February 2021

PROTEIN FEARS:

Chick Pea and Kale Skillet with French bread or *couscous*

Indian Lentils with Cashews and Spinach with *naan* or rice

Lemon Custard Rice with canned or homemade vegetarian split pea soup

Vegetarian Meatball Hero

The minute someone declares that they have decided to become a vegetarian protein fear from mothers, grandmothers, friends, and busy bodies descends, as if it has been circling above. Your children will starve or grow slowly; your immune system will no longer function efficiently; you will lose strength and endurance; your brain will fail you, and on and on and on. We had a tour guide in Russia quote *Pravda*, declaring that we were starving our sixteen-year-old daughter because meat, three times a day, was needed for health. People, who were invited to dinner, even stopped at MacDonald's on the way to our house. Often, while eating dinner, guests would inquire as to where the protein was. I am still receiving questions from mothers who are thinking of moving to vegetarianism as to how to be sure children will get enough protein.

This will seem amusing to young people today but we, of the World War II generation, had been taught to divide the dinner plate into three sections—one, protein defined as meat, fish, poultry, or eggs; two, starch defined as potatoes, spaghetti or macaroni, bread, or rice; corn was generally regarded as part of the third group, vegetables. The food pyramid and the nuances of nutrition were still some years ahead.

The obsession with protein was supported unfortunately by the literature of the day. The propaganda for home consumption urged us to "stay strong to win the war."

In 1951 William Cumming Rose defined essential and non-essential amino acids. His published work confirmed that eight amino acids were essential to adult nutrition; a ninth, histidine, is essential to human infants. The remaining eleven amino acids can be manufactured by the body. While animal-sourced proteins are complete, plants generally have deficiencies of one or more of the so-called essential amino acids, protein building blocks that humans can not synthesize.

Liebigs "law of the minimum," a concept that any amino acid may be the limiting factor in metabolism, was borrowed from animal husbandry by nutritionists and applied to human nutrition. It stated, "If the content of a single indispensable amino acid in the diet is less than the individual's requirement, then it will limit the utilization of other amino acids and thus prevent the normal rates of synthesis even if the total nitrogen intake level is adequate. Thus the 'limiting amino acid' will determine the nutritional value of the total nitrogen or protein in the diet." This concept also raised flags of concern to those who had chosen the meatless lifestyle.

Adelle Davis, in her 1954 book *Let's Eat Right to Keep Fit*, influenced by the work of Rose, Haines, and Warner, encouraged complementation of essential amino acids at every meal and so we, new to this lifestyle, followed faithfully as if her words were the lantern of Diogenes. Francis Lappé, in her classic 1971 work *Diet for a Small Planet*, also strongly encouraged complementation but later softened her view in terms of subsequent research. It is now clear that the body utilizes these ingested building blocks of protein efficiently over a much longer period. However, nutrition textbooks in my

collection as late as the 1980s still discussed the complexity of protein complementation and encouraged meat to fulfill protein requirements. Although it is pretty much agreed that a varied choice of foods may make protein complementation unnecessary, or at least far less of an imperative than Adelle Davis and Francis Lappé may have thought, it is an efficient way to insure nutrition without overeating and without the consumption of more than one's fair share of the planet's protein, one of the reasons many of us chose to become vegetarians in the first place. Complementation at each meal is an efficient and reassuring way to address the real issue of amino acid complementation without using eggs or dairy products to pick up the slack, unless you choose, as we have, to include eggs and dairy in your satisfaction of protein complementation. It is a discipline worth cultivating especially if you choose to go vegan. It reminds me of the old Chinese restaurant take-out menus where you chose "one from column A and one from column B". It does become a habit of menu planning over the years and wipes out that old protein fear.

The *hummus* recipe in last month's column is a perfect example. Served with toast points, as I suggested, amino acids are complemented . . . no protein worries. The Israeli *couscous* and chick pea salad in the same column presents another successful pairing. Think about adding a legume salad to a menu featuring a grain-based casserole. My barley and wild rice salad with dried cranberries was featured in June 2016. *[see recipe archives]*. The protein in barley is complete but the wild rice requires a bit more lysine and threonine so you can add a legume to your menu, maybe something as simple as peanut butter cookies for dessert or you could just add a dairy dessert. In January 2018 *[see archives]* I published a column "Rice and Beans" which reviewed this topic. This month I thought we might look at some more complementation solutions.

limiting amino acid

complementing amino acid source

barley (complete) dairy (complete) eggs (complete)

methionine legumes including peanut grains, nuts seeds butter and *hummus* lysine, threonine grains including pasta and legumes couscous lysine legumes nuts and seeds including tahini and nut butters methionine vegetables in general grains, nuts, seeds tryptophan, lysine legumes corn soy (complete)

CHICK PEA AND KALE SKILLET

TPT - 27 minutes

This skillet delivers a comforting warmth on an autumn or winter day but warmth is not all it delivers. It is a really delicious way to add fiber, leguminous amino acids, and the folate of kale to your menu. Pick up a warm baguette from the bakery or steam couscous while preparing this skillet and your amino acids will be successfully complemented.

2 tablespoons olive oil*

2 garlic cloves—thinly sliced

1 1/2 cups canned, diced tomatoes

- 1/2 teaspoon fennel seeds 1/8 teaspoon crushed red pepper flakes —more, less, or none 1/8 teaspoon Spanish *smoked* paprika Salt, to taste
- 6 cups fresh kale leaves, all stems removed —ripped into bite-sized pieces, well-rinsed, and dried
- 1 cup canned chick peas (*garbanzos*)—well-drained and seed coats removed

Fresh basil chiffonade—about 2 tablespoons

Grated pecorino Romano cheese

Warm French bread chunks

In a skillet set over LOW-MEDIUM heat, heat oil. Add garlic slices. Sauté for several minutes, being careful not to allow garlic to brown.

Turn tomatoes into a mixing bowl. Using a potato masher, crushed the tomatoes well. Add to garlic in skillet.

Add fennel seeds, red pepper flakes, smoked paprika, and salt. Cook, stirring frequently, for about 10 minutes.

Add kale and chick peas (*garbanzos*). Cook, stirring frequently, until kale is wilted and skillet ingredients are heated through. Turn into a heated serving bowl or serve directly from the skillet.

Scatter basil chiffonade over before serving.

Serve at once with grated cheese. Accompany with chunks of warm French bread on the side.

Yields 4 servings

Notes: *There is no need to use extra virgin olive oil to sauté but you do want olive oil to add flavor.

This recipe can be doubled, when required.

1/4 SERVING (exclusive of bread) – **PROTEIN = 7.2 g.**; FAT = 7.2 g.; CARBOHYDRATE = 25.4 g.; CALORIES = 178; CALORIES FROM FAT = 36%

With 2 ounces French bread and 1/2 teaspoonful grated *Romano* cheese per serving – PROTEIN = 16.5 g.

With 1/2 cupful steamed *couscous* and 1/2 teaspoonful grated *Romano* cheese per serving – PROTEIN = 13.5 g.



INDIAN LENTILS WITH CASHEWS AND SPINACH Palak Dahl Kajoo

TPT - 2 hours and 25 minutes; 1 hour = lentil soaking period

The methionine limitation in lentils is complemented by the addition of cashews and the lysine limitation in cashews is complemented by the lentils. If you want to further secure amino acid complementation, add naan or rice to your menu. The sauce that results from this complex flavorful combination literally transforms the humble lentil. Although comparatively mild, it can also be used to jazz up commercially-available lentils masala and other Indian or Pakistani convenience entrees that are available in the grocery store.

1/2 cup brown *or* green lentils* 2 cups *boiling* water

2 cups boiling water

1 tablespoon ghee or clarified butter

2 tablespoons *finely* chopped onion

1 large garlic clove—very finely chopped

3 tablespoons water or vegetarian stock, of choice

- 1 tablespoon crushed tomatoes *or* 1 teaspoon tomato paste, if preferred
- 1 teaspoon tamarind pulp or Thai fruit paste
- 1/2 teaspoon Thai sweet *chili* sauce
- 2 or 3 drops jalapeño chili sauce

1/4 teaspoon very finely chopped fresh gingerroot

1/4 teaspoon ground turmeric

1/8 teaspoon garam masala, or more to taste

Pinch ground cumin

1 cup baby spinach leaves—trimmed and wellwashed

1/4 cup roasted, but unsalted, whole cashews

Pick over lentils and discard any of poor quality. Rinse thoroughly. Drain. Pour into a mixing bowl and add 2 cupfuls *boiling* water. Set aside at room temperature for 1 hour. Drain.

In a *non-aluminum*^{**} saucepan set over *LOW* heat, combine drained lentils and the remaining 2 cupfuls *boiling* water. Cover and allow to simmer for 40 minutes, stirring occasionally. Drain.

In the *non-aluminum* saucepan set over *MEDIUM* heat, melt *ghee*. Add *finely* chopped onion and *very finely* chopped garlic. Sauté until soft and transparent, *being careful not to allow either to brown*.

Add soaked and drained lentils, water or stock, crushed tomatoes or tomato paste, tamarind pulp or Thai fruit paste, Thai sweet *chili* sauce, *jalapeño chili* sauce, *very finely* chopped gingerroot, ground turmeric, *garam masala*, and cumin. Cook, stirring frequently, until heated through and tamarind pulp has dissolved into the sauce.



Add spinach and cashews. Continue cooking, while stirring constantly, until heated through and the spinach is wilted.

Serve with warm naan or serve over rice, if preferred.

Yields 2 servings

Note: *If you prefer, kidney beans can be used in this recipe. With no need to cook, canned beans can save time in your meal preparation.

**Since aluminum discolors lentils rather unpleasantly, avoid using aluminum cookware or serving bowls in this case.

This recipe can be doubled, when required.

1/2 SERVING – **PROTEIN = 13.1 g.**; FAT = 10.3 g.; CARBOHYDRATE = 30.2 g.; CALORIES = 335; CALORIES FROM FAT = 28%

With 1/2 of a naan loaf per serving – PROTEIN = 17.1 g.

With 1/2 cupful steamed rice per serving – PROTEIN = 15.2 g.

LEMON RICE CUSTARD

TPT - 2 hours and 30 minutes; 1 hour = cooling period

I have always judged a diner by its rice pudding. I guess there is a comfort element to that dessert. However, rice puddings are not particularly favored by he with whom I have shared this journey but this rice dessert, with its lovely lemon custard, was warmly received. It is a slightly lush but refreshing end to a meal and the complemented protein it delivers is far from shabby. The long, slow, low-heat oven procedure and the slow, room-temperature cooling produces a custard of amazing texture.

1/4 cup dry *long-grain* white rice *or* converted rice3/4 cup *boiling* water

2 cups *two-percent* milk 1/2 vanilla bean

1/2 cup *fat-free* pasteurized eggs (the equivalent of 2 eggs)
1/3 cup sugar
2 teaspoons freshly grated *organic* lemon zest

Prepare a 7 x 3 x 2-inch non-stick-coated loaf pan by coating with non-stick lecithin baking spray.

In a saucepan set over *LOW-MEDIUM* heat, combine rice and *boiling* water. Cover and allow to simmer for about 12 minutes. Drain and transfer rice to prepared loaf pan. Spread rice evenly across the bottom of the loaf pan.

Choose a baking pan larger than your loaf pan. Place the loaf pan with rice into the larger baking pan. Add water to the baking pan to prepare a water bath. Bring the level about half way up the loaf pan. Place on top of your range or countertop.

Preheat oven to 315 degrees F.



In a saucepan set over *LOW-MEDIUM* heat, combine milk and the vanilla bean. Allow to heat until bubbles form around the edge. Remove from heat. Remove vanilla bean.

In a mixing bowl, combine pasteurized eggs, sugar, and grated lemon zest. Using a wire whisk, mix well.

Split vanilla bean and scrape the seeds within the pod into the egg mixture.* While whisking, gradually pour the scalded milk into the egg mixture too.

Place the loaf pan in its water bath into the preheated 315-degree F. oven. Carefully pull the oven rack out. Pour the milk– egg mixture over the rice. Push the rack back into the oven. Bake for about 1 1/4 hours, or until custard is set and edges are golden. Remove from oven. Set on top of range. Allow pudding to cool to room temperature in the water in the water bath.

Cut into slices to serve. Lift onto dessert plates with two spatulas.

Refrigerate leftovers.

Yields 4 servings

Notes: *Wash the vanilla bean to remove milk residue. Put it in your vanilla extract to add flavor.

This recipe can be doubled, as required. Use an 8-inch-square baking pan or a $9 \ge 5 \ge 3$ -inch loaf pan when doubling

1/4 SERVING – **PROTEIN = 4.9 g.**; FAT = 1.6 g.; CARBOHYDRATE = 19.4 g.; CALORIES = 112; CALORIES FROM FAT = 13%

With 1 cup canned, organic split pea soup per serving – PROTEIN = 11.9 g.

VEGETARIAN MEATBALL HERO

TPT - 18 minutes

Have you ever ordered a meatball hero/ grinder/ gyro/hoagie/sub/po' boy/wedge or been with someone who has? They don't fit in the mouth and there is way too much bread to eat. Oh, and they are messy, messy, messy. This open-faced version is a respectable knife and fork affair that can be eaten in the dining room and, again, your freezer resources can provide a quickly prepared meal.

- 2 four-inch pieces of French *baguette* (about 4 ounces each)
- 1 1/2 teaspoons butter
- 4 frozen vegetarian meatballs—brought to room temperature
- 1/2 cup tomato sauce for *pasta*—homemade *or* a jarred organic, low-sodium product of choice

1 teaspoon grated pecorino Romano cheese

Using a serrated bread knife, sliver the crust from opposite sides of each *baguette* piece so each lies flat with crust on each side. Then slice each in half horizontally through the crustless center. Place one on each of two oven-proof plates. Press open and flat. Slide plates into the oven. Heat oven to 250 degrees F.

In a small saucepan set over MEDIUM heat, heat tomato sauce. Stir frequently. When hot and bubbling, remove from heat.



In a small non-stick-coated skillet set over *MEDIUM* heat, heat meatballs until heated through. Turn frequently. Slice meatballs in half. Arrange four halves on each of the warmed bread bases in the oven. Spoon *one-half* of the tomato sauce over the meatballs. Return to the oven until ready to serve.

Sprinkle one-half of the grated cheese over each serving.

Serve at once.

Yields 2 individual servings

Note: This recipe can be halved or doubled, as required.

1/2 SERVING – **PROTEIN = 15.2 g.**; FAT = 3.6 g.; CARBOHYDRATE = 35.4 g.; CALORIES = 238; CALORIES FROM FAT = 14%

In the introduction this month I mentioned the value of dairy desserts in protein complementation. Next month I'll share some dairy desserts that we enjoy. While managing your protein needs, you might as well enjoy the journey. Please drop by,

Judy

Please note that all food value calculations are approximate and not the result of chemical analysis.

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