Get the Best Nutrient Bang for Your Baking Buck

Nutritious Baking Instruction Manual

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Baking is an art form for some, and just plain challenging for others. First is the list of ingredients that may not suit everyone's nutritional needs, such as wheat or high amounts of sugar. Then there is the unquestionable need of making something the family will actually enjoy eating! It is possible to keep firm on healthy ideals while creating tasty baked goods. Whether you are throwing together a batch of cookies or carefully constructing a scrumptious pie, use this "instruction manual" for making your healthiest varieties.

Baking Choices Abound – How to Choose

There are four main concepts to consider when choosing among the many baking ingredient options: nutritional value, ingredient quality, adjustments to fit individual needs, and knowing how different ingredients affect the end product.

Even though most baked goods are "desserty" in nature, there is no reason you can't get the most nutrient bang for your baking buck. Nutrients are what maximize our vitality, and help prevent brain-hiccups and worse conditions down the road. Incorporating the most nutrients means choosing whole grains instead of refined flours, adding nuts and fruit instead of (or at least in addition to) chocolate chips, whole coconut milk instead of water, and using stable fats like palm or coconut in place of more delicate choices like sunflower. A frequent bonus of picking the most nourishing ingredients is slowing down the digestion of the food.[1] Foods that break down too fast, such as those filled with refined sugars and flours, release a burst of sugar into the bloodstream. This stresses the body and often contributes to hyperactivity, headaches, anxiety, mental dysfunction, and attention problems.[2,3,4] To prevent these sugar surges, incorporate whole grains and ingredients rich in healthy fats and proteins, such as eggs, coconut oil, butter, nuts, and seeds. Also be sure to choose whole food sweeteners, such as stevia or date sugar.

Organic choices are always the best option. A recent study conducted by the Center for Disease Control[5] found that switching from conventionally-grown foods to organic protects children from exposure to toxic pesticides - chemicals that have negative effects on health, particularly the nervous system. Organic choices are especially important when it comes to fats and oils since pesticides and other chemicals tend to concentrate in fat.[6]

Learning how a specific ingredient acts in baking will open the door for making fun adjustments to almost any recipe to fit individual tastes and needs. This means you can take a wheat-based recipe and make it wheat-free for allergic family members. Adjustments can also increase the intake of specific nutrients. Try exchanging coconut oil in place of the oil listed in a recipe to boost your family's intake of medium chain fatty acids (MCFAs) for extra infection-fighting power. Once eaten, MCFAs are transformed into powerful antimicrobial agents capable of defending the body against nasty, sickness-causing microorganisms.[7,8,9,10] Fiber, found abundantly in such choices as flaxseed meal or nuts and seeds, is another great addition that can easily be incorporated into baked goods and provides a bounty of health benefits.

Flours and Grains in Baking

Wheat and white flour are the most commonly used ingredient in baking, commercially and at home. However, not only does white flour have all its nutrition stripped away, intolerances to this grain are becoming widespread.[11] Soaked and sprouted varieties* help many people digest this common ingredient better, but not everyone. Thus, not only is it often necessary to seek out alterative flours, but it is also fun to expand your family's intake of different foods.

Originally published in the Vitamin Cottage Health Hotline March 2006

The ingredient that makes the commonly used flours so versatile in baking is gluten. This is a collection of proteins (namely the long amino-acid chains gliadins and glutenins) that make foods rise and give baked products that "bready" texture and sticky consistency. The less gluten in a product, the more tender it will be since there is less gluten to absorb water and "swell" to give it the firmer texture.[12]

Wheat contains the most gluten, and the closer a grain is in relation to wheat, the greater its ability to cause trouble for wheat-sensitive folks.[13] The ancient "cousins" to wheat, (spelt and kamut), function similarly to wheat, so no special substitute "tricks" are needed to bake with them. Gluten-containing grains include rye, barley, triticale (a wheat-rye hybrid), spelt, kamut, and oats. Gluten intolerance is quite a common condition and consuming less gluten regardless may help support digestive health in general. Therefore, adding gluten-free baking techniques to your list of baking talents is a good idea. See next month's Health Hotline for more details on gluten-free baking.

Fats and Oils in Baking

Traditionally, solid fats like butter, coconut oil, lard, and palm oil were used in most baked foods to endow a flakey, moist texture with scrumptious smooth taste.[14] Surprise! Those are *still* the best fats to use in most whole food baking today. The term shortening came from the function of these more saturated fats since they "shorten" or break up masses of gluten, thus making the final pastry products more tender and flakey. For example, when butter is creamed with sugar, the sharper edges of the sugar crystals cut into the solid fat and create air bubbles, which then are incorporated into the batter.[15]

Liquid oils, like sunflower or soy, hold no air and seep throughout the flour,[15] allowing the gluten to develop more freely, which creates a tougher, denser product.[16] This is one reason manufactures hydrogenate oils. This process raises the melting point of a vegetable oil so it has a nice crystal size, similar to butter and lard.[17,18] However, the baking properties of hydrogenated products, like standard margarine, do not outweigh the negative health consequences of consuming them.[19] The idea of using margarine sometimes appeals to individuals who are worried about the traditionally-used products because they fear saturated fat; however, this should not be the case. (Ask any employee for the customer file titled *Fear Fats No More*!)

If oil is called for in a recipe and you choose to use a liquid product, you can either melt down a more solid fat like coconut oil, or turn to a more stable liquid product like olive oil, which contains a higher percentage of monounsaturated fats. Use caution when melting fat; if allowed to get too hot or to boil, it can affect the end product. This oil is also more resistant to oxidation because it contains antioxidant nutrients like vitamin E.[20] Nevertheless, the more saturates a fat contains, the more stable it will be when heat is applied.

Baking Nutrient Boosters

There are ingredients that can often be hidden in a recipe to offer a little shove in the nutrient density department. For example, replacing ¼ cup of the flour amount with ground flaxseeds can increase fiber and brain-supportive fats. Other nuts and seeds work too. Veggies can be snuck in as well; shredded zucchini and carrots or mashed sweet potato are choices that are often approved of by the toughest critics. Also, working with different sweeteners can boost nutrient amounts, such as substituting half the dry sweetener with date sugar or cutting the sweetener amount by ¼ cup and adding in more of another ingredient to make up for the loss.

There is actually more science behind baking than most realize; however, knowing just the foundational principles will help any baker get the most taste, texture, and nutrition!

* See this month's grocery handout titled *Maximizing Your Baking Buck* for more information on soaking and sprouting grains.

Originally published in the Vitamin Cottage Health Hotline March 2006

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Originally published in the Vitamin Cottage Health Hotline March 2006