

# Raw Milk: Regulation, Rhetoric and Reason

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# Raw Milk Regulations: Federal

- 21 CFR Sec. 1240.61 Mandatory pasteurization for all milk and milk products in final package form intended for direct human consumption.
- House Resolution 1830
  - interstate traffic of unpasteurized milk
  - for direct human consumption
  - by Rep. Ronald Paul on May 11, 2011
  - In committee. <http://www.govtrack.us/congress/bill.xpd?bill=h112-1830>

# Raw Milk Regulations: States National Association of State Departments of Agriculture (NASDA) Survey

- 2011
- 9 Questions
- <http://www.realrawmilkfacts.com/raw-milk-news/story/NASDA-Releases-Raw-Milk-Survey/>

# Raw Milk Regulations: States

## (NASDA) Survey

- 50 respondents
  - 30 states authorize legal sale of raw milk
    - in some specified manner
    - direct human consumption.
- **The Sale of Raw Milk is prohibited in 20 States:**  
(AL, AK, DE, FL, GA, HI, IN, IA, LA, MD, MI, MT, NJ, NC, ND, OH, TN, VA, WV, WY)

# Sales of raw milk restricted to the farm:

- 13 states only on the farm where the milk is produced (AR, IL, KS, KY, MA, MN, MS, NE, NY, OK, RI, TX, WI)
  - **MN, WI, OK, IL** - only incidental occurrences
  - **KS** - minimal on-farm advertising.
  - **AR, KY, MS, RI** - goat milk only
  - **KY, RI** - prescription from a physician
- ID, MA, NY, OR, TX - coliform standard

# Sales of raw milk at retail stores separate from farm:

- 12 states at retail stores separate from the farm (AZ, CA, CT, ID, ME, NH, NM, NV, PA, SC, UT, WA)
  - UT - store to be owned by the producer
  - SC - both on and off the farm and at farmers' markets with permit & warning plaque in front of the raw milk.
- 12 have a total coliform standard.
  - AZ, CA, ME, NH, NV, PA, SC, UT, WA  $\leq 10/\text{mL}$
  - ID  $\leq 25/\text{mL}$
  - CT, NM  $\leq 50/\text{mL}$

# Sales of raw milk at farmers' markets and states with compound regulations:

- 5 states have unique regulations (CO, MO, OH, SD, VT)
  - OR allows on-farm
    - no more than 2 producing cows
    - 9 producing sheep and/or
    - 9 producing goats: Only goat milk at retail off farm.
  - CO no sales but legal through “share” operations.
  - VT share owners claim on their taxes the percentage of the farm that they own.
  - VT limited amounts of raw milk may be sold at farms.
  - SD, MO, VT farmers' market but not stores.
- 4 have bacteriological standards
  - VT, OR  $\leq 10$  coliform/mL
  - MO  $\leq 100$  coliform/mL
  - SD same standards for raw milk as pasteurized milk



# Raw Milk Rhetoric

- Definition (American Heritage Dictionary)
  - The art or study of using language effectively and persuasively.
  - Language that is elaborate, pretentious, insincere, or intellectually vacuous: *His offers of compromise were mere rhetoric.*

Read more:

<http://www.answers.com/topic/rhetoric#ixzz1ciMhH0wJ>



# Rhetoric regarding enzymes and pasteurization.

- Last but not least, pasteurization destroys all the enzymes in milk—in fact, the test for successful pasteurization is absence of enzymes.

From More About Raw Milk  
by [Sally Fallon and Mary G. Enig, PhD](#)  
Excerpt from Nourishing Traditions, 1999

<http://www.realmilk.com/moreraw.html>

# What science tells about enzymes and pasteurization.

Alkaline Phosphatase: Yes, it is inactivated.

**Table 1. Effects of Pasteurization on milk enzyme activity**

Indigenous milk enzymes	Enzyme activity	After pasteurization
Lipoprotein Lipase (LPL)	Hydrolyzes milkfat releasing free fatty acids	Inactivated
Plasmin	Splits casein into large peptides	Active
Ribonuclease	May have bactericidal and antiviral activity	Active
Lactoperoxidase	Bactericidal with hydrogen peroxide/thiocynate	Active
Catalase	Destroys hydrogen peroxide	<50% active

# Rhetoric Regarding the safety of raw milk.

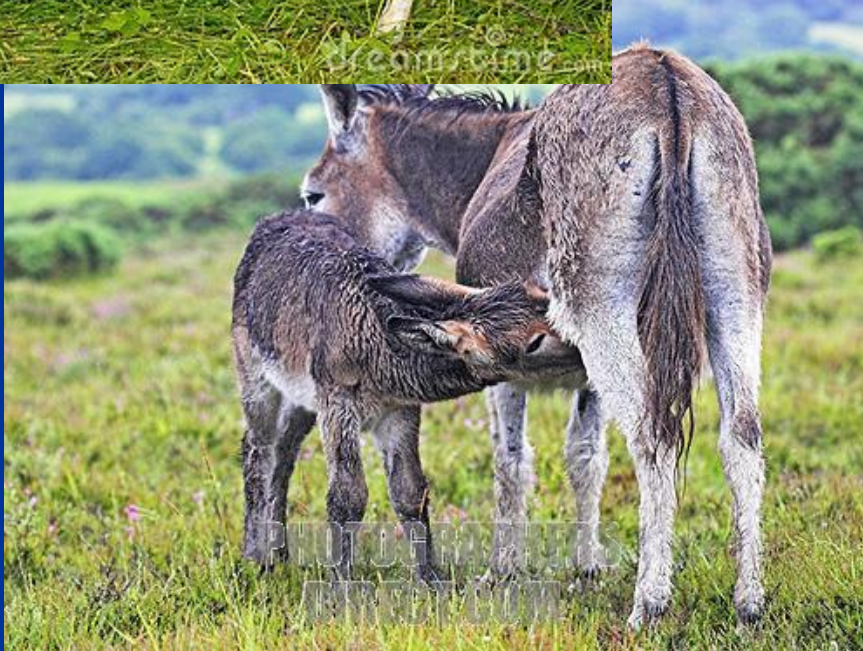
- Judge Holloway stated:
- “It is undisputed that all types of raw milk are unsafe for human consumption and pose a significant health risk. The appropriate remedy in this case is therefore, an order compelling the agency to promote a regulation prohibiting interstate sale.” — Public Citizen v. Heckler, 653 F. Supp. 1229, 1241 (1987).

# What nature says about milk safety.

<http://www.dreamstime.com/royalty-free-stock-photos-calf-com-feeding-image14647478>



<http://rissadum.com/advantages-of-breast-feeding/>



<http://www.photographersdirect.com/buyers/stockphoto.asp?imageid=1560642>

# Is all raw milk the same?

- Organic vs Traditional
- Pasture vs Confinement
- Small vs Large
- Clean vs Dirty
- Management



# Raw Milk straight from the Cow by Alice Park, Thursday, May 01, 2008



[http://www.time.com/time/magazine/  
article/0,9171,1736713,00.html#](http://www.time.com/time/magazine/article/0,9171,1736713,00.html#)

# Michigan Factory Farm???? or Michigan Family Farm????





# Reason?

- How many of you grew up drinking raw milk?
- How many still do?
- How many take risks for pleasure?

# Risk/Benefit

- Foodnet survey estimates 9-10 million raw milk consumers. 2007
- Among dairy product-associated outbreaks reported to CDC between 1973 and 2009 in which the investigators reported whether the product was pasteurized or raw, 82% were due to raw milk or cheese.
- From 1998 through 2009, 93 outbreaks due to consumption of raw milk or raw milk products were reported to CDC. These resulted in 1,837 illnesses, 195 hospitalizations, and 2 deaths.
- Most of these illnesses were caused by *Escherichia coli* O157, *Campylobacter*, or *Salmonella*. It is important to note that a substantial proportion of the raw milk-associated disease burden falls on children; among the 93 raw dairy product outbreaks from 1998 to 2009, 79% involved at least one person less than 20 years old.

# Would you have your child do this activity?

- Between 1982-2002, 256 high school students lost their lives doing this activity.
- Risk/Benefit

# Risk/Benefit

- According to the National Center for Catastrophic Sport Injury Research Twentieth Annual Report:
- From 1982-2002, the total numbers of direct and indirect fatalities among high school athletes were:
  - Baseball — 17
  - Basketball — 88
  - Cheerleading — 21
  - Cross Country — 14
  - Football — 22
  - Soccer — 31
  - Track & Field — 47
  - Wrestling — 16

# Risk/Benefit

- Injuries associated with participation in sports and recreational activities account for 21 percent of all traumatic brain injuries among children in the United States.



# Risk/Benefit

- **Concussion rate doubled in decade**
- There are between an estimated 1.6 and 3.8 million sports-related concussions in the United States every year,<sup>1, 2</sup> leading The Centers for Disease Control (C.D.C.) to conclude that sports concussions in the United States have reached an "epidemic level."
- A 2011 study<sup>8</sup> of U.S. high schools with at least one athletic trainer on staff found that concussions accounted for nearly 15% of all sports-related injuries reported to ATs and which resulted in a loss of at least one day of play.
- According to the C. D.C., during the period 2001-2009 children and youth ages 5-18 years increased 62% to a total of 2.6 million sports-related emergency department (ED) visits annually, of which 6.5% (173,285) involved a traumatic brain injury, including concussion. The rate of TBI visits increased 57%, likely due to increased awareness of the importance of early diagnosis of TBI.
- For young people ages 15 to 24 years, sports are the second leading cause of traumatic brain injury behind only motor vehicle crashes.
- Read more: <http://www.momsteam.com/health-safety/concussion-rates-high-school-sports#ixzz1cbyaH6GJ>

<http://www.momsteam.com/health-safety/concussion-rates-high-school-sports>



# Risk/Benefit

- **Fatal Occupational Injuries to Athletes, 1992-2002**  
by Stephen M. Pegula  
Bureau of Labor Statistics
- Originally Posted: July 28, 2004
- Although athletes made up less than 1 percent of all workplace fatalities during the 1992-2002 period, their occupational fatality rate was nearly 5 times greater than the rate for workers overall.
- From 1992 to 2002,<sup>1</sup> a total of 219 fatal work injuries involving professional athletes were recorded by the BLS Census of Fatal Occupational Injuries (CFOI). That figure represents less than 1 percent of all workplace fatalities that occurred during the period. (See table.) Over the same period, the fatality rate<sup>2</sup> for athletes was 22.0 fatal work injuries per 100,000 workers, while the fatality rate for all workers was 4.7 per 100,000 workers. In addition, occupational fatalities to athletes increased during the latter part of the study period, even as fatal work injuries in general declined. From 1992 to 1996, athletes averaged 16 deaths per year, while workers in general averaged 6,331 deaths per year. From 1998 to 2002, athletes averaged 22 deaths per year, while workers in general averaged 5,893 deaths per year.



# Risk/Benefit

- The protective effect of farm milk consumption on childhood asthma and atopy: The GABRIELA study
- The Journal of Allergy & Clinical Immunology (doi:[10.1016/j.jaci.2011.07.048](https://doi.org/10.1016/j.jaci.2011.07.048)).

# Michigan Fresh Unprocessed Whole (FUW) Milk Workgroup

- The Michigan Fresh Unprocessed Whole Milk Workgroup has been addressing the question: Where do we want to be in 3 to 5 years on access to fresh unprocessed whole milk?

<http://www.miffs.org/MIfuwmilk/index.htm>