

**Nimrod Red Start™ is a paste that contains**

- caffeine from plant extracts
- medium-chain fatty acids
- glucose
- selenium

One syringe of paste should be given to newborn calves immediately at birth. It is intended particularly for calves born in assisted calvings and Caesarean deliveries. The caffeine is rapidly absorbed in the mouth so the product begins working immediately. It can also be used in lambs and foals.



**Nimrod Red Start is a paste presented in a syringe for one calf. Each syringe provides:**

rapidly-absorbed medium-chain triglycerides . 6.49 g  
glucose syrup..... 3.34 g  
caffeine from plant extracts..... 89 mg  
selenium .....3 mg  
vitamin A..... 25,230 i.u.

**Legal Category** Nimrod Red Start is a complementary feeding stuff for newborn calves.

# Nimrod Red Start™ is available from your vet

Ask your vet for more information or contact Nimrod Veterinary Products Ltd



Difficult calving?  
How to improve survival in weak newborn calves...

**Nimrod Red Start™**  
.....  
Invigorating energy booster  
for newborn calves



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## Losing a calf is expensive

Nowadays, every calf is valuable. Be it a Continental-cross bull or a dairy heifer, both are the kind of animal that may require an assisted calving or a Caesarean delivery. And that means the calf may well die soon after birth. Nimrod Red Start™ can reduce these deaths.

## Why does a newborn calf die?

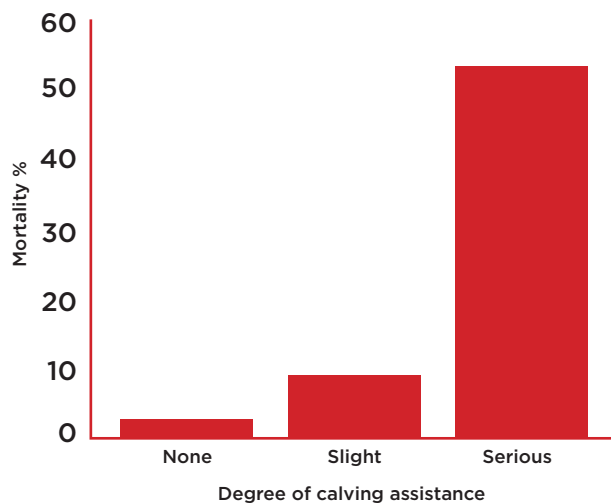
The most likely reasons for a newborn calf to die are failure to breathe and insufficiency of glucose in the blood, causing brain damage.

## Why might a newborn calf fail to breathe?

One reason is having its head and neck in an abnormal position for a long time. The other is shortage of oxygen in the blood. Both these factors are likely in a difficult calving. The longer the calving takes, the more important they become.

## Why might there be insufficient glucose in the blood?

The reason may be the stress of a prolonged calving. The tissues' response to that stress is to use up their energy stores. With those stores gone, they start to use up glucose itself.



McGuirk, B.J. *et al.* (2007)<sup>1</sup>

As can be seen in the graph opposite, the more difficult and prolonged a calving is, the more likely it is that a calf will be unable to breathe normally, and will have insufficient glucose in its circulation. And the more likely it is the calf will die.

Only 2.6% of calves born without assistance die in the first 48 hours. That figure rises to 9.1% amongst calves born with slight assistance, and 53.8% amongst calves born with serious assistance.

## What can be done to save weak newborn calves?

**Breathing** The foetal membranes should be cleared from the nostrils so they do not obstruct breathing. But more than that can be done. High concentrations of caffeine can stimulate breathing. They do this even when failure to breathe is caused by lack of oxygen in the blood.

Newborn babies at risk from breathing failure are given caffeine routinely. Calves can benefit in the same way. Caffeine-rich products such as Nimrod Red Start can easily be given to newborn calves in a paste.



**Energy** Other useful nutrients to improve the survival of weak newborn calves are glucose and medium-chain fatty acids.

Providing extra glucose can prevent brain damage from developing in calves born with insufficient glucose. Medium-chain fatty acids are the ideal energy source for newborn animals: they require no digestion, and are rapidly absorbed and utilized.

Medium-chain fatty acids are very rich in energy, and allow glucose to be spared from use in other tissues for use in the brain - where sufficient glucose is vital.



**Colostrum** Deaths in the first 48 hours of life are usually related to the difficulty of calving. After that, calves' deaths are usually caused by infections. The best protection that can be provided against infections early in life is colostrum.

Newborn calves should be given 4 litres of colostrum within the first two hours of life. Giving it within the first hour is better still: the calf's ability to absorb the protective antibodies in colostrum starts to decline as soon as it is born. A second feed of 4 litres of colostrum should be given 8 hours later.

The absorption by the calf of antibodies in colostrum has been shown to be improved by giving additional selenium. Nimrod Red Start contains the optimal amount of selenium.

Vitamin A deficiency has been found to be a contributing factor to mortality in newborn calves in some cases and is included in Nimrod's formulation.

## References

1. McGuirk, B.J., Forsyth, R., and Dobson, H. (2007) *Veterinary Record*, **161**, 685-687