

**BEFORE THE UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD AND NUTRITION SERVICE**

In re: National School Lunch Program

Docket No. __

PETITION FOR ADMINISTRATIVE ACTION

Submitted to:

Audrey Rowe, Administrator
USDA Food and Nutrition Service
3101 Park Center Drive
Alexandria, Virginia 22302

Date:

July 19, 2012

Submitted by:

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I. ACTION REQUESTED

Petitioner Physicians Committee for Responsible Medicine (“PCRM”) is a national, nonprofit, health-advocacy organization based in Washington, D.C., and comprised of over 120,000 physician and lay members. PCRM teaches consumers, educators, and policymakers about using nutrition as a tool for preventive medicine and maintaining good health. PCRM requests that USDA, as the lead agency tasked with carrying out the National School Lunch Program, issue a report to Congress recommending that Congress amend the National School Lunch Act so as to exclude dairy milk as a required component of meals under the National School Lunch Program.

II. HISTORY OF THE NATIONAL SCHOOL LUNCH PROGRAM’S DAIRY REQUIREMENTS

The National School Lunch Act of 1946¹ established the National School Lunch Program with the dual aims of promoting the consumption of agricultural commodities and safeguarding the health and well-being of U.S. schoolchildren.² USDA administers the school lunch program³ and sets minimum nutritional requirements for meals served.⁴

The school lunch program originated during the Great Depression as an informal arrangement to use schoolchildren as consumers of surplus farm products and thereby dissipate agricultural surpluses.⁵ When wartime demand eliminated most agricultural surpluses, USDA inaugurated a new program under which cash payments were made to schools to help them purchase food directly.⁶ After World War II, investigation of draftee rejections revealed a significant correlation between physical deficiencies and childhood nutrition, heightening concern about how children were eating⁷ and highlighting the school lunch program’s nutritional benefits.⁸

In 1946, Congress enacted the National School Lunch Act⁹ to ensure nutritionally balanced lunches for children each school day by providing schools with cash assistance and donations of commodities acquired by USDA.¹⁰ The Act assigns USDA authority to administer the program and establish minimum nutritional requirements “on the basis of tested nutritional research.”¹¹ In return for federal aid, participating schools must serve lunches meeting the USDA-established nutrition requirements.¹² Among other things, participating schools must offer students dairy milk,¹³ and all meals must be consistent with the *Dietary Guidelines for Americans*.¹⁴

¹ 42 U.S.C. §§ 1751-1769j.

² 42 U.S.C. § 1751.

³ 42 U.S.C. § 1752.

⁴ 42 U.S.C. § 1758(a).

⁵ See Sheila A. Taenzler, *The National School Lunch Program*, 119 UNIV. OF PENN. L. REV. 372, 372 (1970).

⁶ *Id.* at 372 n.3 (citing S. REP. NO. 79-553, at 10-11 (1945)).

⁷ Dan Glickman, *Secretary Dan Glickman*, 55 USDA NEWS 5, June 1996, <http://www.usda.gov/news/pubs/newslett/old/vol55no5/article3.htm> (last visited May 4, 2012).

⁸ See Taenzler, *supra* note 5, at 372

⁹ 60 Stat. 230, ch. 281, § 2 (June 4, 1946).

¹⁰ *Id.*

¹¹ 42 U.S.C. §§ 1752, 1758(a)(1)(A).

¹² 42 U.S.C. §§ 1753(b), 1758(a)(1)(A).

¹³ 42 U.S.C. § 1758(a)(2).

USDA's initial school lunch meal pattern was based on checklists of food types: meat or meat alternate, fruit and/or vegetable, bread or bread alternate, and dairy milk.¹⁵ Since then, Congress and USDA have regularly reviewed and revised school lunch requirements to reflect new knowledge about nutrition. For instance, in 1976, USDA dropped the requirement that butter be served with each school meal due to concern over fat levels.¹⁶ Then in 1979, after the National Academy of Sciences identified the overconsumption of fat as a dietary concern, USDA, without specific Congressional authorization, promulgated regulations requiring schools, most of which were serving only whole milk, to serve unflavored low-fat milk, skim milk, or buttermilk.¹⁷ At local discretion, USDA permitted schools to offer whole milk and/or flavored milk, provided that an unflavored form of low fat milk was offered.¹⁸

In an apparent (and seemingly ill-advised) response to USDA's lower-fat milk requirement, Congress amended the National School Lunch Act in 1986 to require the inclusion of whole milk as a school lunch beverage.¹⁹ Congress eventually changed course, however, first, in 1989, by requiring schools to offer low-fat milk as an alternative to whole milk²⁰ and then, in 1994, by eliminating the "whole milk requirement" due to whole milk's high fat levels.²¹ In 2004, Congress again amended the Act, this time to require schools to offer a substitute for dairy milk under certain conditions related to the dietary needs of students.²² As shown below, developments in scientific research over the past decade call for new changes to the school lunch program.

III. SCIENTIFIC EVIDENCE DEMONSTRATES THAT CONSUMPTION OF MILK OFFERS NO HEALTH BENEFITS AND HAS SEVERAL HEALTH DETRIMENTS

The nutritional rationale for including dairy milk in school meal programs was based primarily on its calcium content; therefore dairy milk was presumed to promote bone health and integrity. This supposition has proven false. Abundant evidence has shown that milk has no special effect on bone health and does not prevent fractures in children or adults.

While calcium is an essential nutrient, it is available from many other foods that have a more healthful nutritional profile, compared with dairy products. Children can get the calcium they need from beans, green leafy vegetables (e.g., broccoli, kale, collard greens), tofu products, breads, and cereals. Additionally, a wide variety of non-dairy, calcium-fortified beverages is available today, including soymilk, rice milk, and fruit juice, all of which provide greater health and nutritional benefits, compared with dairy milk.

¹⁴ 42 U.S.C. § 1758(f)(1)(A).

¹⁵ See, e.g., National School Lunch Program; Nutritional Requirements, 44 Fed. Reg. 48,149, 48,149 (Aug. 17, 1979).

¹⁶ 41 Fed. Reg. 23,695, 23,695-96 (June 11, 1976)

¹⁷ 44 Fed. Reg. 48,149, 48,149 (Aug. 17, 1979).

¹⁸ Id.

¹⁹ See School Lunch and Child Nutrition Amendments of 1986, Pub. L. No. 99-500, 99-591.

²⁰ Child Nutrition and WIC Reauthorization Act of 1989, Pub. L. No. 101-147.

²¹ The Healthy Meals for Healthy Americans Act of 1994, Pub. L. No. 103-448.

²² Child Nutrition and WIC Reauthorization Act of 2004, Pub. L. No. 108-265.

A study published by the American Medical Association in the Archives of Pediatric and Adolescent Medicine in 2012 showed that children who consume the largest quantities of milk have as least as many bone breaks as those who consume less. Researchers followed 6,712 adolescent girls from the Growing Up Today Study for seven years, carefully tracking their diets, physical activity, and the incidence of any stress fractures. Girls consuming the most dairy products and calcium had no added protection, compared with girls consuming less dairy products or calcium. In fact, among the most active girls—exercising more than one hour per day—those who got the most calcium in their diets (coming mostly from dairy products) had more than double the risk of a stress fracture, compared with those getting less calcium.²³

This result was not surprising. Prior studies had shown that dairy milk consumption does not improve bone health or reduce the risk of osteoporosis and actually creates other health risks. Two studies of young women published in the journals *Bone* and *Pediatrics* showed that total and regional peak bone density was significantly affected by the amount of physical activity they got in their teen years, while increased calcium intake above 500 mg/day made no difference at all.²³

Not only does dairy intake fail to ensure appropriate bone growth early in life. It is similarly unhelpful at the other end of the lifespan, when osteoporosis and bone breaks are particularly common. The Harvard Nurses' Health Study, a prospective study controlled for age, menopausal status, hormone use, smoking, exercise, and other factors, which followed more than 72,000 women for 18 years, showed no protective effect of increased milk consumption on fracture risk.²⁴ Those women who consumed the most milk were every bit as likely to suffer a hip fracture as those who avoided milk.

One explanation for this result relates to the high animal protein and sodium content of dairy milk.²⁵ Animal protein and sodium both leach calcium from the bones and encourage its passage into the urine. In comparison, plant protein found in beans, grains, and vegetables does not appear to have this effect.

The amount of calcium ingested does not necessarily translate into the amount of calcium absorbed or retained, nor does it translate into enhanced bone structure. Bone is not simply a calcium mass. Calcium balance is affected by genetic, dietary, and lifestyle factors, including animal protein intake and sodium intake (both of which increase renal calcium losses, as noted

²³ Lloyd T, Beck TJ, Lin HM, et. al. Modifiable determinants of bone status in young women. *Bone*. 2002;30:416-21; Lloyd T, Chinchilli VM, Johnson-Rollings N, Kieselhorst K, Egli DG, Marcus R. Adult female hip bone density reflects teenage sports-exercise patterns but not teenage calcium intake. *Pediatrics*. 2000; 106:40-4.

²⁴ Feskanich D, Willett WC, Colditz GA. Calcium, vitamin D, milk consumption, and hip fractures: a prospective study among postmenopausal women. *Am J Clin Nutr*. 2003;77(2):504-511.

²⁵ Finn SC. The skeleton crew: is calcium enough? *J Women's Health*. 1998;7(1):31-6; Nordin CBE. Calcium and osteoporosis. *Nutrition*. 1997;3(7/8):664-86; Reid DM, New SA. Nutritional influences on bone mass. *Proceed Nutr Soc*. 1997;56:977-87; Zemel MB. Role of the sulfur containing amino acids in protein-induced hypercalciuria in men. *J Nutr*. 1981; 111 :545; Hegsted M. Urinary calcium and calcium balance in young men as affected by level of protein and phosphorus intake. *J Nutr*. 1981;111:553; Marsh AG, Sanchez TV, Mickelsen O, Keiser J, Mayor G. Cortical bone density of adult lacto-ovo-vegetarian and omnivorous women. *Jam Dietetic Assoc*. 1980;76:148-51.

above), level of physical activity, vitamin D intake, consumption of fruits and vegetables, and caffeine intake.²⁶ The balance of these environmental factors, along with genetics, is more important than calcium intake with regard to the risk of osteoporosis and fracture.

The promotion of milk ingestion in children is, in effect, the promotion of an ineffective placebo. But worse, it is a distraction from what actually can help children and adults protect their bones. As noted above, studies of children and adults have shown exercise to have a major effect on bone density.²⁷

Dairy products do contain calcium, but it is accompanied by high sugar in the form of lactose, animal growth factors, occasional drugs and contaminants, and a substantial amount of fat and cholesterol in all but the defatted versions. Dairy products are the number one source of saturated fat in an American's diet, according to the 2010 *Dietary Guidelines for Americans*. Dairy products such as cheese are also very high in sodium, which exerts a toll on bone and heart health.

Other products are preferable as calcium sources. Calcium-enriched soymilk contains the same level of calcium as dairy milk, but, unlike dairy milk, it is low in sodium and free of animal protein. An additional benefit to bone health from consuming soy products is soy's ability to enhance calcium retention.²⁸ Calcium-fortified juices are especially protective because the vitamin and minerals contained therein improve calcium absorption and reduce calcium loss.²⁹ Other calcium-fortified, non-dairy beverages, such as rice milks, are also protective of bone health, because of their high calcium content and lack of animal protein and sodium.

IV. CONCLUSION

It is now well-established that dairy milk is high in sugar, high in fat, and high in animal protein that is harmful to, rather than protective of, bone health. Research also shows that children can get all the calcium they need from non-dairy sources, such as beans, tofu, broccoli, kale, collard greens, breads, cereals, and non-dairy, calcium-fortified beverages, without any of the health detriments associated with dairy consumption. In light of the abundant scientific evidence, and to

²⁶ Hopper JL, Seeman E. The bone density of female twins discordant for tobacco use. *N Engl J Med*. 1994;330:387-92; Dawson-Hughes B. Calcium supplementation and bone loss: a review of controlled clinical trials. *Am J Clin Nutr*. 1991;54:274S-80S; Mazess RB, Barden HS. Bone density in premenopausal women: effects of age, dietary intake, physical activity, smoking, and birth control pills. *Am J Clin Nutr*. 1991;53:132-42; Nelson ME, Fisher EC, Dilmanian FA, Dallal GE, Evans WJ. A 1-y walking program and increased dietary calcium in postmenopausal women: effect on bone. *Am J Clin Nutr*. 1991;53:1304-11; Nielsen FH, Hunt CD, Mullen LM, Hunt JR. Effect of dietary boron on mineral, estrogen, and testosterone metabolism in postmenopausal women. *FASEB J*. 1987;1:394-7.

²⁷ Lunt M, Masaryk P, Scheidt-Nave C, et al. The Effects of Lifestyle, Dietary Dairy Intake and Diabetes on Bone Density and Vertebral Deformity Prevalence: The EVOS Study. *Osteoporos Int*. 2001;12:688-698. Prince R, Devine A, Dick I, et al. The effects of calcium supplementation (milk powder or tablets) and exercise on bone mineral density in postmenopausal women. *J Bone Miner Res*. 1995;10:1068-1075. Lloyd T, Beck TJ, Lin HM, et al. Modifiable determinants of bone status in young women. *Bone*. 2002;30(2):416-421.

²⁸ Lovati MR, Manzoni C, Corsini A, et al. Low-density lipoprotein receptor activity is modulated by soybean globulins in cell culture. *J Nutr*. 1992;122:1971-78.

²⁹ Nicar MJ, Pak CYC. Calcium bioavailability from calcium carbonate and calcium citrate. *J Clin Endocrinol Metab*. 1985;61:391-3.

better safeguard the health and well-being of the nation's schoolchildren, USDA should issue a report to Congress recommending that Congress amend the National School Lunch Act to exclude dairy milk as a required component of meals under the National School Lunch Program.