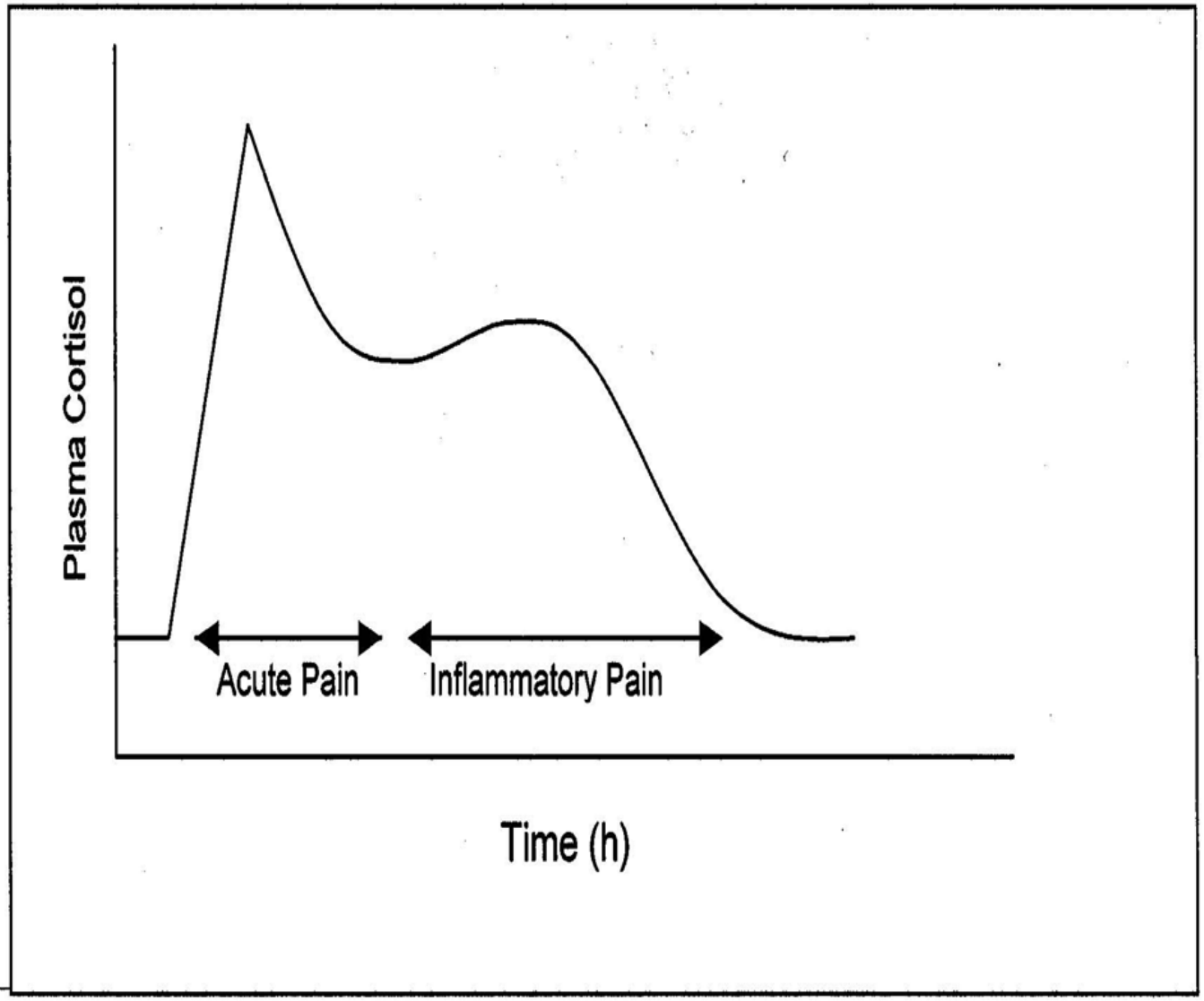
On Farm Welfare Amputations

Invasive procedures used on farms

- *Nose ringing -*
- *Nose pegging*
- *Beak trimming - -*
- *Teeth clipping*
- *Antler removal*
- *Disbudding*
- *Dehorning*
- *Dubbing*
- *Desnooding*
- *Eyestalk ablation*
- *Ear notching and implants*
- *Wing clipping -*
- *Branding -*
- *Pizzle dropping*
- *Mulesing -*
- *Tailing*
- *Castration*
- *Toe clipping*

Main research method used when examining pain and distress associated with amputation procedures



Used for :-

- **understanding which aspects cause pain**
- **comparing different methods**
- **developing analgesia protocols**

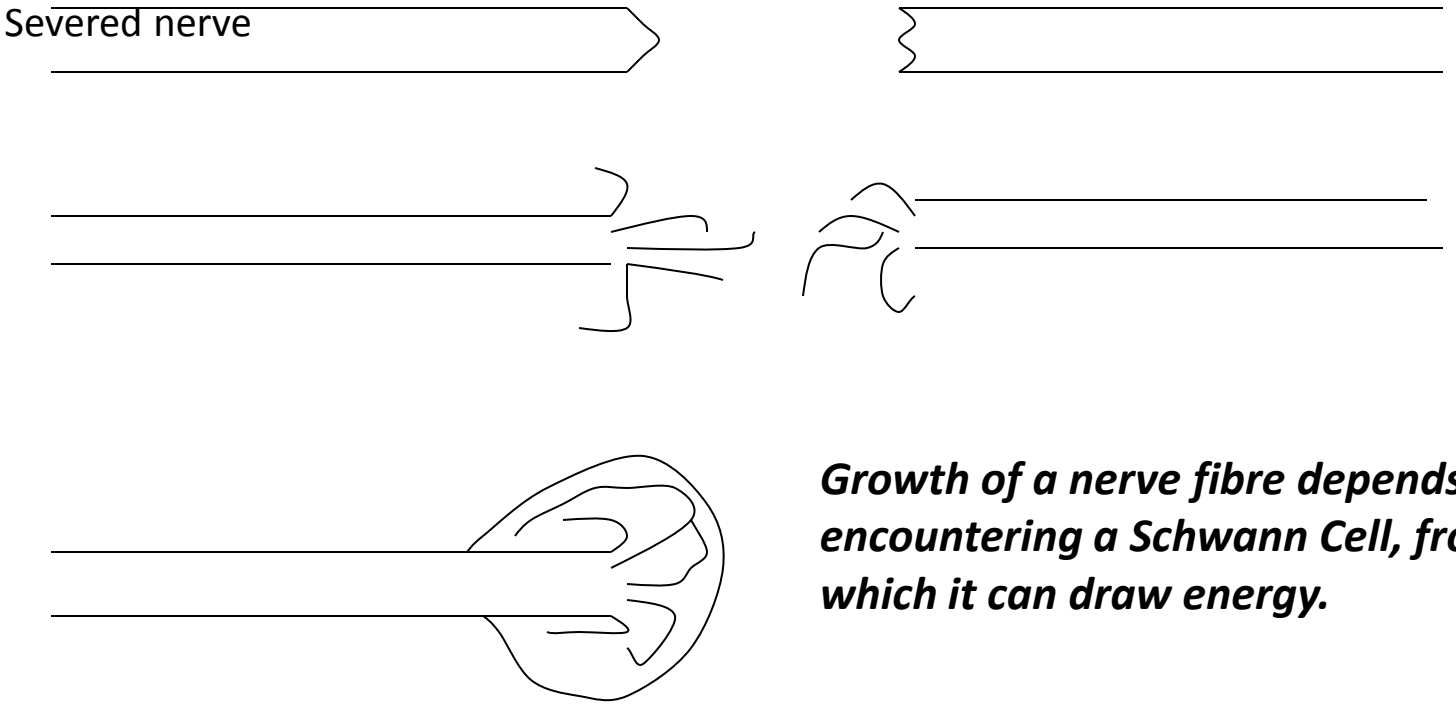
Behaviour

- **body posture**
- **gait**
- **activity directed at the wound**

- **difficult to use aversion as an indicator**

Pathology

Neuroma formation



Growth of a nerve fibre depends on it encountering a Schwann Cell, from which it can draw energy.

Some useful findings:-

1. **Sources of pain are**
   acute pain – surgery, nerve compression, burns
   inflammatory pain
   ischaemic pain

2. **Surgical castration is more painful than burdizzo or rubber ring**

3. **Cauterising a wound helps reduce inflammatory pain. It can destroy nerve endings which respond to inflammatory agents which accumulate at the wound.**

4. **Using a local anesthetic does not eliminate inflammatory pain. It delays it.**

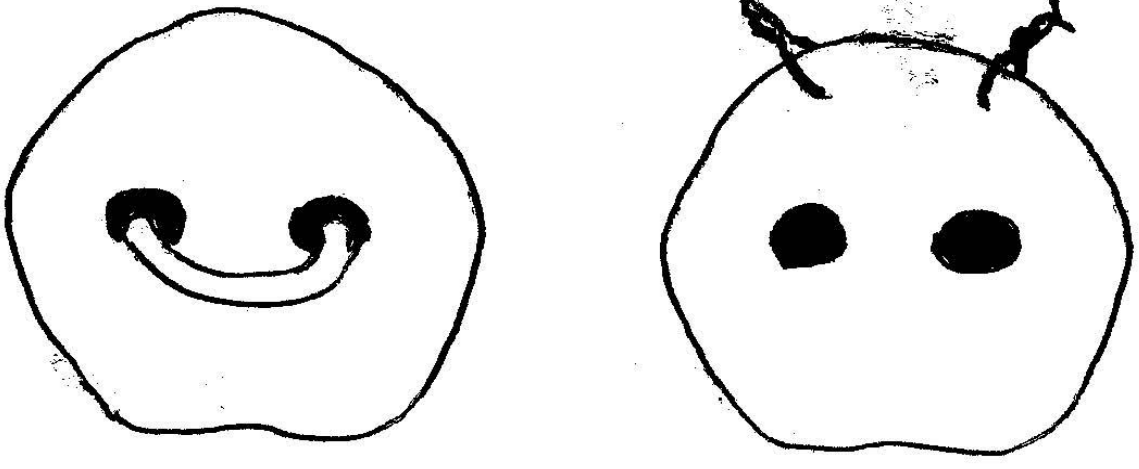
The Procedures

Why are they done ?

When are they done ?

How can pain & distress be reduced ?

Nose ringing pigs



- **used for reducing damage to pasture**
- **inserting the rings is very stressful - disrupts the relationship between the handler and the pig**
- **septum rings last longer**

Nose pegging

How would you study whether this procedure caused pain or discomfort ?

Used for controlling cannibalism and fighting injuries

Is it necessary in all flocks and situations ?

What are the painful aspects of this practice ?

How can pain be controlled ?

Teeth clipping & teeth grinding/rasping

Piglets
Llamas
Alpacas
Horses
Rodents

Is it necessary ?
Risk of pulpitis

Antler removal

Soft antler is a valuable crop
When the antler is in-velvet it is sensitive to painful stimuli
When it is hard antler it is not sensitive to painful stimuli
Now, antler removal is usually done with an analgesic +/- ketamine
Disallowed in some countries
Risk of myiasis

Suxamethonium

Disbudding and dehorning

Pain can be controlled with :-

Cornual nerve block with local anaesthetic + Non-steroidal anti-inflammatory drugs (NSAIDs)

NSAIDs are less necessary with the hot iron method

Dubbing and desnooding

Used for :-

1. reducing injuries in birds that fight
2. identifying unwanted male birds (from the female line) in breeding flocks

Very few research studies

Eyestalk ablation

Used for inducing precocity in :-

1. slaughter prawns, shrimps and crabs
2. breeding prawns

This will be discussed in the Fish Welfare presentation

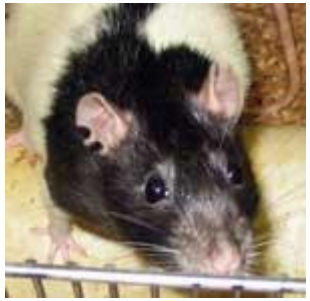
Ear notching

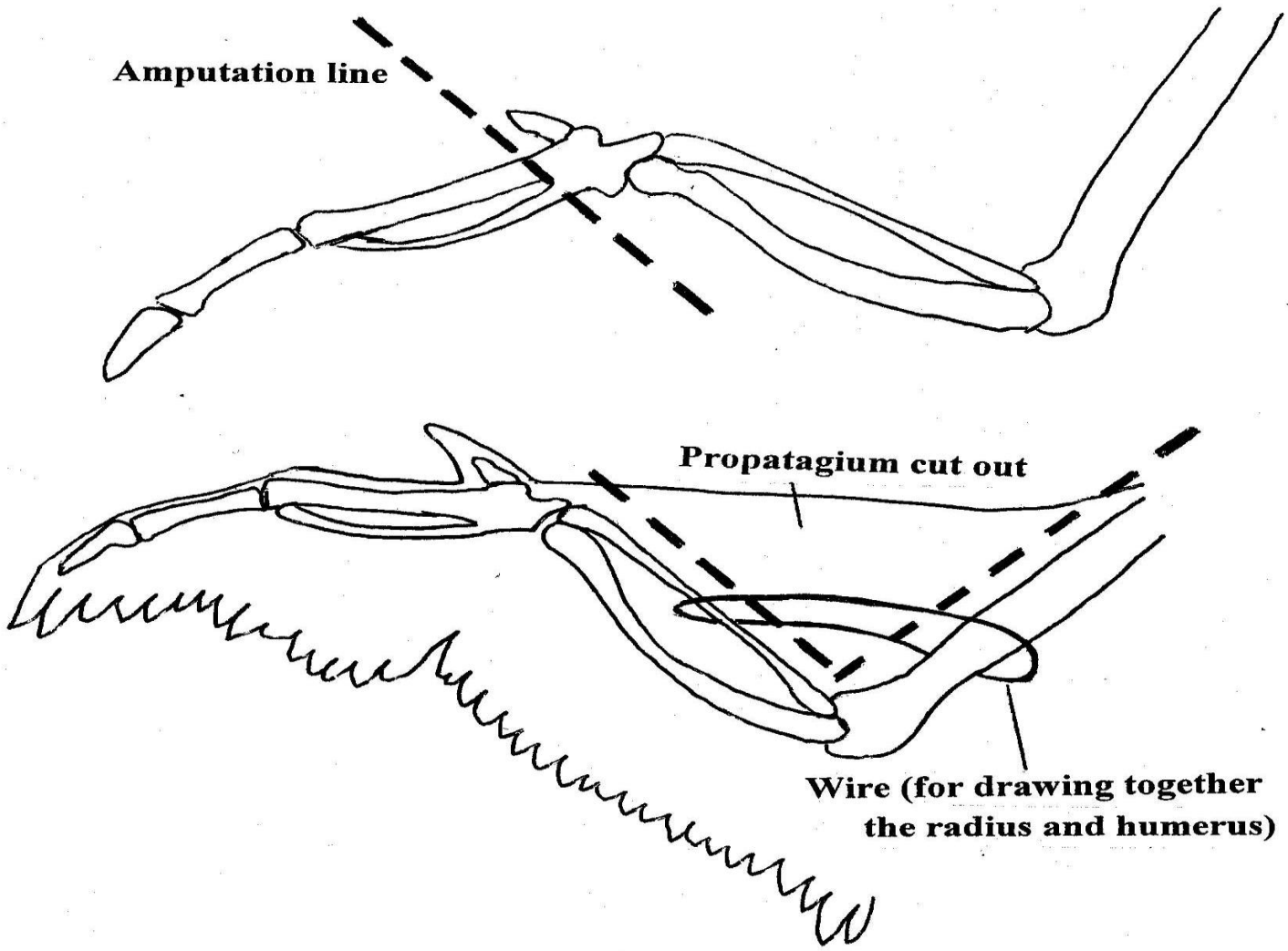
Used as an identification system for pigs and laboratory rodents

Becoming less common because of introduction of transponders

Very few research studies

Ear slicing or ear punching has been used in marketing




Amputation line
Propatagium cut out
Wire (for drawing together
the radius and humerus)

Hot iron branding

Hot iron branding is illegal in some countries, and very common in other countries

Initial heart rate rise is higher with hot iron branding compared to freeze branding, but heart rate remained higher for longer with freeze branding.

Higher plasma adrenaline and noradrenaline levels at 5 min after hot iron branding compared to freeze branding.

Higher plasma cortisol levels 40 min after hot iron branding compared to freeze branding, and they remained higher for longer.

Suggested that hot iron branding caused a brief intense pain. The burning damaged the nerves and this reduced subsequent pain, but there may be secondary hyperalgesia. Freeze branding caused a longer lasting throbbing or aching pain.

Caponising

Used for producing gourmet poultry meat

Surgical castration without analgesia, using an incision in the flank

In experienced hands, mortality is low but there is a risk of postoperative infection

Pizzle dropping

Used selectively to
prevent pizzle rot
prevent urinary calculi
reduce belly wool staining
reduce the risk of flystrike

Pizzle rot
Mycoplasma mycoides

The prepuce is cut from the belly to allow it to hang down and drain better.

Mulesing

Lucilia spp.

To prevent flystrike in wrinkly skin sheep

Being phased out.

Tail docking

To reduce the risk of flystrike

What types of pain might occur with tail docking ?

There is a higher cortisol response to knife tail docking compared to rubber ring.

The knife method is now disallowed in some countries.

Butted tail docking makes shearing Easier, but increases the risk of perineal sarcoids.

Castration

In the 1950s veterinarians in Germany started castrating large boars by injecting pentobarbitone into the testes and then removing them surgically.

Is this a good approach to castrating animals ?

Toe clipping

To reduce back scratching during mating in turkeys, chickens and ducks

To reduce scabby hips and backs in slaughter turkeys

A dairy farmer decides to stop using ear tags because he cannot read the numbers when he is milking the cows. Instead he wants to insert the tags in the back of the udder, as this will allow him to read the number when the cows are being milked.

Suggest alternative experimental ways of determining whether this method is more or less painful or distressing for the cows compared with conventional ear tags ?

Any questions ?