A Campaign for Real Milk

FULL-FAT

PASTURE-FED

UNPROCESSED

By the Weston A. Price Foundation

A Campaign for Real Milk Is a Project of
The Weston A. Price Foundation
westonaprice.org

This document is posted at realmilk.com.
Updated September, 2011
Number of RDM Outbreaks

Note that no outbreaks have occurred since 2002

1983: Scotland ban

1985: RDM controls introduced in E, W and NI
• Chart does not differentiate between registered & non-registered herds
• No evidence of any outbreaks from any FSA registered herds.
• Outbreaks continue in Scotland after raw milk ban
Unreliable statistics (Info from FOIA Request)

- FSA has never seen RDM outbreak reports
- Public Health England, responsible for the statistics rarely sees RDM outbreak reports, produced by Local Authorities.
- Public Health England deemed pre-1992 statistics “unstandardised and not comprehensive”
- Raw milk is often a scapegoat when associated with outbreaks. Often without proven connections.
- This chart exaggerates risk and is not fit to inform policy.
Dairy is low risk

Number of outbreaks reported: 1992 to 2013

- Others: 1600
- Chicken: 250
- Red meat: 300
- Seafood: 200
- Egg: 100
- Fruit & Veg: 50
- Raw milk: 20
- Pasteurised Dairy Products: 20
- Pasteurised Milk: 20
- Raw Dairy Products: 20
- Others: 1800
Dairy is low risk

Number of people affected: 1992 to 2013

- Raw Dairy Products: 0
- Raw milk: 0
- Pasteurised Dairy Products: 0
- Pasteurised Milk: 0
- Fruit & Veg: 0
- Egg: 0
- Seafood: 0
- Red meat: 0
- Chicken: 0
- Others: 40,000

Number of people affected: 1992 to 2013
Dairy is low risk
Leading causes of death for Men, 2012

- Heart disease: 37,000
- Lung cancer: 16,000
- Emphysema/bronchitis: 13,000
- Stroke: 12,000
- Dementia & Alzheimer's: 9,000
- Pneumonia: 8,000
- Prostate cancer: 7,000
- Bowel cancer: 5,000
- Lymphoid cancer: 4,000
- Thorax cancer: 2,000
- Food poisoning: 1,000
Evidence based policy?

• No evidence at all for raw milk ban
• “Harmonisation” will BAN non-bovine raw milk retail. Presently lawful with no evidence of risk.
  – Ellies Dairy, frozen raw milk across Britain
  – Local raw goat milk available prominent organic health food stores elsewhere.
• Plans to maintain BAN on bovine raw milk retail, yet no evidence of harm.
  – FSA Registered, Soil Association Organic, raw dairy farmers still banned from selling in Selfridges.
Is Raw Milk Safe?

• There is an “inherent food safety risk associated with raw drinking milk and cream (RDM)” From RDA Consultation Doc.

• Para 50 12/05/01 FSA Minutes: The Chair of ACMSF said: “The absence of evidence of diseases associated with raw milk and cream was not equivalent to the evidence of absence.”

• “We aim to be science and evidence based in everything we do.” FSA Strategy to 2015
Raw Milk Is Uniquely Safe

Consider the calf, born in a muddy pasture, which then suckles on its mother’s often manure-covered teat. How can that calf, or any mammal survive?

Because raw milk contains multiple, natural, redundant systems of bioactive components that can reduce or eliminate populations of pathogenic bacteria. None are mentioned by FSA consultation documents.
## Destruction of Built-In Safety Systems by Pasteurization

<table>
<thead>
<tr>
<th>Component</th>
<th>Breast Milk</th>
<th>Raw Milk</th>
<th>Pasteurized Milk</th>
<th>UHT Milk</th>
<th>Infant Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-lymphocytes</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Macrophages</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Neutrophils</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Lymphocytes</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>IgA/IgG Antibodies</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>B&lt;sub&gt;12&lt;/sub&gt; Binding Protein</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Bifidus Factor</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Medium-Chain Fatty Acids</td>
<td>active</td>
<td>active</td>
<td>reduced</td>
<td>reduced</td>
<td>reduced</td>
</tr>
<tr>
<td>Fibronectin</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Gamma-Interferon</td>
<td>active</td>
<td>active</td>
<td>inactivated</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Lactoferrin</td>
<td>active</td>
<td>active</td>
<td>reduced</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Lactoperoxidase</td>
<td>active</td>
<td>active</td>
<td>reduced</td>
<td>inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Lysozyme</td>
<td>active</td>
<td>active</td>
<td>reduced</td>
<td>Inactivated</td>
<td>inactivated</td>
</tr>
<tr>
<td>Mucin A/Oligosaccharides</td>
<td>active</td>
<td>active</td>
<td>reduced</td>
<td>reduced</td>
<td>inactivated</td>
</tr>
<tr>
<td>Hormones &amp; Growth Factors</td>
<td>active</td>
<td>active</td>
<td>reduced</td>
<td>reduced</td>
<td>Inactivated</td>
</tr>
</tbody>
</table>

Raw Milk Challenge Tests I

- Large amounts of *Campylobacter* (an amount found in 20,000 grams manure) added to chilled raw milk (4°C):
  - Most strains showed a dramatic decline
    Day 0 = 13,000,000/ml
    Day 9 = less than 10/ml
  - The only strain that did not decline was a non-human strain.

*FIG. 1.* Survival of *C. jejuni* and NARTC in unpasteurized milk held at 4°C. No campylobacters were detected at the <10-CFU/ml level (minimum level of sensitivity) in the final sampling.

*Applied and Environmental Microbiology,* 1982;44(5):1154-58
Raw Milk Challenge Tests II

• Lactoperoxidase in raw milk kills added fungal and bacterial agents\(^1,2\)

• Raw goat milk kills *Campylobacter jejuni* in a challenge test \(^3\)

Raw Milk Challenge Tests III

- Seven strains of *E. coli* O157:H7 in amounts of 1 million/ml added to raw milk. The pathogen failed to grow and died off gradually.¹
- *L. mono* added to raw milk at 98.6° F. After 56 hours, no viable cells of *L. mono* were detectible.²
- “The growth of *Staph. Aureus, S. Enteritidis* and *L. monocytogenes* in raw milk at 99° F was reduced markedly compared to the growth of these organisms in pasteurized milk.”³
- Five strains of *E. coli* O157:H7 did not grow at 41° F and decreased over days.⁴

---

BSK Food & Dairy Laboratories (2002) inoculated raw colostrum and raw milk samples at 40° F from Organic Pastures Dairy (Fresno, California) with a cocktail containing 2.4 million *Salmonella*, 9.2 million *E. coli* O157:H7 and 8.1 million *Listeria monocytogenes* (these huge amounts a very unlikely occurrence in a real-life situation).

Yet even with these huge amounts, pathogen counts declined over time and in some cases were undetectable within a week.

*E. coli* O157:H7 did increase slightly after seven-days decline, possibly due to exhaustion of anti-microbial components in the milk.

The laboratory concluded: “Raw colostrum and raw milk do not appear to support the growth of *Salmonella, E. coli* O157:H7 or *Listeria monocytogenes.*”

McAffee, M. Unpublished data.
Fivefold Protective System in Raw Milk

1. Destroys pathogens in the milk.
2. Stimulates the Immune system.
4. Prevents absorption of pathogens and toxins in the gut.
5. Ensures assimilation of all the nutrients.
Milk Safety in California

- **ORGANIC PASTURES**: Since 1999, over 40 million servings of Organic Pastures raw milk, not one confirmed illness; in over 1,300 tests, not one proven illness and no pathogens found in the milk or milking area, or in any of the dairy cows being milked on the farm.
## Lowered Nutrient Availability in Pasteurized Milk

<table>
<thead>
<tr>
<th>Vitamin</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin C</td>
<td>Raw milk but not pasteurized can resolve scurvy. “... Without doubt... the explosive increase in infantile scurvy during the latter part of the 19th century coincided with the advent of use of heated milks...” Rajakumar, <em>Pediatrics</em>. 2001;108(4):E76</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td>Longer and denser bones on raw milk. Studies from Randleigh Farms.</td>
<td></td>
</tr>
<tr>
<td>Vitamin B12</td>
<td>Binding protein inactivated by pasteurization.</td>
<td></td>
</tr>
<tr>
<td>Vitamin B6</td>
<td>Animal studies indicate B6 poorly absorbed from pasteurized milk. Studies from Randleigh Farms.</td>
<td></td>
</tr>
<tr>
<td>Iron</td>
<td>Lactoferrin, which contributes to iron assimilation, destroyed during pasteurization.</td>
<td></td>
</tr>
<tr>
<td>Minerals</td>
<td>Bound to proteins, inactivated by pasteurization; Lactobacilli, destroyed by pasteurization, enhance mineral absorption. BJN 2000 84:S91-S98; MacDonald and others. 1985.</td>
<td></td>
</tr>
</tbody>
</table>


• CDC website notes that breast milk is best protection to infants “against salmonellosis and many other health problems.” Yet the agency warns against raw milk as a cause of salmonellosis. [Cdc.gov/ncidod/dbmd/diseaseinfo/salmonellosis_g.htm](http://Cdc.gov/ncidod/dbmd/diseaseinfo/salmonellosis_g.htm).
Asthma Crisis

- According to the CDC, asthma is the second most prevalent chronic condition among children. It results in approximately **14 million days of missed school** each year. Asthma in children increased from 3.6% in 1980 to 7.5% in 1995, or approximately 5 million children.

- What if we could prevent most of these cases through something as simple as offering raw milk in childhood?

CDC National Health Interview Survey Data
Asthma & Raw Milk - 2001

• Exposure to farming in early life and development of asthma and allergy: a cross-sectional survey.

• Summary: Long-term and early-life exposure to stables and [raw] farm milk induces a strong protective effect against development of asthma, hay fever, and atopic sensitization [rashes].

Researchers in London concluded that children who even *infrequently* drank raw milk had significantly less current eczema symptoms and a greater reduction in atopy (allergic hypersensitivity).

• In a study of 14,893 children aged 5-13, consumption of raw milk was the strongest factor in reducing the risk of asthma and allergy, whether the children lived on a farm or not.

• The benefits were greatest when consumption of farm milk began during the first year of life.

*Clinical & Experimental Allergy. 2007 May; 35(5) 627-630.*
Asthma & Raw Milk – 2011

- Children drinking raw milk had 41 percent less asthma and half the rate of hay fever.
- Boiling farm milk removed the protective effect.
- Protective effect linked to whey proteins in milk, which are damaged by heat.

*Journal of Allergy and Clinical Immunology. Online August 29, 2011.*
Asthma & Foodborne Illness – Relative Risk

- About 5,500 people in the US die from asthma each year.
- About 1,250 people in the US die from food-borne pathogens from ALL sources. (No deaths from raw milk).
- Thus, the risk of dying from asthma is over four times greater than the risk of dying from food-borne pathogens from ALL sources, and infinitely greater than the risk of dying from raw milk.
Raw Milk Digests Itself!
Many find that it cures milk intollerance

- ACTIVATED ENZYMES: The enzymes in raw milk, when activated by the appropriate pH of the digestive tract, digest all the components in the milk.
- NO WORK: The body’s digestive apparatus does not need to do any work to digest raw milk.
- CURATIVE, ENERGIZING: This is a major reason raw milk has such extraordinary healing and energizing powers.
- OVERBURDEN: Pasteurized milk puts a huge burden on the digestive apparatus and for many is impossible to digest.
Raw Milk and Casein Intolerance

- Milk allergy is usually attributed to casein intolerance.
- Pasteurization destroys *L. lactis* and other lactic-acid bacteria indigenous to milk.
- These bacteria produce enzymes that break down the casein molecule.
- These findings suggest that raw milk could be consumed by many of those with milk allergy.

Summary

• Research has shown that there is a very significant difference in the nutritional value of unpasteurized milk versus pasteurized milk.

• Research shows no evidence of risk from registered raw milk producers, but clear benefits for children.

• Yet this review proposes adopting the Welsh warning label warning mothers and children to avoid raw milk.

• Additional red tape and cost for farmers with no evidence of risk to informed consumers.
Recommendations

• Review RDM outbreak statistics. Present chart not fit for policy formulation

• Review scientific papers about the benefits of raw milk. We can provide a list of papers.

• Rather than focus on whether raw milk is to be or not to be, review the FSA registration and testing regime to improve safety, reduce cost and improve the experience for farmers.

• Analyse the safety features and record of raw milk vending machines used across Europe before banning their use.

• Explore how the regulatory regime could expand to continuing the retail of non-bovine and expand to regulate bovine raw milk retail

• There is no evidence to tighten the warning label and given the studies quoted, the proposed label could cause harm be costly.
All truth passes through three stages. 
First, it is ridiculed. 
Second, it is violently opposed. 
Third, it is accepted as self-evident. 

—Arthur Schopenhauer
Resources

westonaprice.org

Quarterly Magazine
Informational Brochures
Yearly Shopping Guide
Annual Conference
Local Chapters
Resources

The Weston A. Price Foundation
for Wise Traditions in Food, Farming and the Healing Arts

Wise Traditions in Food, Farming and the Healing Arts

Healthy Baby Issue

Heart Disease Issue
A Campaign for Real Milk
realmilk.com
A Project of the
Weston A. Price Foundation

Many articles on raw milk and raw cheese; sources for raw milk.
Resources

The Untold Story of Milk
REVISED AND UPDATED
by Ron Schmid

New Trends Publishing
newtrendspublishing.com
(877) 707-1776
Resources

Nutrition and Physical Degeneration
Price-Pottenger Nutrition Foundation
price-pottenger.org
(619) 462-7600
### Summary

Traditional diets *maximized* nutrients while modern diets *minimize* nutrients

<table>
<thead>
<tr>
<th>TRADITIONAL DIETS</th>
<th>MODERN DIETS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foods from fertile soil</td>
<td>Foods from depleted soil</td>
</tr>
<tr>
<td>Choice of organ meats over muscle meats</td>
<td>Muscle meats, few organ meats</td>
</tr>
<tr>
<td>Animal fats</td>
<td>Vegetable oils</td>
</tr>
<tr>
<td><strong>Animals on pasture</strong></td>
<td><strong>Animals in confinement</strong></td>
</tr>
<tr>
<td>Dairy products raw and/or fermented</td>
<td>Dairy products pasteurized</td>
</tr>
<tr>
<td>Grains and legumes soaked/fermented</td>
<td>Grains refined and/or extruded</td>
</tr>
<tr>
<td>Bone broths</td>
<td>MSG, artificial flavorings</td>
</tr>
<tr>
<td>Unrefined sweeteners (honey, maple syrup)</td>
<td>Refined sweeteners</td>
</tr>
<tr>
<td>Lacto-fermented vegetables</td>
<td>Canned vegetables</td>
</tr>
<tr>
<td>Lacto-fermented beverages</td>
<td>Modern soft drinks</td>
</tr>
<tr>
<td>Unrefined salt</td>
<td>Refined salt</td>
</tr>
<tr>
<td>Natural vitamins in foods</td>
<td>Synthetic vitamins added to foods</td>
</tr>
<tr>
<td>Traditional cooking</td>
<td>Microwave, irradiation</td>
</tr>
<tr>
<td>Traditional seeds/open pollination</td>
<td>Hybrid seeds, GMO seeds</td>
</tr>
</tbody>
</table>
A Campaign for Real Milk

FULL-FAT
PASTURE-FED
UNPROCESSED

By the Weston A. Price Foundation

A Campaign for Real Milk Is a Project of The Weston A. Price Foundation
westonaprice.org

This document is posted at realmilk.com. Updated September, 2011