

The First Day of Life

There is no transfer of immunity between the cow and calf before birth

We still need to talk about Colostrum!!!

>20% of calves experience FPT (failure of passive transfer)

Calves that have FPT are:

- 1.5 x more likely to scour
- 1.8 x more likely to get pneumonia
- 2 x more likely to die

Table to show how quickly the gut closes after birth:

	Birth	6 hours after	12 hours after	24 hours after
% of gut open	100%	50%	25%	0%

The gut is not selective. It is a:

- **Race** against time for gut closure vs colostrum uptake
- **Fight** between uptake of IgGs and harmful bacteria

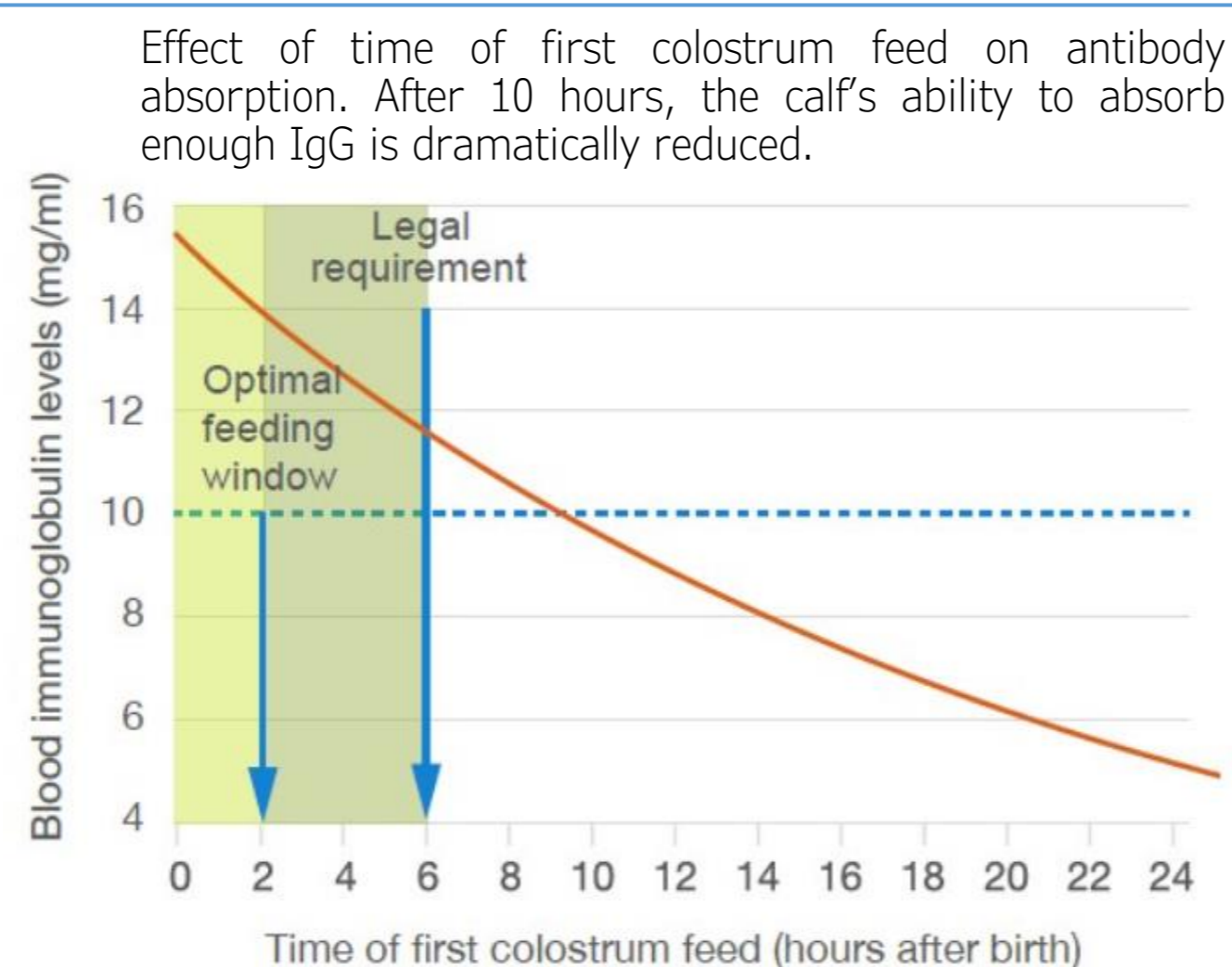
The 5 Qs of Colostrum

Quick

- Within 2 hours of birth (no later than 6 hours)

Tube vs teat feeding?

- No difference in IgG uptake so do what suits you



Source: AHDB, 2018

Quantity

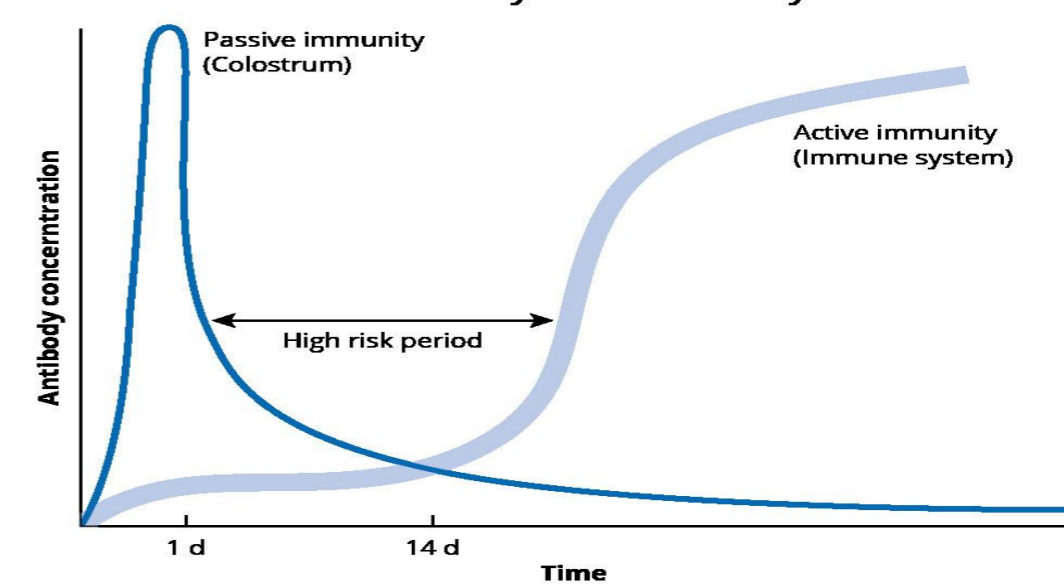
Abomasal size as a limiting factor is a MYTH

Feed 10% of Body weight ASAP

Second colostrum feed within 12 hours

How long to keep feeding colostrum/first milking? At least 3 days can feed up to 7 days

Antibodies from colostrum protect calves until their own immune systems are fully functional.



Source: Penn State- Feeding the newborn dairy calf.

Quality

Huge Variation between farms!
Breed variance/age/dry period
length/yield difference/poor hygiene/transition ration



Quality decreases with time after birth – loses 3.7% in IgG content per hour (more if contaminated with bacteria)

Use a Brix refractometer to test colostrum quality (unaffected by temperature): values above 22% can be used/stored for future use

sQueaky clean

Colostrum collected from parlour/robot has higher total bacteria count (TBC) than that taken directly from the cow

Contaminated Colostrum reduces the ability of the calf to absorb IgGs

Cleanliness of colostrum collection and feeding equipment is critical – hot water followed by hypochlorite or peracetic acid

Know a cow's Johne's status before using her Colostrum

Quantify

Measuring inputs: Colostrometer, Refractometer, check amount and timing of colostrum feeding

Measuring outputs: Total proteins (on farm or vet practice lab), ZSTs (external lab)

Scour sample test kits

Growth rates: weigh tapes vs scales, need to do regularly, tie in with other management tasks

Mortality rates

FPT can be measured by talking bloods of calves up to 7 days old. Target of TPs to be >5.4