

**Malignant oedema is an acute, rapidly fatal wound infection in grazing animals including sheep, cattle and deer, which is caused by toxins produced by several types of clostridial organisms.**

### **What causes the disease?**

Several different types and combinations of clostridial organisms can be responsible including *C.septicum*, *C.chauvoei*, *C.perfringens*, *C.novyj* and *C.sordellii*. These bacteria generally live in the soil but can contaminate wounds e.g. following shearing, castration, tail docking, fight wounds in rams.

### **What are the clinical signs?**

Clinical signs appear soon after infection. Swelling and inflammation occurs initially at the wound site and gas production from the bacteria can cause the area to have an abnormal, "crinkly," bubbly feeling. The skin darkens and becomes gangrenous as the tissues die and the blood supply is compromised. The infection may spread locally through the surrounding tissues. The animal often develops a fever and becomes dull and lethargic. Death typically occurs during the following 24 hours.

### **How is it diagnosed?**

Diagnosis is usually at post-mortem and the clinical signs are reasonably suggestive. Culture and isolation of the bacteria can confirm a diagnosis, however this is not necessarily straightforward as the bacteria can be difficult to isolate and identify.

### **Is there an effective treatment?**

Unlike other clostridial infections in sheep, therapy such as antibiotics and local wound treatment will occasionally be effective when the condition is detected in its very early stages. However many animals under normal pastoral and grazing systems in Australia will succumb and die prior to signs being noticed.

### **Can malignant oedema be controlled or prevented?**

The brief clinical course of this disease dictates a preference for prevention rather than treatment. Protection against malignant oedema can be achieved by vaccination using a multivalent clostridial vaccine, which will also protect against other fatal clostridial diseases.

Pfizer's Glanvac<sup>®</sup> 6 range of vaccines, Ultravac<sup>®</sup> 5in1 and Ultravac<sup>®</sup> 7in1 all provide protection against malignant oedema. Glanvac<sup>®</sup> also provides control of cheesy gland in sheep, and Ultravac<sup>®</sup> 7in1 provides protection against leptospirosis in cattle.

### **What vaccination programs are recommended?**

For previously unvaccinated cattle and sheep, the primary course consists of 2 doses ideally given 4–6 weeks apart in cattle and 4 weeks apart in sheep. This should be followed by a booster dose 12 months later. Annual boosters should be done about a month before calving or lambing so that passive immunity is transferred from dam to offspring. This will protect them in the first vulnerable period of life prior to them receiving their first vaccination at marking time.

For complete directions refer to the product label. Consult your veterinarian or animal health consultant for advice on specific vaccination programs.

### **What are the correct dose rates?**

Glanvac<sup>®</sup> 6 1mL for sheep/1mL for goats\*  
Ultravac<sup>®</sup> 5in1 1mL for sheep/2mL for cattle  
Ultravac<sup>®</sup> 7in1 2.5mL for cattle

\* Glanvac<sup>®</sup> 6 & Glanvac<sup>®</sup> 6B12 are registered for goats.