER NEWS

FAX: 932-5261

February 25, 2005

BY: Mary A. Keith, Ph.D., L.D.
Food, Nutrition and Health Agent**HILLSBOROUGH COUNTY**

5339 S. County Road 579

Seffner, FL 33584-3334

PH:(813)744-5519 x 136, FAX:744-5776
e-mail:makeith@mail.ifas.ufl.edu**Don't Throw out the Non-Stick Pans**

Another of the great conveniences of modern cooking has been under attack recently. Some years ago it was aluminum cookware, now it's the non-stick skillet, pots and pans that are being questioned. We all know how convenient they are. Besides being easy to clean they're a great help in reducing the amount of fats and oils we need for frying and cooking. That alone makes them important for anyone trying to control their weight, cholesterol or risk of heart attack. So why is this cookware causing so much worry?

The coating on non-stick pans is a chemical called polytetrafluoroethylene. Oil won't stick to it, grease won't stick to it, water won't stick to it, most foods won't stick to it. It sticks tightly to the metal of the pan, and does not come off into the food unless you scratch or scrape it off with a utensil. It does not react with much of anything, except or unless it gets too hot. That's when the problems occur.

If you have water or wet foods in the pan, no matter how high you set the flame the temperature of the pan will only reach 212° F. That's the temperature of boiling water. Until all the water is boiled off, the water, the food and the pan will only be 212°F. At that temperature nothing is going to happen to the non-stick surface.

If you are frying foods in oil or butter, the temperature will get higher. How high it gets depends on which kind of oil you are using. Some fats start to smoke and burn at about 350° F, so a sensible cook is not going to let the pan get hotter than that.

Besides the danger of burning down the house, the food will be ruined! But the pan will

still be fine at that temperature.

Common cooking oils start to smoke when they and the pan get hotter than about 400 to 450° F. A few unusual oils, such as avocado and almond oil, don't start to smoke or burn until they are almost 500°F. That is getting very close to the danger zone for the pan. But if you have any other food in the pan with the oil, it will be sizzling away at that temperature, and most cooks know that they need to turn down the flame.

So it is very unusual that a pan used normally in cooking will get hot enough to damage the non-stick coating. That doesn't happen until the pan gets above 500°F. But here's where the danger occurs: if you put an empty, dry pan on a high flame or in a hot oven, it can get much hotter than 500°F. At that point the coating starts to break down and turn into gas.

If you leave an empty pan on a hot stove in a small kitchen, enough of the gas can build up to make you sick. It's called 'fume fever', and it makes you feel like you have a bad flu, with fever, chills, coughing and tightness in the chest. Most people get over it in less than 2 days. Pets, especially birds, are smaller and more sensitive to the gas. It can kill them.

As long as you use the pan correctly, there is no danger. Don't put an empty pan on a hot burner or in a hot oven. Never walk away from a hot pan on a hot stove. Don't use non-stick pans in the broiler. Keep the kitchen well ventilated. If a pan does happen to get too hot take it off the heat, open windows and turn on a fan to stir up plenty of air circulation. As long as you cook safely the non-stick pans will be safe too!

This week's unusual recipe uses some of our Florida grapefruit. If you aren't lucky enough to have a grapefruit tree in your yard, you can use a jar of canned fruit from the grocery. It's a colorful way to get some of your fruits and vegetables for the day.

Florida Citrus Harvard Beets

1/4 cup sugar (or Splenda)	1 Tbsp cornstarch
2 C Florida grapefruit sections	1/4 tsp salt
16-oz can sliced or tiny whole beets	1/4 C vinegar

Drain grapefruit and save juice. Drain beets and save juice. Combine juices to make 3/4 cup of liquid. Add vinegar to juice (1 cup total). Combine sugar or Splenda with salt and cornstarch in saucepan. Slowly add juices and stir to dissolve cornstarch. Place over medium heat and cook with constant stirring until mixture boils. Boil ½ minute. Add beets and heat through. Remove from heat, stir in grapefruit sections. Serves 6.

Hillsborough County Extension is a cooperative service of the Hillsborough County Board of County Commissioners and the University of Florida.

The Institute of Food and Agricultural Sciences is an Equal Employment Opportunity - Affirmative Action Employer authorized to provide research, educational information and other services only to individuals and institutions that function without regard to race, color, sex, age, handicap or national origin. COOPERATIVE EXTENSION IN AGRICULTURE, HOME ECONOMICS, STATE OF FLORIDA, IFAS, UNIVERSITY OF FLORIDA, U.S. DEPARTMENT OF AGRICULTURE, AND BOARDS OF COUNTY COMMISSIONERS COOPERATING