

PENNY SAVER NEWS

FAX: 932-5261

April 5, 2012

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:mkeith@ufl.edu

What Difference Does the Oil Make?

So you're going to make a cake. The recipe calls for margarine or butter. Can you use oil instead? Or you want to make a stir-fry for dinner and find there's no oil in bottle. Can you use butter? What happens if the recipe calls for peanut oil and all you have is corn oil in the house? Must you go out and buy another bottle before you start to cook?

These are questions that most cooks face at one time or another. You could probably add a few more to the list! What are the answers? As with so many things, the answers *depend*. What they depend on is partly the recipe, and partly what the oil or fat is made of. Here's a quick rundown, to help you decide the next time you discover someone emptied the bottle of oil and didn't replace it!

In cakes and baked goods it's a good idea to try to stick to the kind of fat the recipe calls for. Margarine can be substituted for butter without a problem. But using either solid shortening or liquid oil could mess up the result. The reason is that both margarine and butter contain water. If you've ever seen butter sizzle in the frying pan as it melts, you've seen the water being cooked out. The amount of butter the recipe calls for is adjusted to provide as much fat as needed, and to take account of the water that comes along. Shortening and oil are both 100% fat, no water included. So using them changes the amount of both oil and water in the recipe. The other difference is that the kind of fat is different. Shortening and margarine are solid. Many recipes depend on that firmness to hold air bubbles when it is beaten. Oil won't hold air

bubbles. So a cake developed for shortening or butter but made with oil will be flat and dense. Cookies developed for shortening and made with oil will spread out very thin and crisp when baked.

What about frying or stove-top cooking? In most cases, after the sizzling has subsided, you can successfully substitute butter or margarine for oils. You might need to add a little more margarine than the recipe calls for. And once any leftovers cool the fat will solidify again. So there will be a layer of stiff fat over the meat or vegetables.

However there's a deeper reason why some recipes specify which fat or oil to use. Hopefully you've never experienced it, but fats do burn. Fats start to smoke before they burst into flame. Even if they don't flame, once they get hot enough to make smoke they're darkening and starting to taste bitter. The smoke is usually very irritating to our nose and lungs. Each individual fat or oil has a very specific temperature at which it starts to smoke. That temperature is called the 'smoke point.'

Butter has proteins as well as fats and water. Those extra proteins will burn too. Butter has one of the lowest smoke points, about 250°F. So butter is often not the right choice for foods that will be fried at a high temperature, since it could smoke or burn before the food is cooked. Most olive oils also have acids and fairly low smoke points as well. That's why olive oil is not usually used for more than light sautéing. Vegetable shortening in general smokes at about 360°F. Who wants scorched food?

Oils with high smoke points include peanut (450°F), canola (450°F) and soybean oil (460°F). Safflower oil, the refined kind we get in the grocery, has an even higher smoke point, at 510°F. Avocado oil, available in some specialty stores, has the highest at 520°F. So if your recipe calls for peanut oil, and the food will be cooked at a very

high heat, don't substitute butter. Use canola or soybean oil instead, one with a similar resistance to smoking at high heat.

Here's a fish with tropical twist. Since it won't be cooked on really high heat any oil will do. If you can't eat mango, peel and halve 2 fresh peaches instead. Serve with a green salad and steamed green beans or fresh tomato slices.

Grilled Fish and Fruit

2-3 Tbsp olive oil

5 Tbsp chopped fresh cilantro

1 fresh lime

pinches of salt and pepper

1 large mango, peeled

4 fillets of firm fish - snapper or other

1 tsp cumin seeds

Preheat grill. Cut peeled mango into thick wedges. Grate rind of lime to get 1 ½ tsp lime zest. Squeeze out juice. Stir oil, cilantro, 3 Tbsp lime juice and lime zest in small bowl. Add a pinch of salt and pepper. Use half this dressing to brush over fish fillets and mango wedges (or peach halves.) Save rest of dressing. Sprinkle fish and mango with cumin seeds and a pinch more salt and pepper. Grill (or broil) on one side 6 minutes, turn over and continue cooking until fish flakes easily and mango is soft and beginning to brown. Use remaining dressing to drizzle over cooked fish and mangos as well as salad, steamed green beans or tomato slices. Serves 4.