Cooking with Grape Seed Oil or Rice Bran Oil: *Is it safe?*

By Caroline Barringer, NTP, CHFS, FES

A professional chef recently contacted me at Immunitrition with a question about the smoke points of oils, as well as the safety of cooking with rice bran oil and grape seed oils in particular. She explained to me that the smoke point of an oil or fat is considered important to culinary professionals because they want to be able to cook certain foods quickly at high temperatures without the food burning or having an "off" flavor, which is a strong indication that the oil has gone rancid. Oils with higher smoke points may be important to a modern chef, but what they fail to understand is that the smoke point of an oil or fat has nothing to do with its health benefits or its safety for cooking at higher temperatures. Fats and oils are made up of all fatty acid types (mono, poly, and saturate), so we must first investigate to see what the predominant type of fatty acid a specific oil or fat contains to determine whether or not it should be exposed to heat, oxygen, light, or moisture.

As a rule of thumb, if the predominant classification of an oil or fat is polyunsaturated, then we should NEVER cook with it - REGARDLESS of its smoke point. These fats/oils are omega 6 fatty acid rich and should only be consumed raw in small amounts. Keeping omega 6 fatty acids in a 1:1 ratio with your omega 3 fatty acids is best. Omega 6's and 3's, which are predominantly classified as polyunsaturates, are highly reactive. Lipid (per)oxidation and free-radical production quickly takes place when these types of fatty acids are exposed to ANY degree of heat - even very low heat. This is a big red flag for producing inflammation and irritation within our bodies. Eating a moderate amount of omega 6's is fine, but only from raw, organic, cold-pressed, and unrefined sources. Consuming a teaspoon each of an omega 6 fatty acid along with an equal amount of an omega 3 fatty acid per day packs a powerful punch. Stick with your saturates for cooking at higher temperatures - coconut oil, palm oil, butter, ghee, lard, and tallow. For light, lower heat sautéing, using avocado oil, macadamia nut oil, and olive oil, is fine. More on these fats later...

Now back to grape seed oil and rice bran oil. Here is a fatty acid profile for both:

Grape seed oil	**Rice bran oil**
71% POLY	**36% poly**
17% mono	**48% MONO**
12% saturated	17% saturated
(485º smoke point)	(490º smoke point)

As you can see, **grape seed oil** is mostly a poly fat and should never be exposed to any degree of heat. It should be stored in the refrigerator and used sparingly as per the aforementioned omega 6 daily serving. **Rice bran oil** on the other hand, is predominantly a monounsaturated fatty acid. It is a bit more stable than grape seed oil, and can be used for very low-heat applications, but rice bran oil still has a hefty polyunsaturated content (36%), so it's best to store it in the fridge and use in moderate amounts. Rice bran oil's 17% saturated fatty acid content protects the delicate poly fatty acids when exposed to low-heat cooking. Rice bran oil shares a similar profile to sesame oil (43 poly, 42 mono, and 15 sat), so it's best to follow the same rules for cooking with both rice bran and sesame oils, although sesame oil has a higher antioxidant profile for added protection. I always add a bit of a saturated fat to any monounsaturated fat I use for cooking a light stir-fry or low-simmer dish to protect the poly content that particular fat may have. I also like to use sesame oil mixed with coconut oil for oil pulling, an effective and traditional oral health secret.

What disturbs me most is the misinformation companies are printing on their product labels about the health benefits of their oil(s). One company in particular states that their grape seed oil is extracted using a HEATED expeller press process. Remember, heat and polyunsaturated fats don't mix! Exposing the delicate fatty acid profile within a grape seed to any degree of heat during the oil extraction phase damages the poly fat molecules. Folks, this oil is now rancid due to heat exposure and it hasn't even hit the grocery store shelves! Hopefully these manufacturers are not using solvents (chemicals to aid in releasing the oil from the seed or nut. These chemical additives add insult to injury and are a threat to your overall health.

Another producer of grape seed oil states, "Our grape seed oil is **refined** at lower temperatures for a longer period of time to protect it from the effects of high heat exposure." In other words, they expose this low oil producing grape seed to "lower" heat temperatures for LONGER periods of time to PROTECT the oil? That doesn't make sense! Grape seed oil should be COLD pressed only, never exposing it to any kind of heat. Ironically, further down on the label they recommend that their very own grape seed oil be used for **medium-high to high heat FRYING and BAKING**... "Our grape seed oil produces superior results in a wide range of

culinary applications including sautéing, medium/high heat frying, baking and/or oil infusing." Their statements and claims completely contradict each other.

I also receive questions about avocado and macadamia nut oils. Let's take a look at their typical fatty acid profiles to determine whether or not they are "safer" for light, low heat cooking as compared to olive oil...

Avocado	**Macadamia**	**Olive**
10% poly	10% poly	12% poly
70% MONO	**78% MONO**	**75% MONO**
20% saturated	12% saturated	13% saturated

As you can clearly see, avocado and macadamia nut oils have a very similar profile with a substantial mono content and a fairly low poly content (especially macadamia oil), along with a fair amount of saturated fatty acid content to help protect the more delicate poly and mono fats when exposed to heat. Olive oil has the highest poly content of this group, so it may be wise to store it in the refrigerator then allow to melt at room temperature for pouring over foods **after** cooking, or to use with a very low heat setting for a short period of time. Peanut oil is another type of monounsaturated dominant oil, but it also has 34% poly fats in its profile, so **very limited use**, especially where heat exposure is involved, is advised.

Corn, safflower, sunflower, flax (linseed), walnut, hazelnut, hemp, pine nut, pumpkin, and wheat germ oils should only be used raw and in small amounts. **Never cook with these nut and seed oils** as they are polyusaturated heavy. They are delicate and easily damaged by heat, light, oxygen, and moisture, so refrigeration in a tightly sealed, opaque bottle is a must. Look for cold-pressed, unrefined versions only.

Additionally, accessory oils such as cod liver, fish liver, borage, black currant oil, and evening primrose should **NEVER** be used for cooking. These therapeutic fatty acids are mostly found in nutritional supplements, but there are some free-flowing versions now available. If you plan on using a free-flowing version, keep it cold at all times, stored in an opaque bottle, and take it as a supplement - right off the spoon - as directed by your health care practitioner.

Cottonseed oil, canola oil, and any hydrogenated oils should **always be avoided.** These fats are anti-nutritive, denatured, highly processed, pesticide and solvent laden, rancid, and refined. Of course, we all now know about the dangers of trans fats so avoid all fats that have hydrogenation listed on the label. NO AMOUNT OF TRANS FATS is safe to consume.

In summary, the smoke point of an oil or fat has NOTHING to do with its safety when used for cooking. Mary Enig and Sally Fallon-Morell, both experts on fats, agree that cooking with polyunsaturates (whether low in gums and other impurities) is not safe. Consuming about a teaspoon maximum per day of a raw, organic, unrefined omega 6 fatty acid, along with a teaspoon of raw, organic flax oil (or other omega 3 fatty acid) is all you need of these essential fats to feed your anti-inflammatory, prostaglandin forming pathways. A little goes a long way and packs a powerful punch if you are digesting your fats properly. Read those oil labels, folks! As a health rule, if you see that the predominant fatty acid is a polyunsaturate, do not cook with it. Another important thing to remember... ANY LABEL stating that an oil or fat is REFINED should NEVER BE CONSUMED! We do not want to eat refined oils of ANY KIND, whether they are mono, poly, or saturated fats.

About the writer

Caroline Barringer has an extensive nutrition background and is a sought-after health lecturer, writer and researcher. Her expertise in the field of nutrition, food preparation, and health has fostered radio and television interviews, and she is currently the host of her own Internet television show, iCaroline TV, to be launched in the winter of 2011. Caroline is a Board Certified Nutritional Therapist (NTP) specializing in Fertility Enhancement at her clinic, Inner-Chi Wellness, located in Long Island, NY and she is currently the east coast Lead Instructor, Vice-President, and active Board Member for the Nutritional Therapy Association, Inc. Caroline's mission is to change the way the world eats through nutrition education and publication, empowering individuals to make responsible and healthful food choices for restoring and maintaining a higher quality of life.

Sources:
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