

The background features a large, faint watermark of the ACMSF logo, which consists of a white oval containing the letters 'ACMSF' in a serif font. The text of the slide is centered over this watermark.

The Advisory Committee on the Microbiological Safety of Food ACMSF

Chairman: Professor Sarah O'Brien
Deputy Chairman: Professor David McDowell

Terms of Reference

To assess the risk to humans from microorganisms which are used, or occur, in or on food, and to advise the Food Standards Agency (FSA) on any matters relating to the microbiological safety of food

ACMSF & RDM

- 1995 - ACMSF report on Verocytotoxin-producing *E. coli* (VTEC) - outbreaks of human foodborne infection due to *E. coli* O157.
- 1997 - PHLS/ADAS survey shows raw drinking milk samples carried substantial amounts of faecal indicator organisms and in some cases pathogens.
- 1998 - raw drinking milk from sheep and goats can carry faecal indicator organisms.
- 2000 – national survey of the microbiological quality and heat processing of cows' milk.
- 2010 - potential for milk and milk products contamination with *Mycobacterium bovis*.

Summary of Microbiological Hazards associated with Raw Drinking Milk

Organism	Shed directly in milk [#]	Severity of illness [§]	Implicated in foodborne illness
<i>Bacillus cereus</i>	×	Moderate	++
<i>Campylobacter jejuni/coli</i>	✓	Severe [^]	++
<i>Clostridium perfringens</i>	×	Severe [^]	+
<i>Coxiella burnetii</i>	✓	-	+
<i>Cryptosporidium parvum</i>	×	Severe [^]	+
Enterohaemorrhagic <i>E. coli</i>	✓	Severe	++
<i>Listeria monocytogenes</i>	✓	Severe [^]	++
<i>Salmonella</i> spp.	✓	Serious	++
<i>Staphylococcus aureus</i>	✓	Moderate	++
<i>Streptococcus</i> spp.	✓	-	+
<i>Toxoplasma gondii</i>	✓	-	++
<i>Yersinia enterocolitica</i>	✓	Serious	+

Key:

[#] Transmission through udder; mastitis etc

[^] Susceptible sub-populations

- No data/unknown

[§] Based on ICMSF (2002)

+ Rare

++ More common

Summary of prevalence data for pathogens in raw cows' milk

Organism	International data
<i>Campylobacter jejuni</i>	0 – 40%
<i>Enterohaemorrhagic Escherichia coli</i> (EHEC)	0 – 33.5%
<i>Listeria monocytogenes</i>	1 – 60%
<i>Salmonella</i> spp.	0 – 11.8%

Milk Production Hygiene

Operational Information: Sampling and Failure Rates

Number of samples of raw cows drinking milk

	2009/10	
	Pass	Fail
England	324	60
Wales	17	4

Absolute and percentage failure rate for all tests carried out:

	2009/10		
	Samples	Fail	%
England	384	60	15.6
Wales	21	4	19

Current Epidemiology

In people:-

- No outbreaks since 2003 in which RDM implicated as a food vehicle

In cattle:-

- Rising prevalence of *M. bovis*

Conclusion

The critical control for ensuring the microbiological safety of milk intended for human consumption is pasteurisation.