

Treatment of the hypothermic lamb

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Lambing time 2007 was probably one of the best with regard to ambient weather conditions, and lamb losses due to hypothermia should have been relatively low. However on an annual basis, hypothermia is still responsible for around 40% of all lamb deaths in the UK, equating to a loss of approximately one million lamb deaths each year. More traditional lambing time weather in March/April in this country can be wet, windy and cold - newborn lambs born outdoors are prone to exposure during these adverse weather conditions.



Fig. 1: High risk of hypothermia during adverse weather conditions.

Hypothermia can be caused by either excessive heat loss or inadequate heat production, or a combination of both of these. Normal temperature in a lamb is 38.5–40°C. When the body temperature falls below 37°C, the lamb will lose the suck reflex and intervention is required to save the lamb.

Losses are highest in small lambs born outside in wet, cold and windy conditions but can also occur indoors in lambs which have experienced dystocia, with a subsequent lack of suckling and chilling in a draught. Generally, when lambs are born, they have enough energy supplies to last for around five hours

- if death occurs in this period it is blamed on excessive heat loss. After five hours of age, hypothermia is due to a combination of heat loss and starvation which leads to hypoglycaemia. These lambs will be unable to generate heat even in reasonable environmental conditions.

CLINICAL SIGNS

Mild/moderate hypothermia (body temp 37–39°C) would be a lamb which is moving slowly, appears weak and is just able to suck its mother.

Treatment

The affected lamb should be fed warm colostrum/milk via teat or stomach tube and dried thoroughly before returning to its mother (Fig. 2). The farmer should then observe the lamb carefully.



Fig. 2: Monitoring the lamb with mild hypothermia.

Severe hypothermia (body temp <37°C) would be a lamb which may still be standing initially but is arch backed, depressed, empty looking and unable to suck. It will quickly deteriorate to recumbency, coma and death.

Treatment

The treatment of this lamb would depend on its age: lambs over 5 hours old should be considered to be hypoglycaemic as well as hypothermic, so before heating the lamb, it is crucial to feed them with intraperitoneal glucose (see below), to reduce the risk of hypoglycaemic convulsions and death.

- **Lambs < 5 hours old**

1. Dry thoroughly.
2. Warm carefully till body temp rises over 37°C.
A box with a thermostatically controlled heater underneath (Fig. 3a) is preferable to a heat lamp (Fig. 3b).
3. Feed with warm colostrum via stomach tube (Fig. 4).
4. Warm to 39°C.
5. Return to mother in dry, draught free environment and observe carefully.



Figs. 3a and 3b: A thermostatically controlled heat box is preferable to direct heat from a lamp.



Fig. 3b.



Fig. 4: Feeding warmed colostrum via stomach tube.

- **Lambs > 5 hours old**

1. Inject intraperitoneal glucose 20% at a rate of 5-10 ml/kg (40% warmed glucose diluted half and half with boiled water). To give an intraperitoneal injection, the lamb is first suspended vertically by the forelimbs. A 19 gauge 1" needle is introduced through the body wall approx 1" to the side of and 1" caudal to the navel. The needle is pointed in the direction of the lamb's pelvis. Once the needle has carefully been inserted the contents of the syringe is introduced slowly into the abdominal cavity (Fig. 5).
2. Dry thoroughly.
3. Warm carefully till body temp rises over 37°C.
4. Feed with warm colostrum via stomach tube.
5. Warm to 39°C, return to ewe and observe carefully.



Fig. 5: Intraperitoneal injection of glucose in a lamb.

Prevention of hypothermia is not always possible due to the variable weather conditions which can be seen in the UK at lambing time. Housing of ewes and the provision of adequate shelter in fields, such as big bales and constructed tin windbreaks can be undertaken where necessary. In conjunction with this, correct pre-lambing feeding of the ewes to give production of quality colostrum, and good shepherding at lambing time, can go a long way to help reduce lamb deaths due to hypothermia.

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