



# COURSE IN LOCAL ANAESTHESIA DURING CASTRATION OF PIGLETS

2018

# OUTLINE

- Why local anaesthesia?
- Anatomy
- Injection technique
- How to
- Castration technique
- Hygiene and safety
- Drugs and records

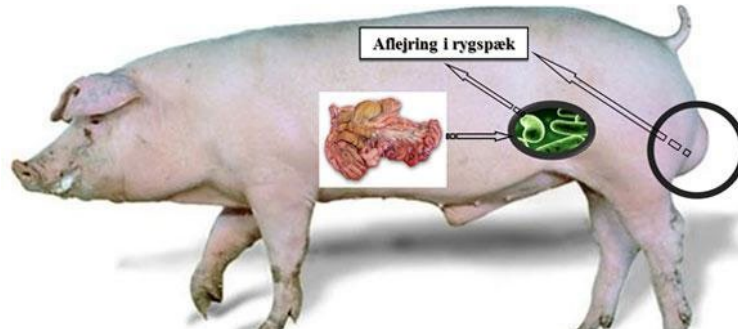


# CASTRATION OF PIGS – WHY DO WE DO IT?

To eliminate boar taint in the meat

Boar taint is attributed to two compounds

- Androstenone – produced in the testicles
- Skatole – produced in the intestines



# PRODUCTION OF ENTIRE MALES

Pros: No castration

Cons: Risk of boar taint in meat  
Difficult to sell meat  
Risk of increased mounting activity and aggressive behaviour  
Risk of increased rind damage



## INDUSTRY GOAL

**Applies to all  
DANISH producers**

Piglets must be castrated under

local anaesthesia from January 1<sup>st</sup>, 2019



# LEGISLATION STATES

IN GENERAL FOR **ALL** ANIMALS:

Animals must only be castrated if they are anaesthetized before the procedure is initiated

The procedure must be performed by a vet

**But there are exceptions when it comes to piglets**



# EXCEPTIONS FOR PIGLETS

Piglets can be castrated **without** local anaesthesia:

- Within the first 2-7 days
- Prolonged pain relief
- Performed by a vet or a person trained in the procedure



Castration by tearing of tissue is **not** allowed



# PIGLETS AND LOCAL ANAESTHESIA



Piglets MAY castrated **with** local anaesthesia:

- Within the first 2-7 days
- Prolonged pain relief
- Performed by a person trained in the procedure
- Completed course in local anaesthetics
- Completed course in drug handling



# CASTRATION USING LOCAL ANAESTHESIA

## Legislation states:

As of January 1, 2018, farmers **are allowed** to administer a local anaesthetic to piglets prior to castration

(Order 1324 of 29 November 2017 §7, 2)

## The industry says:

By January 1, 2019, all piglets **must** have a local anaesthetic prior to castration



# PREREQUISITES FOR APPLYING LOCAL ANAESTHETICS

KURSUSBEVIS

Har fuldført kursus i

LOKALBEDØVELSE I FORBINDELSE  
MED KASTRATION

Kurset indeholder:

- Lovgivning om kastration og lokalbedøvelse
- Anatomi og fysiologi
- Udstyr og præparater i forbindelse med lokalbedøvelse
- Metode og teknik – lokalbedøvelse
- Metode og teknik – kastration
- Sikkerhed og hygiejne

Kursusdato for teori: / / 20      Kursusdato for praktisk: / / 20

Kursusdyrlæge (Teori):      Kursusdyrlæge (Praktisk):

Dyrlæge xx.xx.xx.xx  
Underskrift og dato

Dyrlæge xx.xx.xx.xx  
Underskrift og dato

- Course in drug handling
- Course in local anaesthetics
- Course certificates

# COURSE IN LOCAL ANAESTHETICS

**Theoretical part:** How to do it!

**Practical part:** Practice on at least 10 pigs!

Theoretical and practical parts must be completed **within 35 days**

The course is arranged by vets



# WHY LOCAL ANAESTHETICS?

**To prevent acute pain!**

Untreated pain may lead to

- Extended healing time
- More complications
- Less activity by the udder

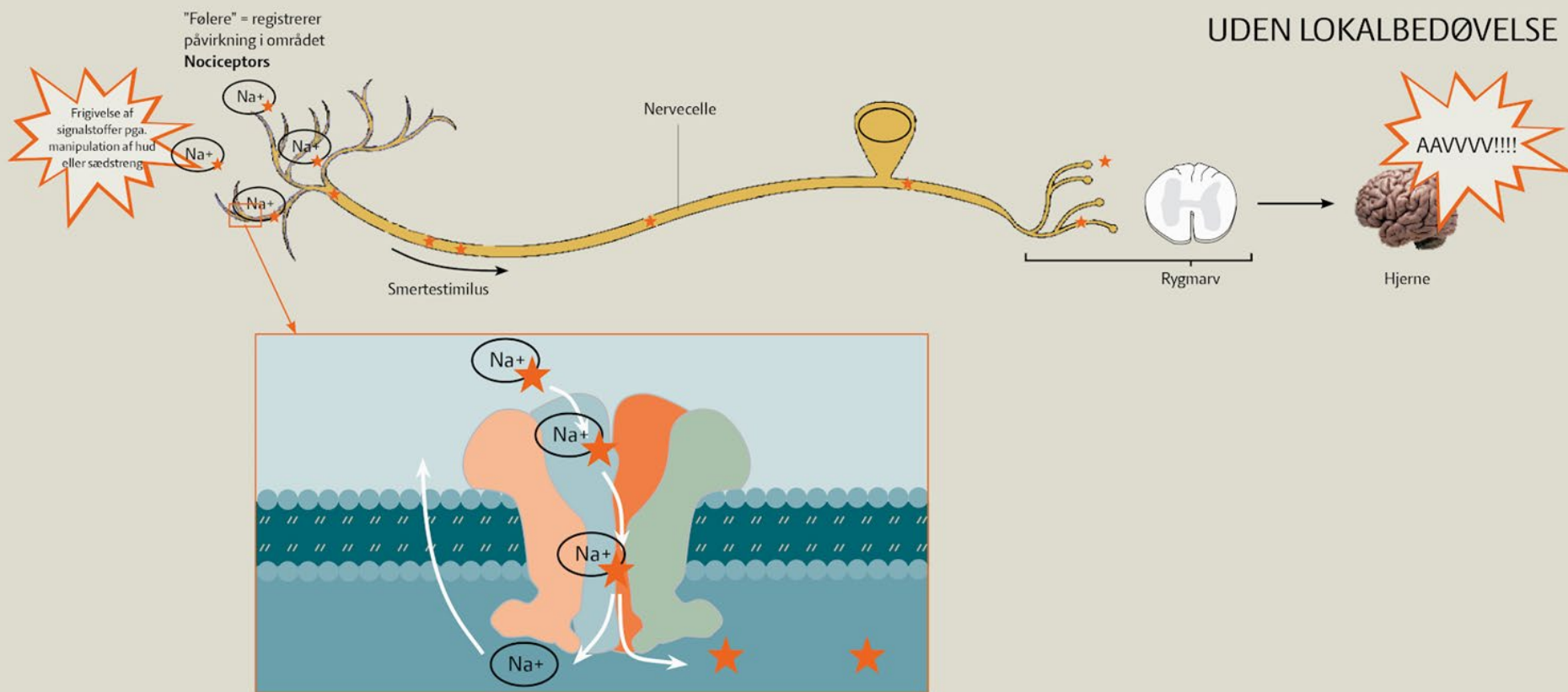


# DIFFERENCE BETWEEN PAIN RELIEF AND LOCAL ANAESTHETICS





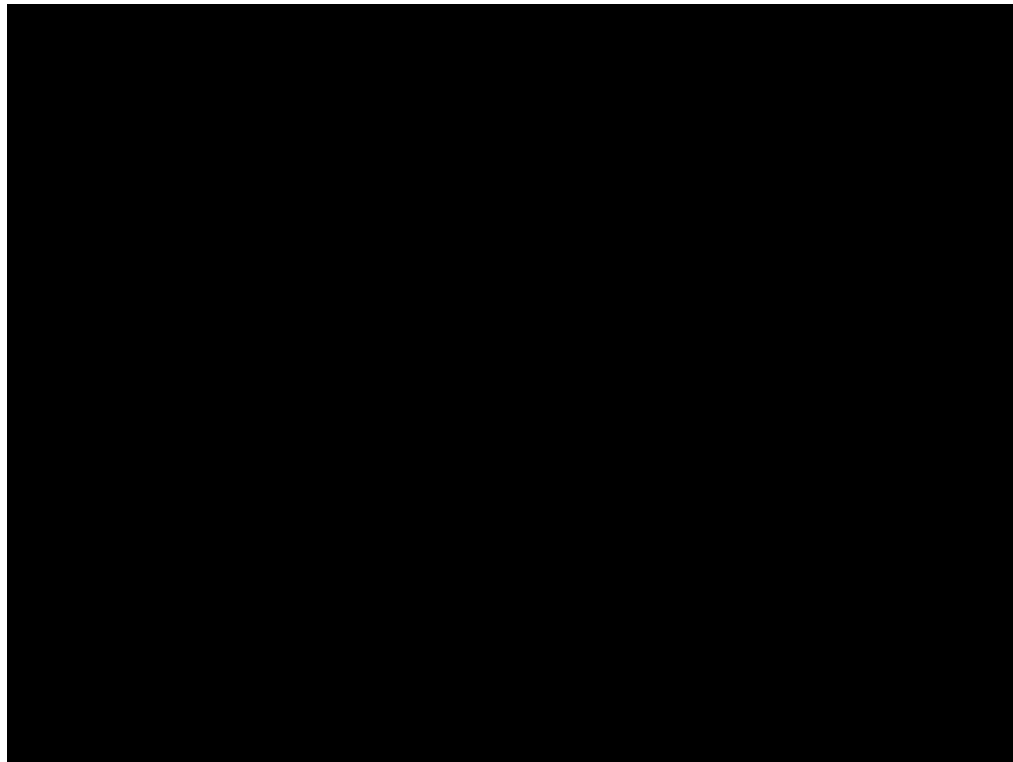
# NO LOCAL ANAESTHETICS



# PAIN REACTIONS

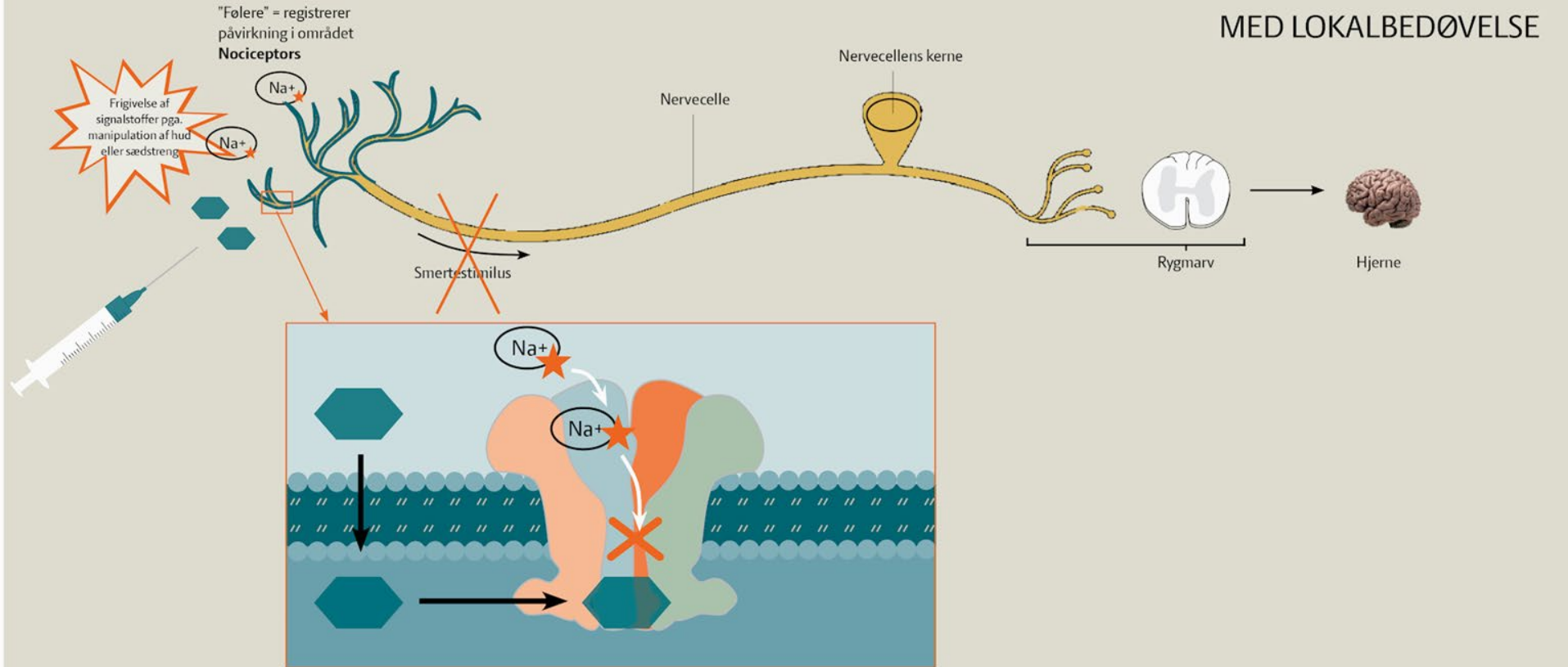
Pigs in pain often

- Scream
- Resist
- Try to escape

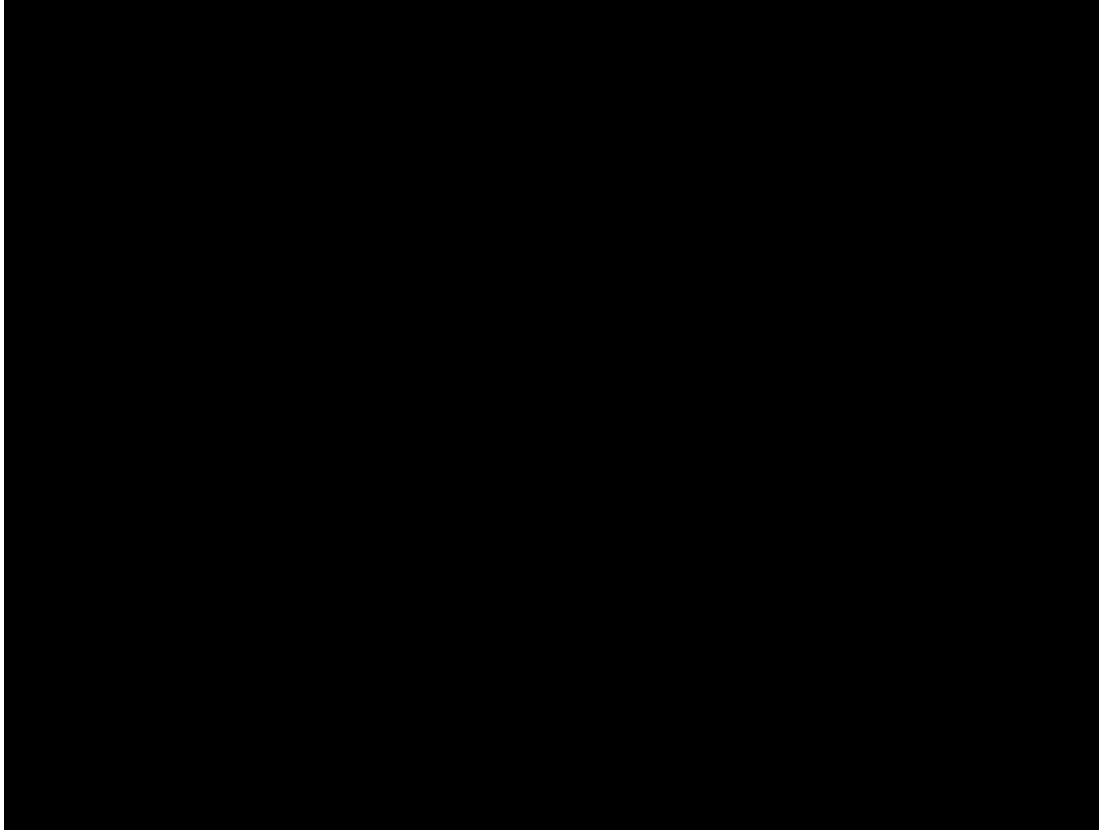




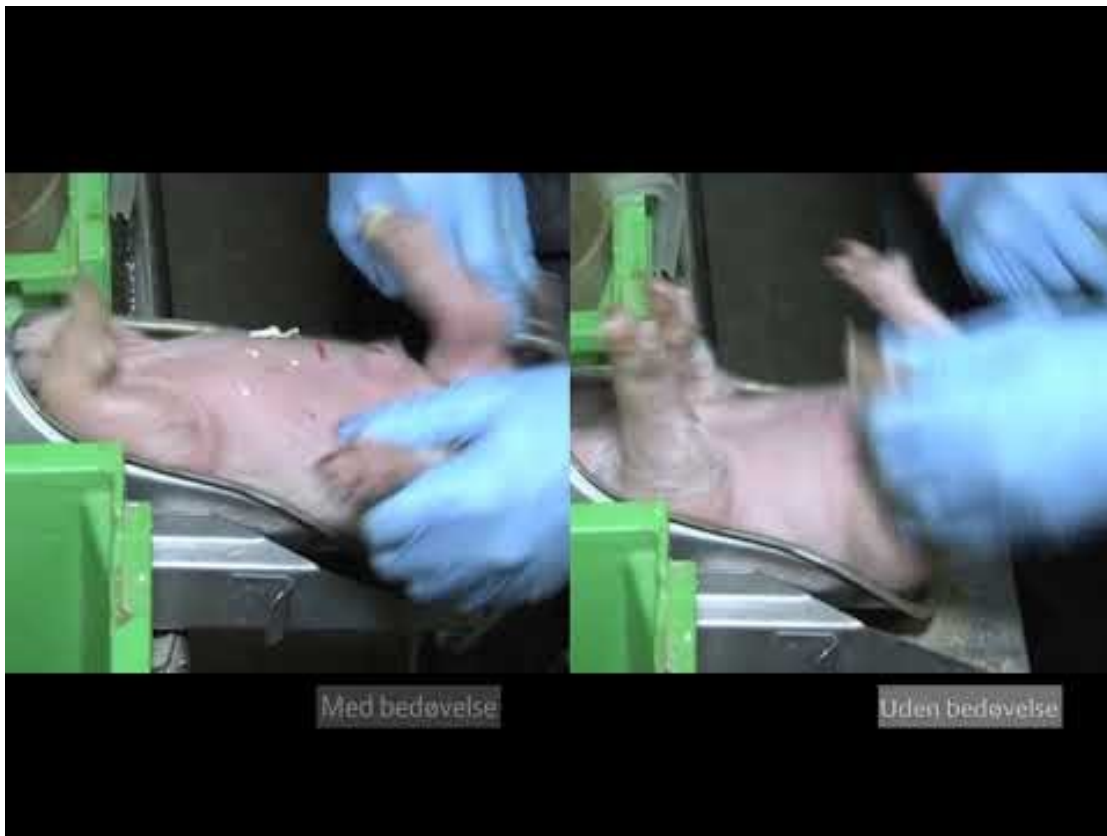
# WITH LOCAL ANAESTHETICS



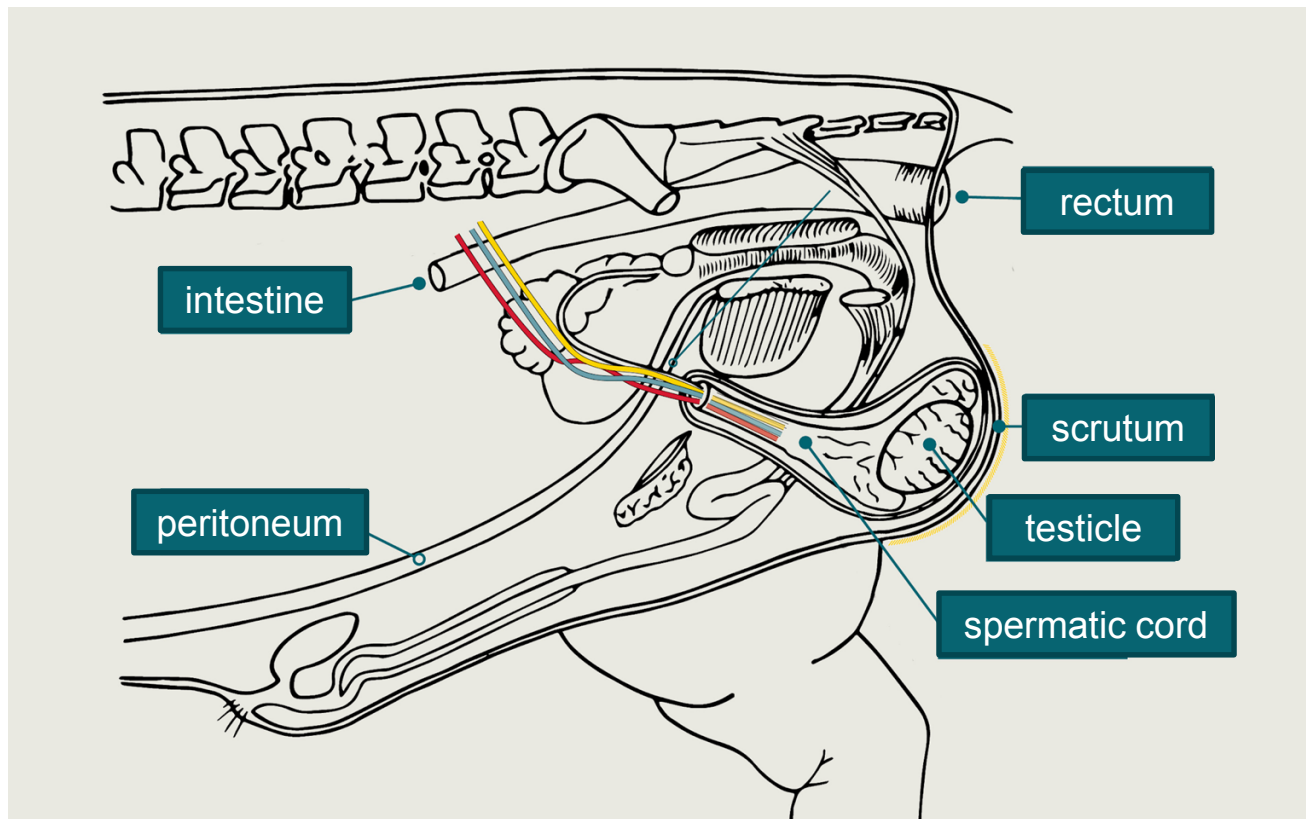
# CASTRATION WITH LOCAL ANAESTHETICS



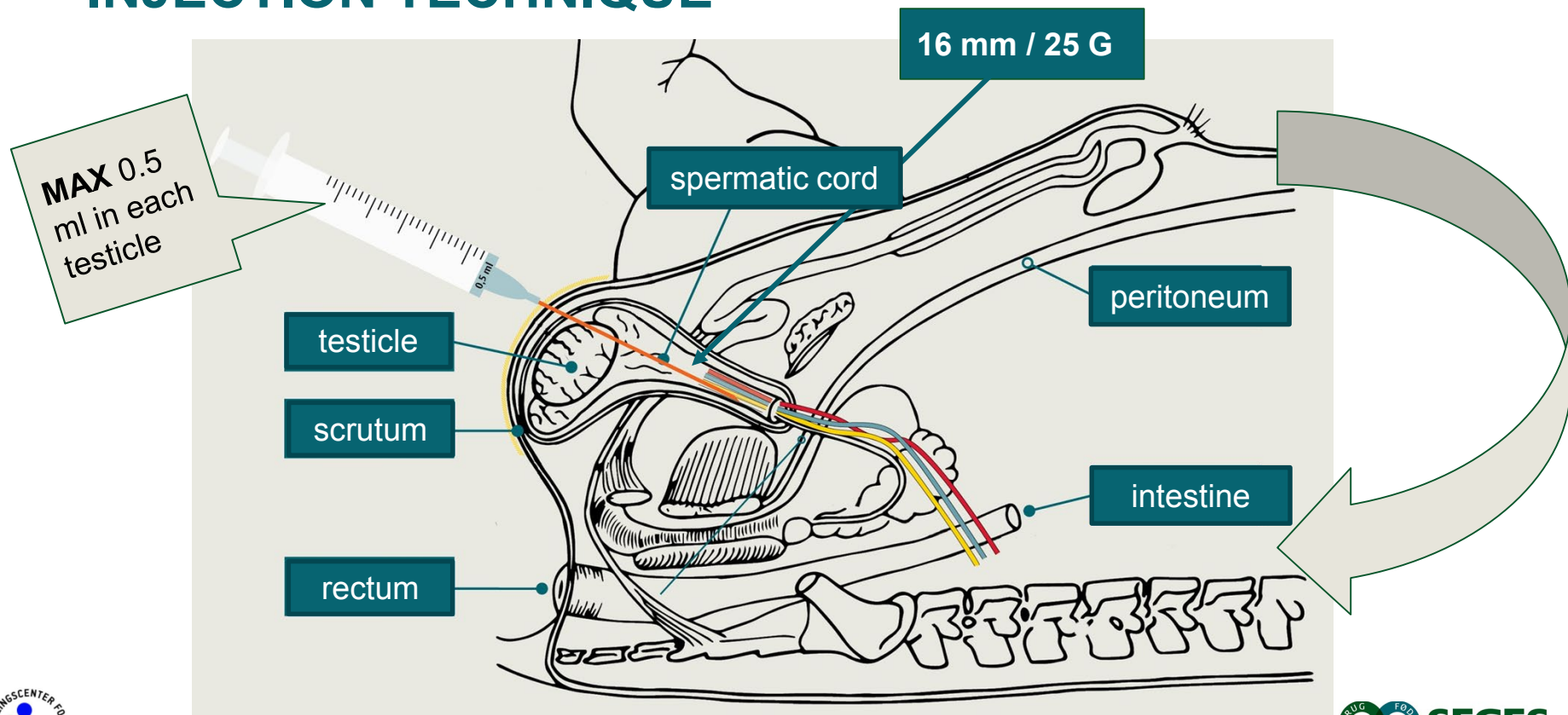
# COMPARISON



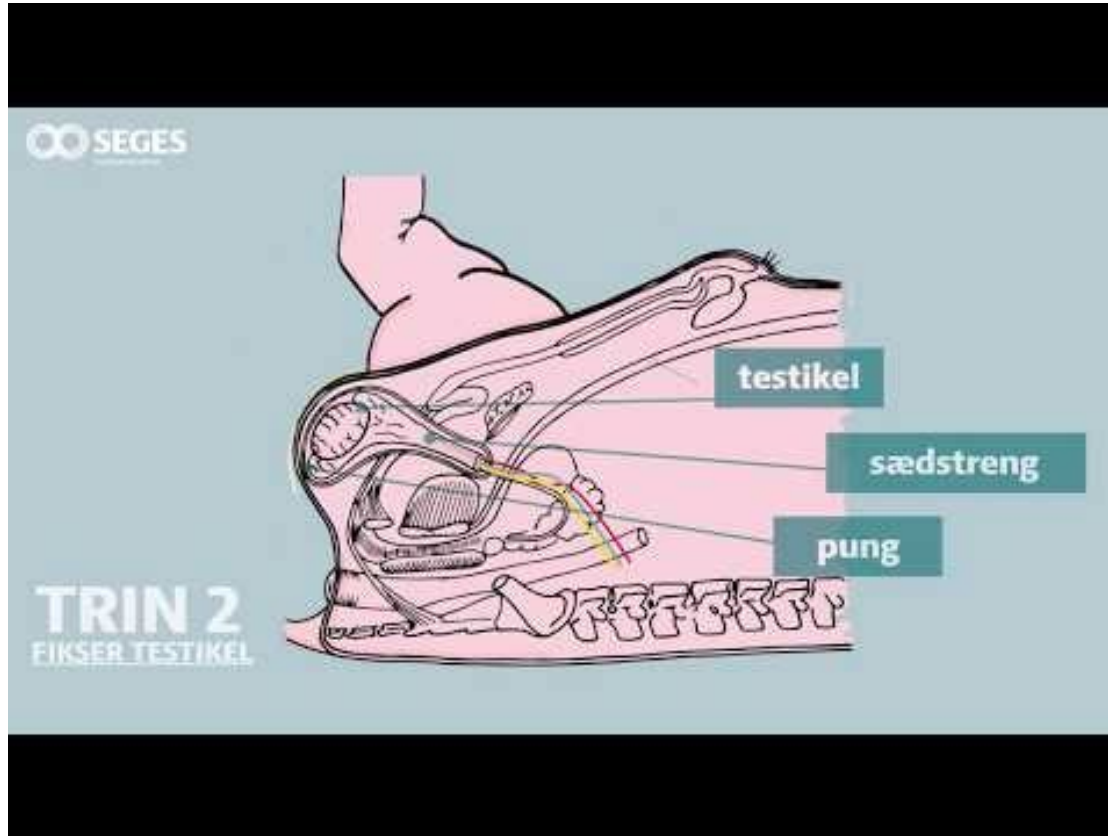
# ANATOMY



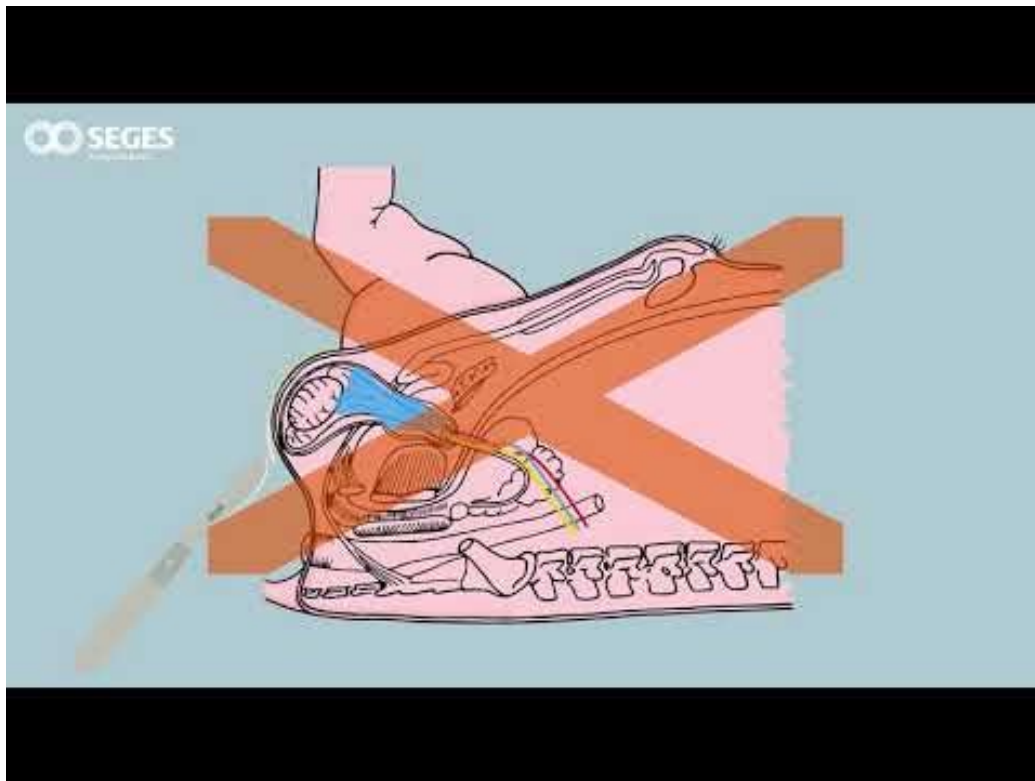
# INJECTION TECHNIQUE



## LOCAL ANAESTHETICS CORRECTLY APPLIED

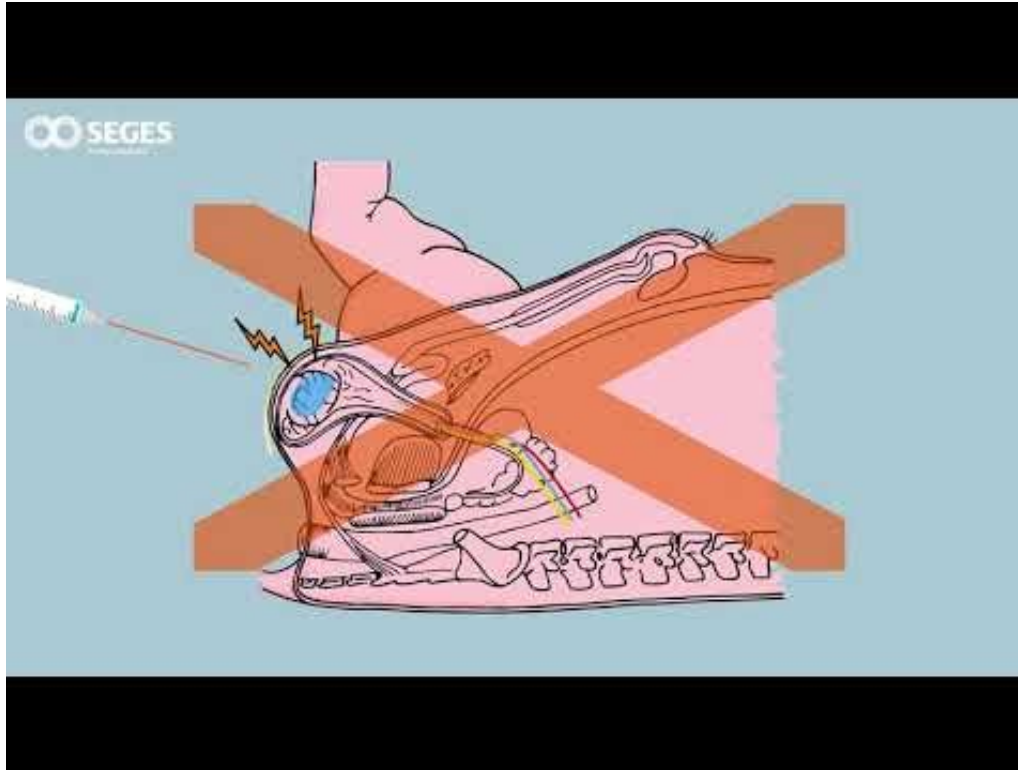


# IT IS PAINFUL IF THE FLUID IS NOT EVENLY DISTRIBUTED!!!





# IT IS PAINFUL IF THE TESTICLE BURSTS!!!



# THE PIG MUST LIE STILL!!!



- Risk of reduced effect
- Risk of the needle damaging the pig
- Risk of snapping the needle
- Restrain the piglet
- Be careful not to inject yourself



# RESTRAINING THE PIGLET



Hand held



Castration barre



Castration bench

# LIST OF MATERIALS AND TOOLS

- ☐ Castration bench
- ☐ Needle 25G (0.5x16mm)
- ☐ Automatic injector or disposable syringes
- ☐ Procamidor vet or Pronestetic
- ☐ Nitrile gloves
- ☐ Container for discarded needles and scalpels
- ☐ Container for cut off testicles

**NOTE: not available  
as detectable**

# NEEDLES NOT DETECTABLE

- ONLY USED FOR LOCAL ANAESTHETICS!

Not detectable



Detectable



# HOW TO DO IT



# DRUGS = injection with Procain



Effective for 45 minutes

40 mg/ml – adrenaline  
added

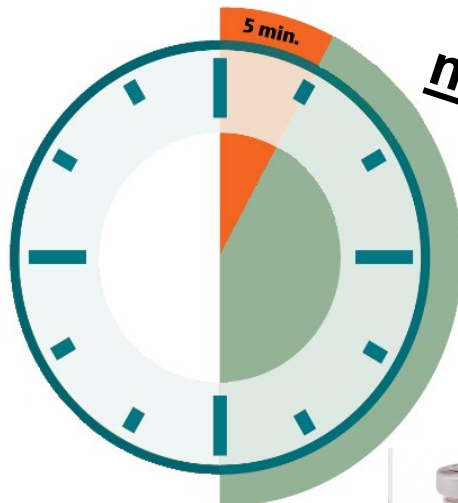
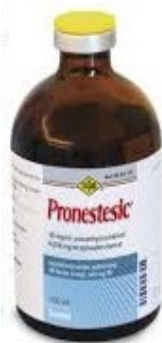


Effective for 30 minutes

20 mg/ml



# TIME FROM INJECTION TO CASTRATION

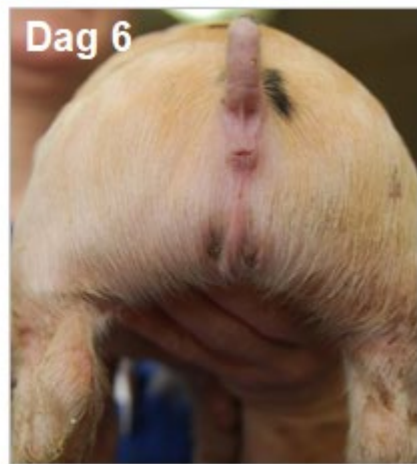


Which routines take minimum 5 minutes?

# CASTRATION TECHNIQUE



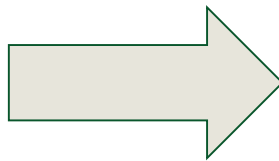
# IT SHOULD LOOK LIKE THIS!



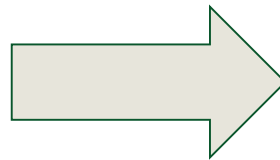
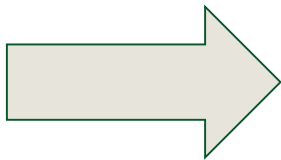
# THE PIG STILL NEEDS PAIN RELIEF



# WASTE HANDLING



category 2-  
material



# PRACTICAL EXPERIENCES

Castration incl. pain relief: 22-30 seconds per pig

Local anaesthetic: 15-30 seconds per pig

**If you are not thorough, you  
are wasting your time!**





# ADDITIONAL COSTS

- Local anaesthetic = DKK 5 per pig
  - Wages = DKK 3.5
  - Drugs and materials = DKK 1.5



# IF YOU ARE NOT THOROUGH, YOU HAVE WASTED YOUR TIME

Optimise time consumption through structure

- Move equipment as little as possible
- Complete other tasks while you wait for the anaesthetic to work



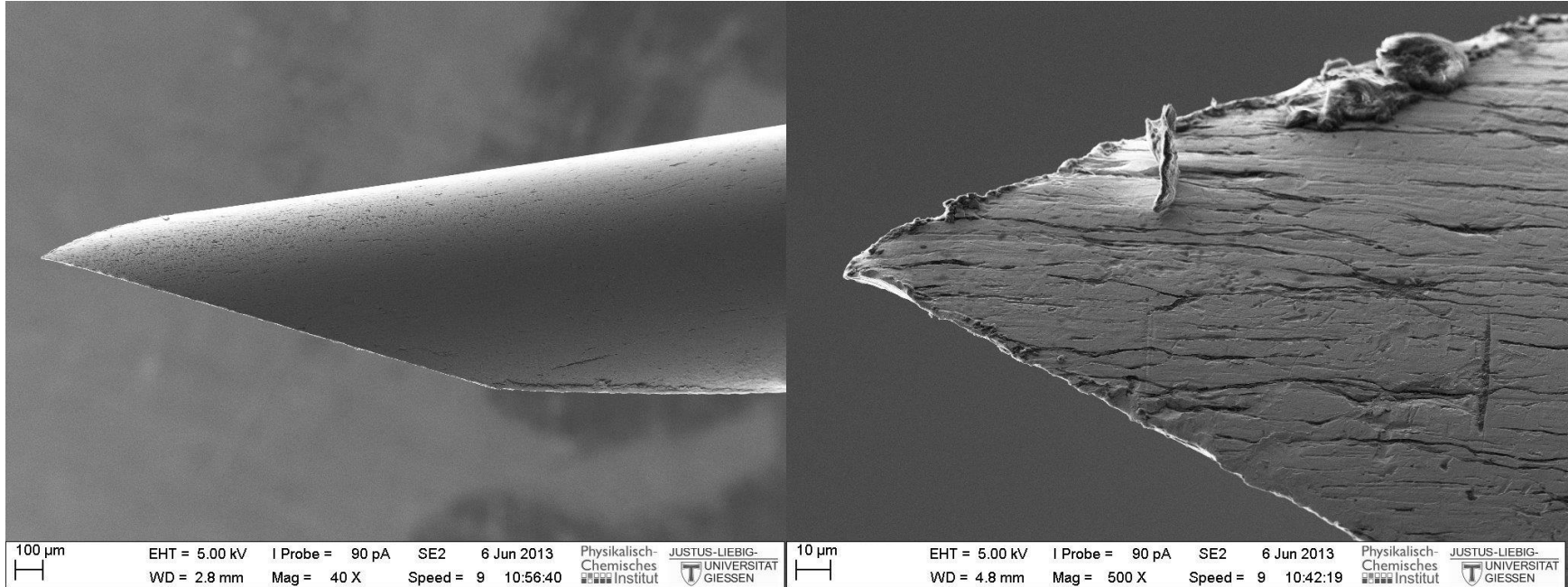
# HYGIENE

## Needles and scalpels:

- Change after each litter
- Store in closed containers
- Work with 2 scalpels so that one is always soaked in industrial alcohol

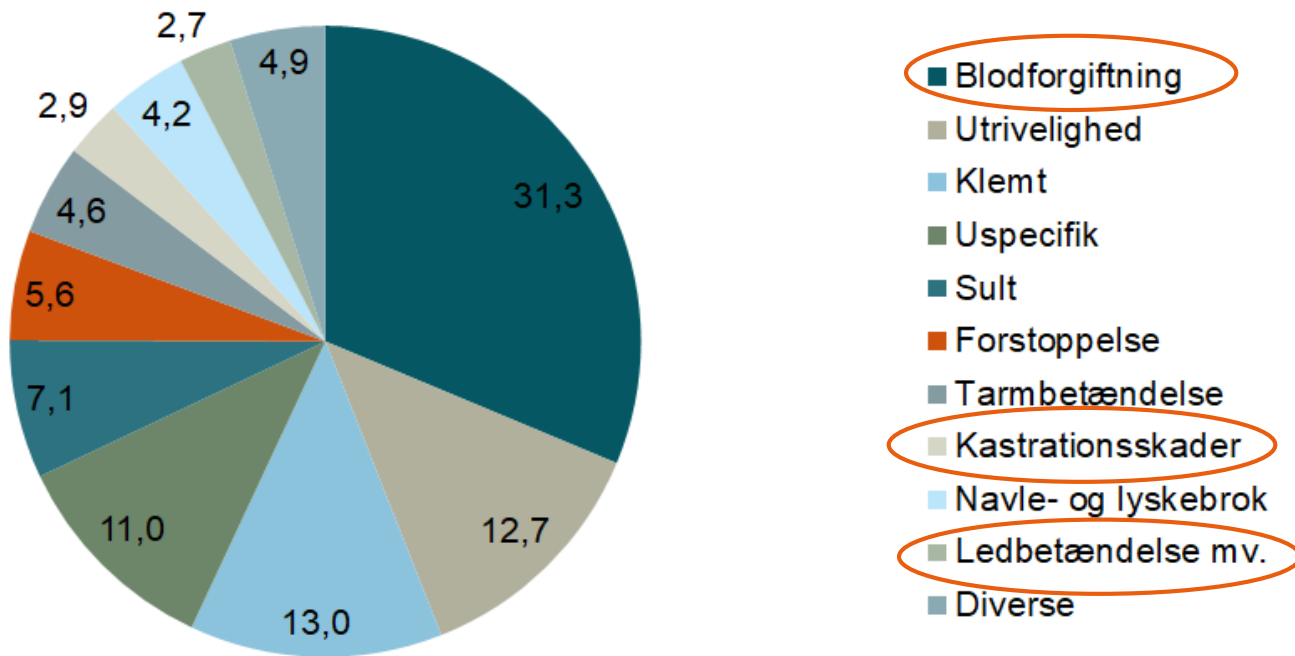


# ALSO CHANGE THEM AS THEY BECOME BLUNT



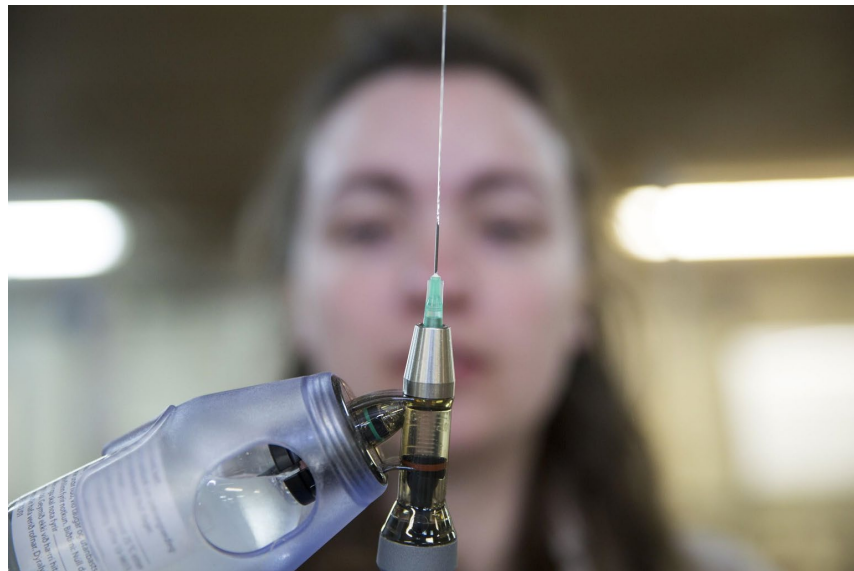
# POOR LEVEL OF HYGIENE MAY CAUSE BLOOD POISONING

Dødsårsag 5.-20. levedøgn (%)



# DRUG RECORDS

The use of local anaesthetics must be recorded as you record the use of pain relieving drugs, but they are not antibiotics and have no influence on yellow card



§15 i BEK 1352 af 29/11/2017



# SAFETY

Avoid skin contact!

Use **nitrile** gloves!



The effect on humans is the same as on pigs  
– your fingers can get numb

# MORE SAFETY

- Working position
  - Hight
  - Angle
- Amount of lift
  - Where should you put the piglets for the 5 minutes?



# MORE SAFETY

- Can be used during pregnancy and breast feeding
- If you are sensitive to procain/procainhydrochlorid or adrenalin? Avoid contact with the products
- Do not cary glass bottles in your pocket!



# SELF INJECTION – NOW WHAT?



Rinse with water in case of skin or eye contact

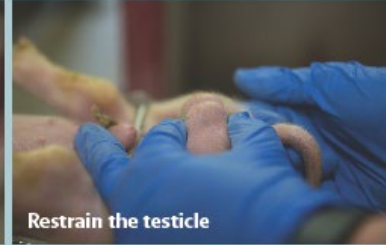
Seek medical help if skin irritation occurs –  
or if you self-inject

**Show the package  
leaflet to your GP**

# WORK PLACE EVALUATION (APV)

## LOCAL ANAESTHESIA BEFORE CASTRATION

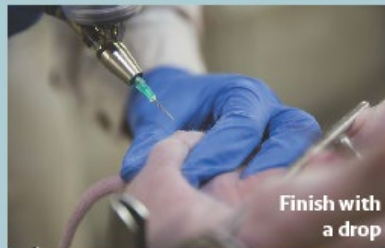
The pig must lie still



Max 0.5 ml per testicle



Wait min 5 minutes  
before you initiate  
the procedure



# STORAGE AND SHELF LIFE

Shelflife after first opening 28 days  
Room or body temperature upon use  
Withdrawal period 0 days



Pronestestic

Store at 2 °C - 8 °C



Procamidor

Store at max 25 °C



# SIDE EFFECTS

Very rare:

- Skin irritation/allergic reaction
- Agitation followed by depression
- Palpitation and reddening of the skin



# CERTIFICATE

After theoretical part – signed by vet

After practical part – signed by vet

Remember: The practical part must be completed within **35 days**

**NOTE:** Not everybody can get a reprint, so keep the certificate safe!

## KURSUSBEVIS



---

Har fuldført kursus i

### LOKALBEDØVELSE I FORBINDELSE MED KASTRATION

Kurset indeholde:

- Lovgivning om kastration og lokalbedøvelse
- Anatomi og fysiologi
- Udstyr og præparater i forbindelse med lokalbedøvelse
- Metode og teknik – lokalbedøvelse
- Metode og teknik – kastration
- Sikkerhed og hygiejne

|   |   |
|---|---|
| Kursusdato for teori: / / 20              | Kursusdato for praktisk: / / 20           |
| Kursusdyrlæge (Teori):                    | Kursusdyrlæge (Praktisk):                 |
| Dyrlæge xx.xxx.xxx<br>Underskrift og dato | Dyrlæge xx.xxx.xxx<br>Underskrift og dato |
| <hr/>                                     | <hr/>                                     |

# A GOOD START WITH LOCAL ANAESTHETICS!

## Remember:

- ★ The pig must lie completely still!
- ★ Max 0.5 ml in each testicle!
- ★ Wait **minimum** 5 minutes before initiating the procedure!
- ★ Change needles and scalpels after each litter!
- ★ Remember to wear gloves!



**....and do not forget that you are doing something good for the pig!**

# LIST OF MATERIALS AND TOOLS - REMEMBER

- ☐ Castration bench
- ☐ Needle 25 g (0.5x15mm)
- ☐ Automatic injector or disposable syringe
- ☐ Procamidor Vet. or Pronestestic
- ☐ Nitrile gloves
- ☐ Container for discarded needles and scalpels
- ☐ Container for cut off testicles





Enjoy!

2018