

Equine Restraint

Chapter #2

Pages 29-46

Large Animal Clinical Procedures

Physical Restraint of Horses

- *Restraint* is the term used to imply control of an animal and may be necessary for medical reasons and nonmedical procedures
- The two types of animal restraint are *physical restraint* and *chemical restraint*
- Some times both must be used to accomplish a procedure

Type of restraint

- *Physical restraint* refers to methods that are applied to the animal with or without use of special equipment
- *Chemical restraint* refers to the use of pharmaceuticals to alter the animal's mental or physical abilities

Know your horse

- Good restraint involves understanding the natural instinct of the horse, being able to read an individual's temperament , and recognize the extent of handling and training that an individual has (or has not) had.
- Each animal is an individual and each has different background

Make a plan



- Horses are natural suspicious and respond best to a calm, deliberated approach (slow but confident)
- Good horsemen typically maintain vocal and physical contact with the animal they are handling



- Horses are traditionally handled primarily from their left side (also called the *near side*.)
- If the horse starts to move away from you at this point, attempt to stay with the horse by moving along side and hold on to it's mane. See where his hand is?



- **Never** stand directly in front or directly behind the horse during a procedure, unless protected by a barrier or mechanical device.
- Horses may also throw their heads violently , causing injury
- Even a normally “good horse” may display these responses when in pain or fear
- Watch eyes, ears, nostril, tail, and body movement of horse

Fear/fearfulness- “flighty”

Aggressive- ears back flat, nostrils large

Reactive to sudden novelty



Approachable



Flighty/Fearful



listening

angry!



Halter and Lead Rope

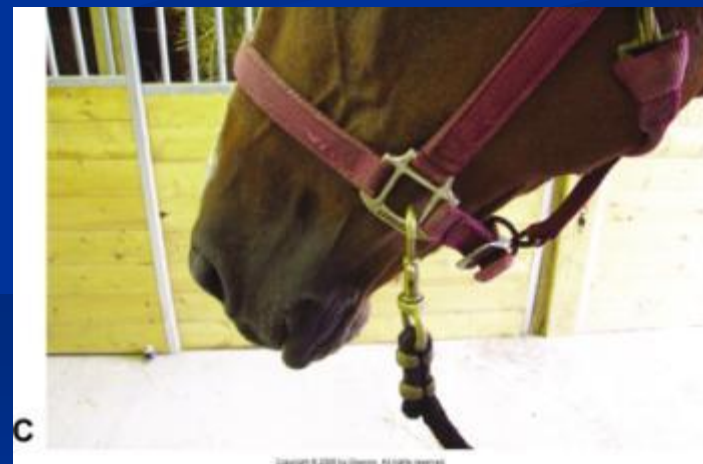
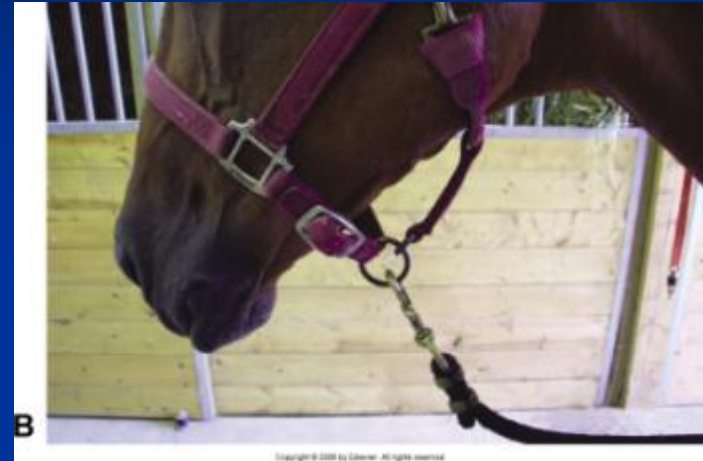
- Basic act of horsemanship is placing a halter and lead rope- **BE PREPARED!**
- The horse should be approached from the left side
- For initial control place the lead rope around the neck



Placing the halter



- Once the halter is positioned and the buckles/snaps secured, the lead rope is attached
- Alternate attachment of lead rope to halter



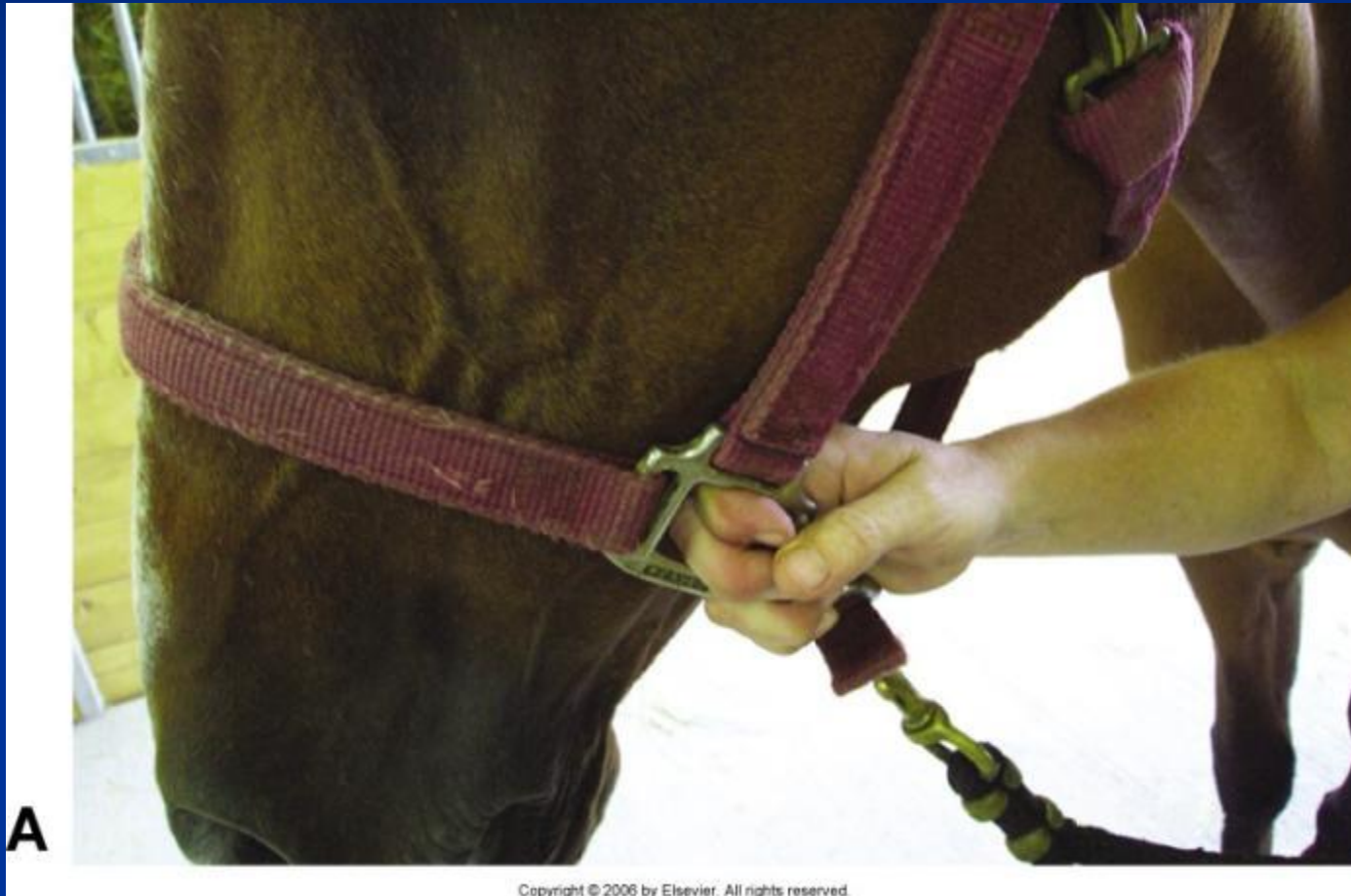
Leading the horse using the halter and lead rope.



Your elbow..



Fingers should not be placed through the buckles or snaps of the halter



Don't....

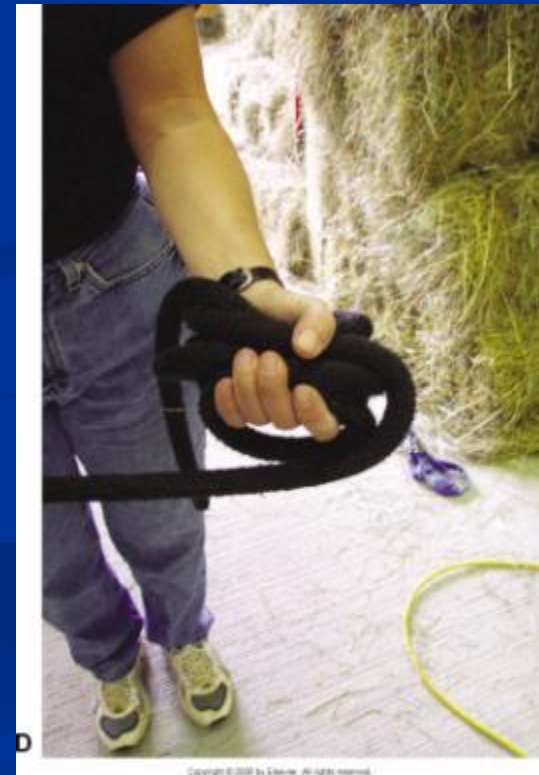
- Improper coiling of lead rope around the arm.



C

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- Improper coiling of lead rope around the hand.



D

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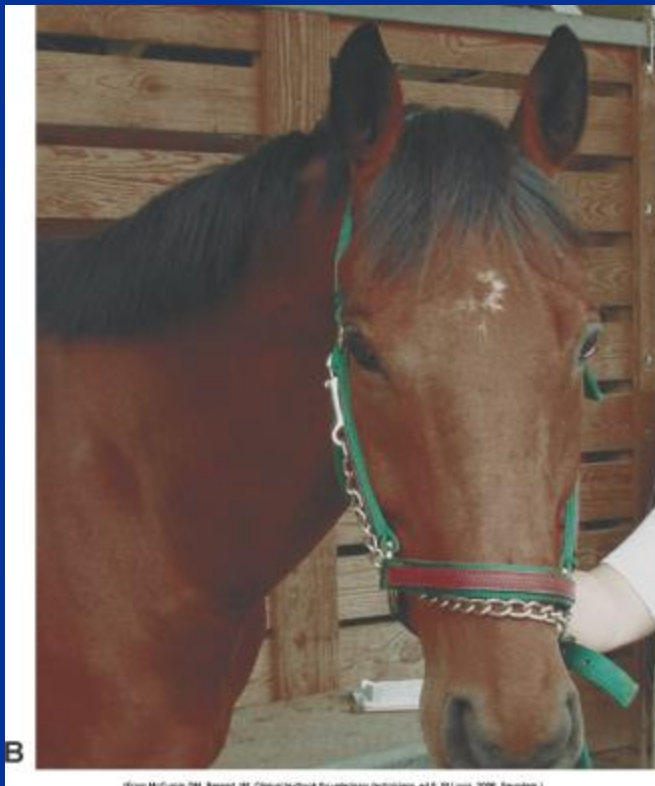
Chain shank

- When a simple lead rope does not provide enough control, the chain portion or a chain shank can be placed over the nose or in the mouth for increasing restraint
- Placing the chain over the nose is a mild restraint



Chain shank

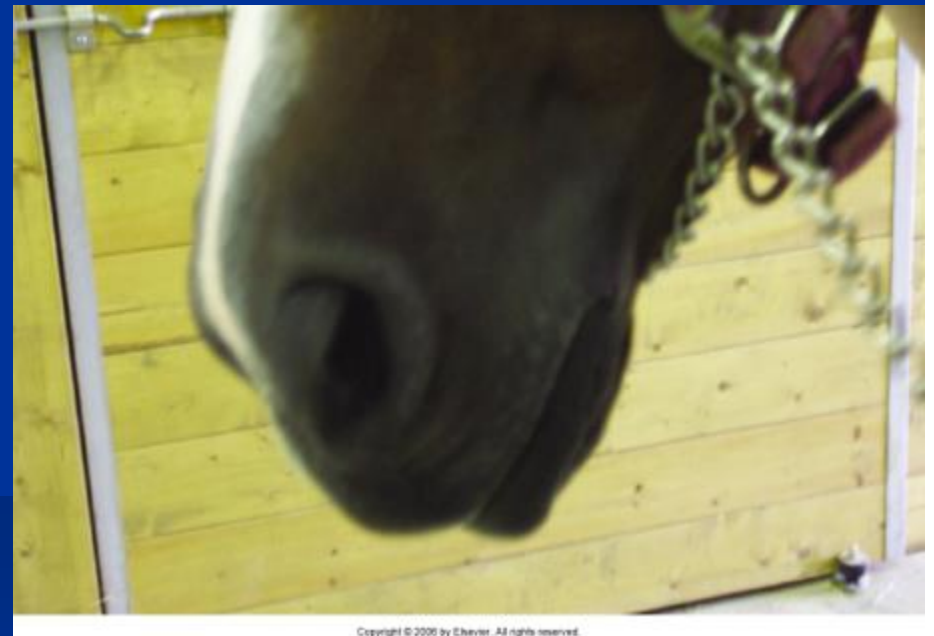
- Chain shank attached to right upper ring
- Chain shank attached between the mandibles



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Chain shanks

- The chain should cross the nosepiece to provide some protection for the horse.
- Placement of chain shank under the chin.



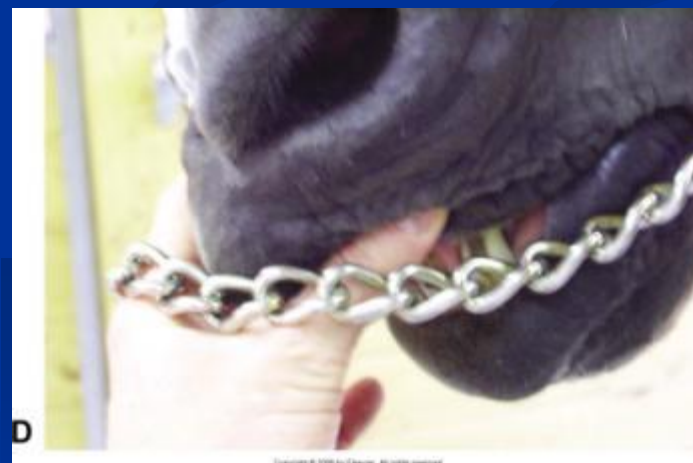
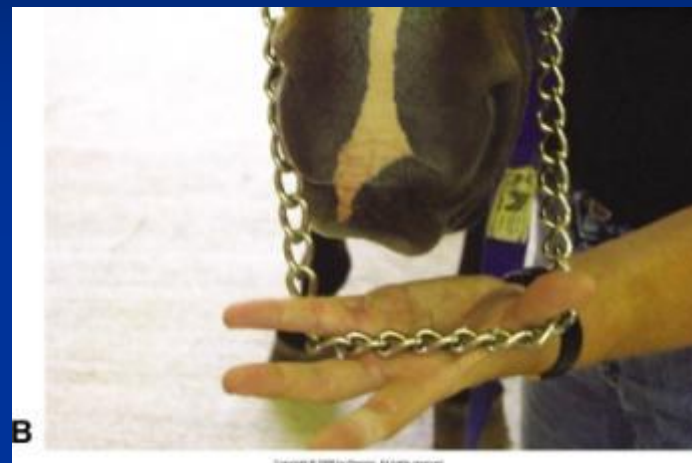
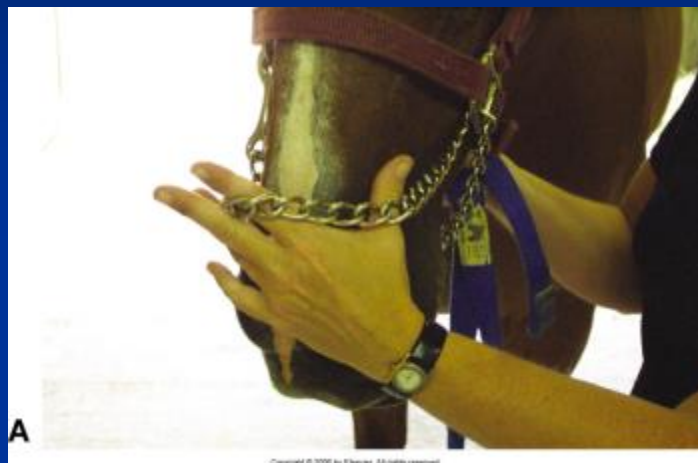
Placement of the chain shank through the mouth



Placing the lip shank.

A, Holding the chain for placement of the lip shank. B, Slack is given to the chain. C, Elevating the upper lip to position the chain.

D, Elevating the upper lip to position the chain



Proper position of the chain against the upper gum. Note that the chain lays flat against the gums.



E

Never place your hand on the chain shank for restraining



What Not to Do

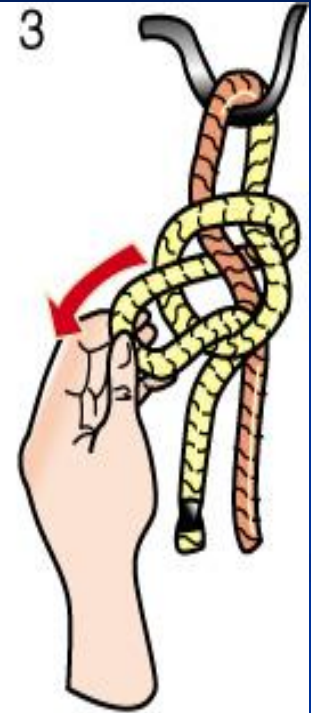
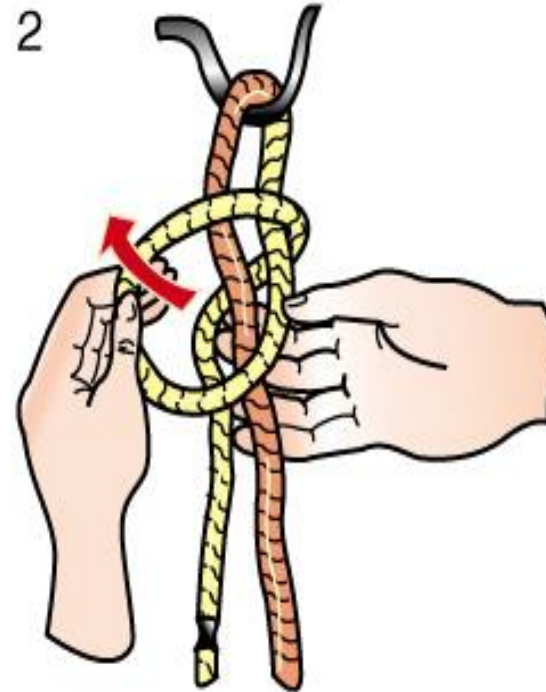
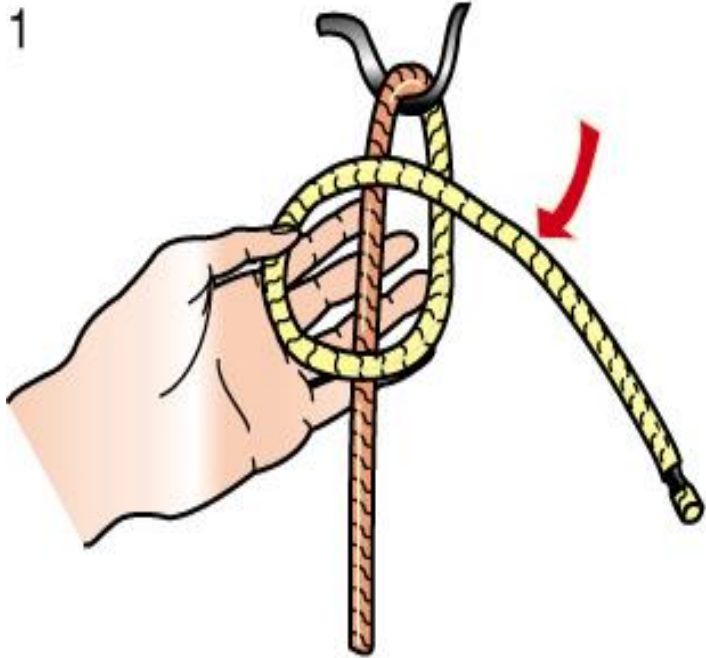
Normal restraining



Always tie the horse to an object at its shoulder level or higher!



- Always tie to something grounded, tree, post, etc.
- Never to a fence or anything the horse can pull down – if so you now have something chasing your horse!
- Never tie up with a reins on a bridle or with a chain shank



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■ Practice

Cross ties



Blocking vision



A, Improper method for blocking vision. **B**, Proper method for blocking vision



Lifting the limbs

- Before elevating any leg of the horse, one should position the horse in a square stance
- To lift a forelimb, the hand is run down the back of the leg and the tendons or suspensory ligament gently squeezed



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Lifting the limbs



- Alternative method is squeezing the chestnut

- To elevate a hind limb, face the rear of the horse and maintain contact with one hand on the horse's hindquarters
- As with the forelimb shoulder pressure into the horse's hindquarters can help shift its weight to the opposite limb and encourage lifting the leg



- Once the leg has been lifted, it can be held with the hands or cradled in the lap/thigh area, depending on the procedure to be performed.



B

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C

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My technique



Cleaning the sole



Hindlimb



A, The hindlimb can be supported with one hand.

B, The hindlimb can be supported on the thighs to free up the hands.



Tail Restraint



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Twitches

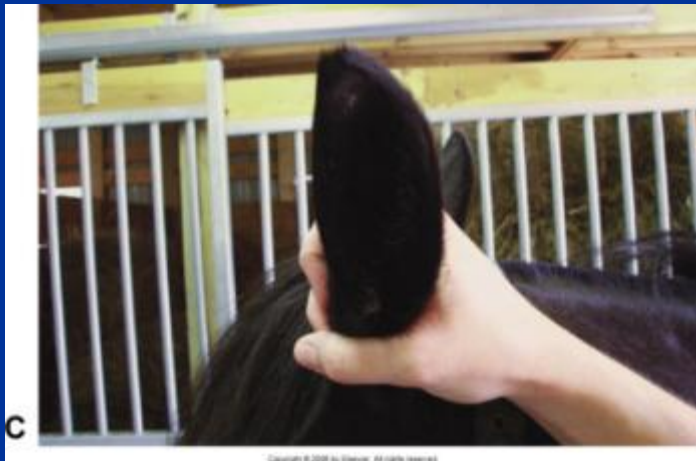
- Twitches are among the oldest and most commonly used methods of restraint
 - There are two methods of twitches:
Natural and Mechanical
 - *Natural* twitches are applied with the hand directly on the horse: no especial equipment is required
 - *Mechanical* twitches are manmade devices that are applied directly on the horse
- *Twitches of any type are NOT for foals*

Natural Twitch

The shoulder twitch (“shoulder roll” or “skin twitch”)



Ear twitch



Improper grasping of the ear tip for an ear twitch



Mechanical twitches.

- Mechanical twitches are designed to “pinch” the upper lip
- Long wooden handle with rope loop (*top*). Short wooden handle with chain loop (*middle*). Aluminum humane twitch (*bottom*).



Placing a mechanical twitch.

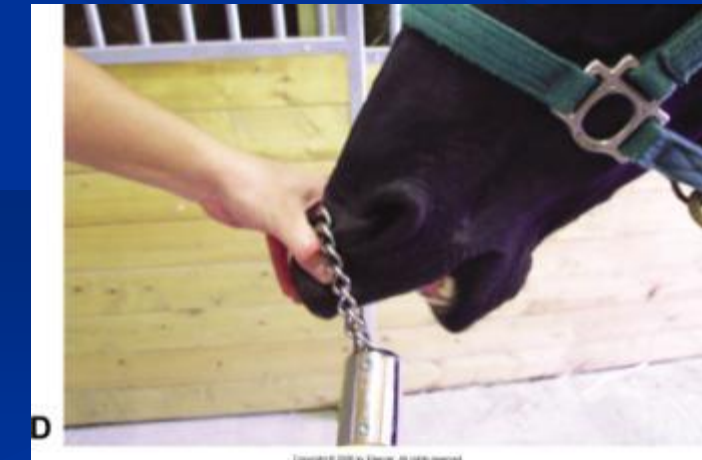
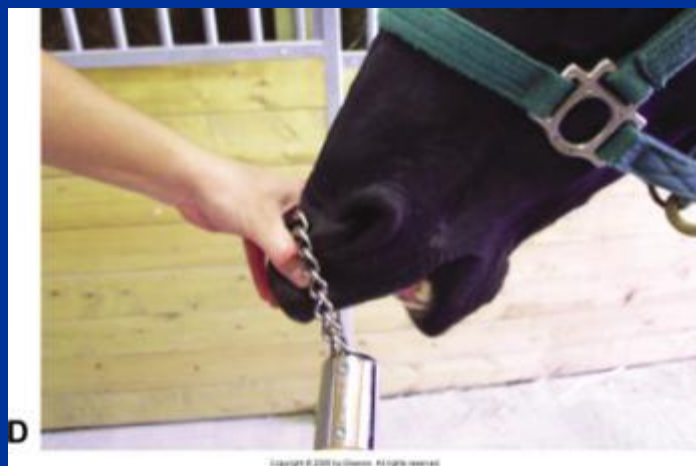
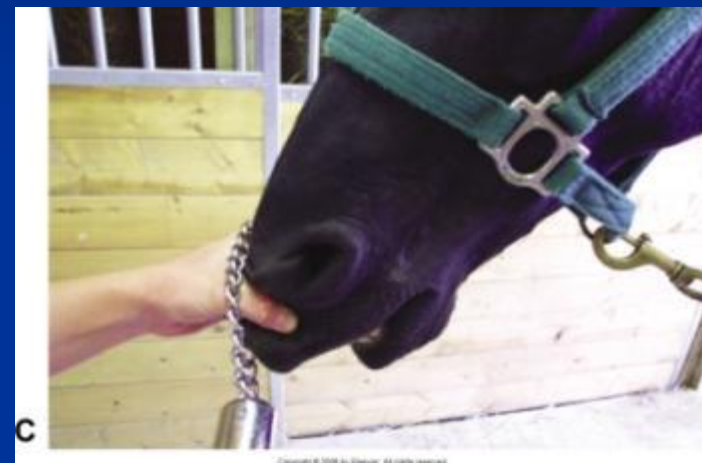
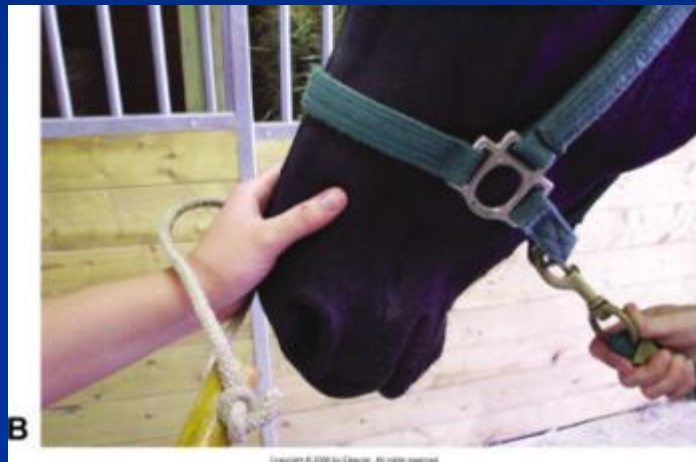
- Proper positioning of the loop of the twitch



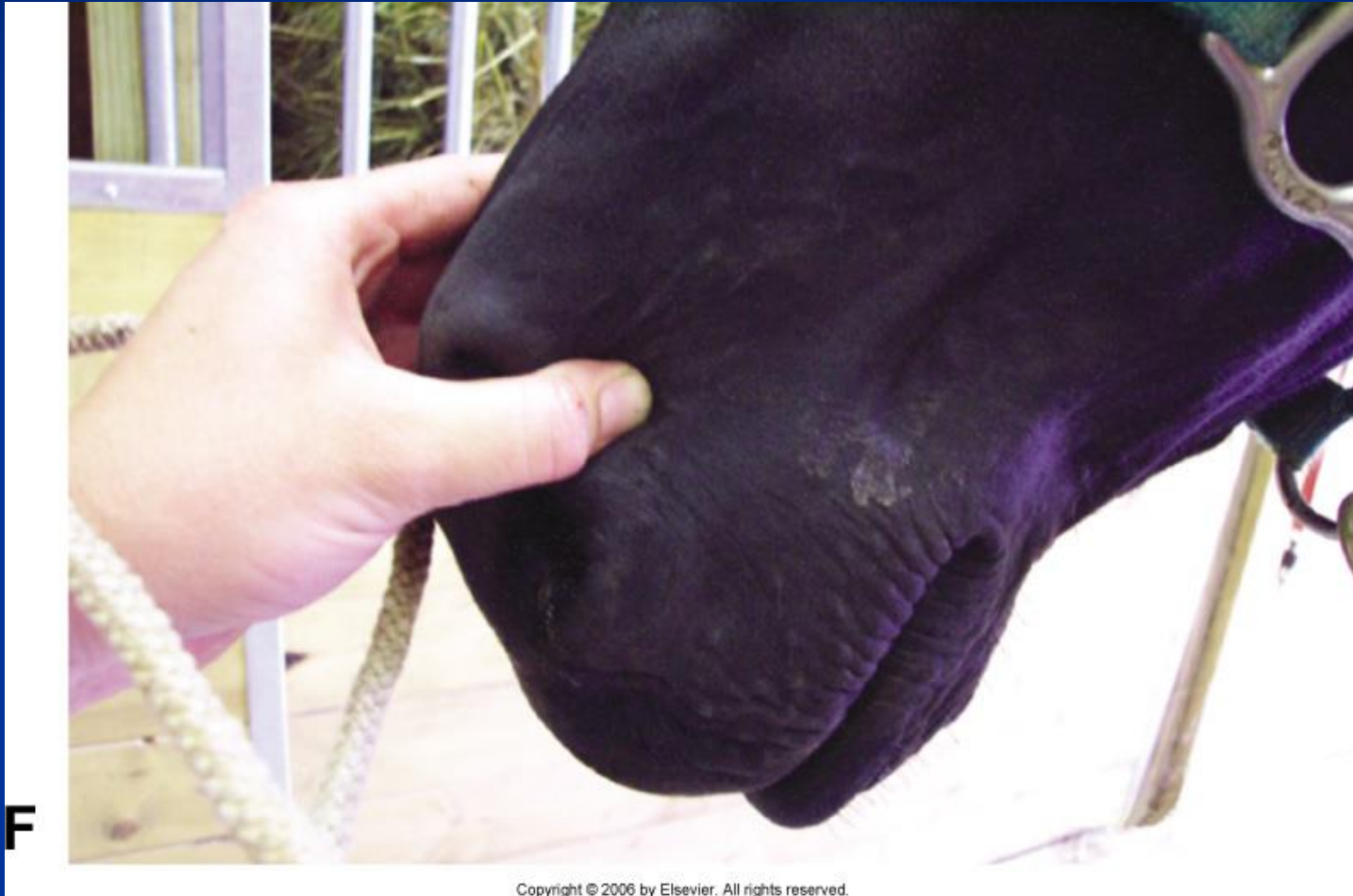
B, Place the hand on the nose and slide it toward the upper lip.

C, Grasp the upper lip and elevate it slightly.

D, Elevate the hand and wrist to help transfer the loop from the hand over the lip. E, Transfer the loop onto the upper lip.



Avoid blocking the nostrils while placing the twitch.



To place the twitch first control the twitch handle with a hand under an armpit while placing the twitch loop



Otherwise, the handle is free to swing and hit the handler
and/or the horse and cause an injury

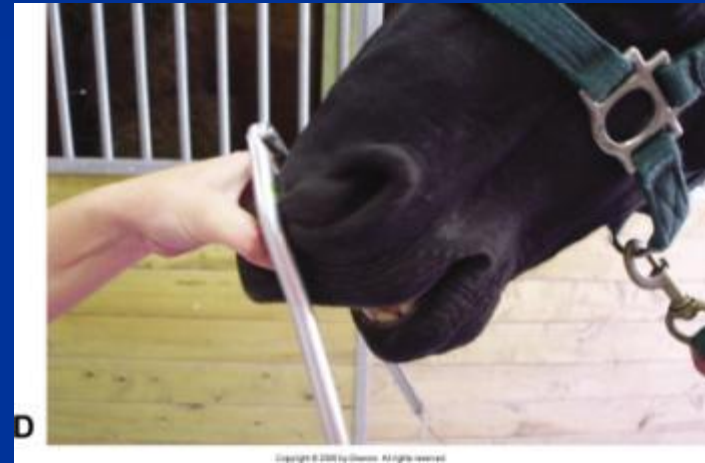
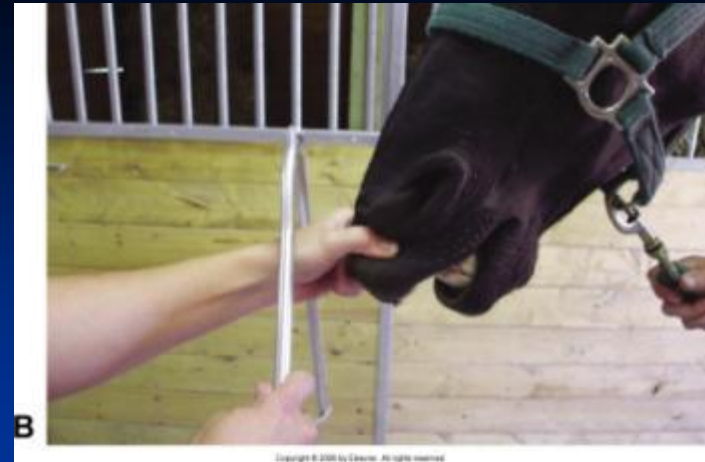
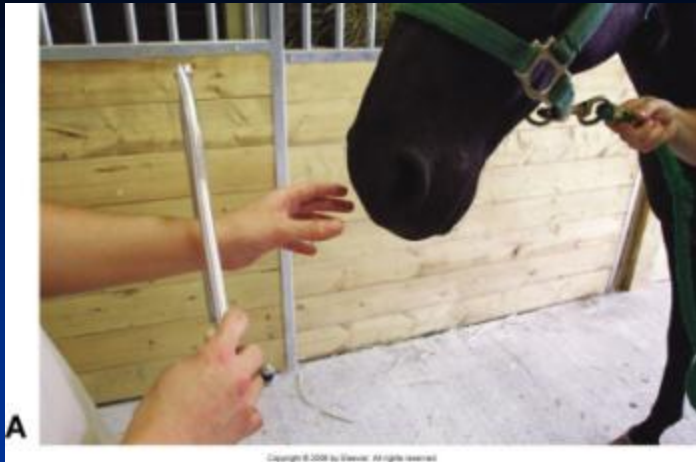


■ Video - Restraining

Humane twitch

- It consist of two arms that function as a scissor type “clamp” on the nose.
- Pressure is controlled by opening or closing the arms of the clam
- Apply only enough pressure with the twitch to accomplish the procedure and only as long necessary





- A, Approach to place the humane twitch. B, Grasp the upper lip. C, Proper placement of the humane twitch, with the lip between the straight portion of the twitch arms. D, Improper placement of the humane twitch, with the lip between the rounded portion of the twitch arms.

Notice how these people are utilizing the Humane twitch.



Humane twitch



Proper way to hold the twitch. The lead rope is not wrapped around the twitch handle.



The Stableizer

- [Video](#)



Tail tie

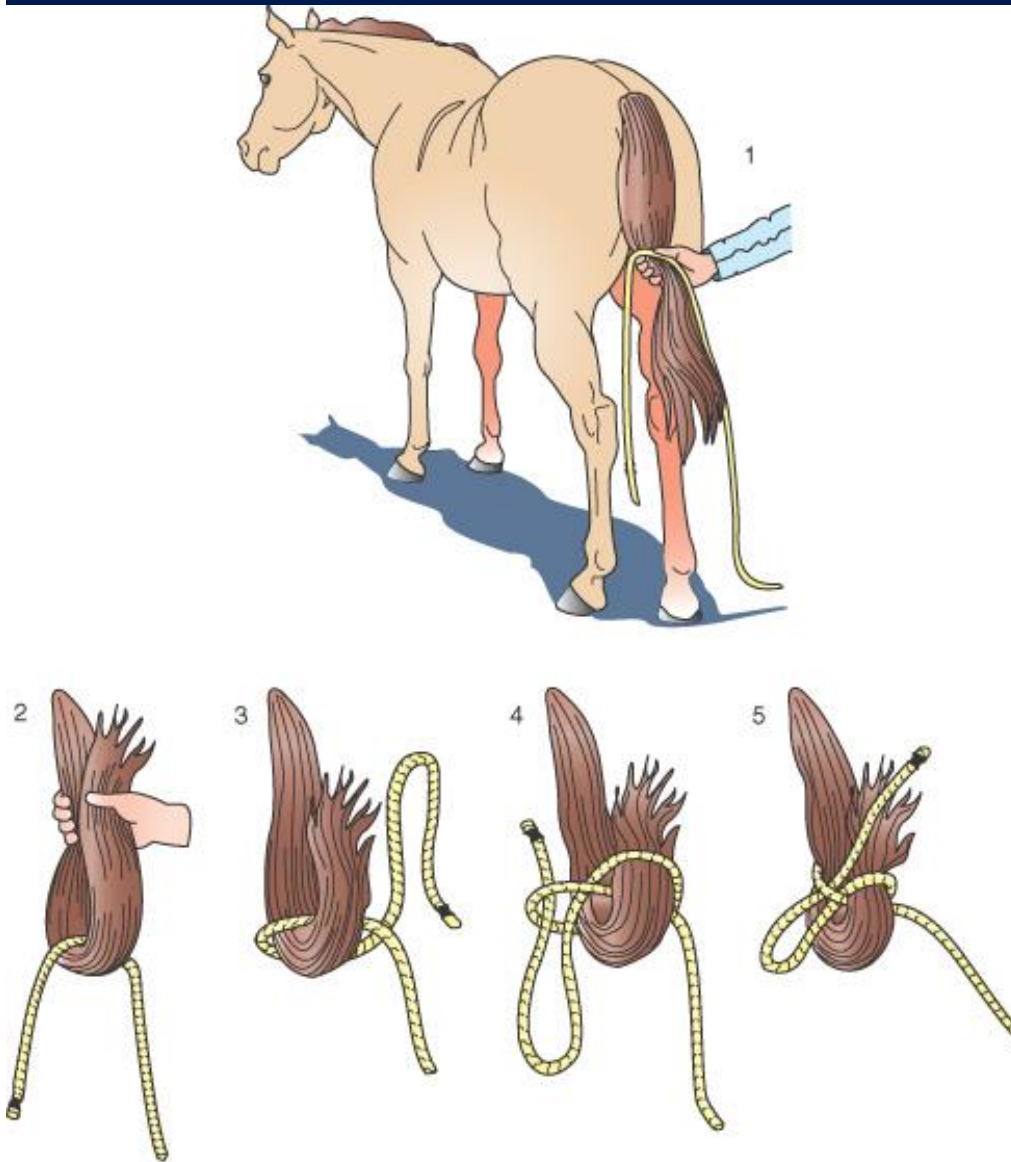


Fig. 3-19. Tail tie.

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- Tail is strong enough to be use to move , lift or support the hindquarters
- The tail tie is performed just beyond the end of the last coccygeal vertebrae

Tail Tie Restraint Method: good for rectal palpations and vaginal examinations



A

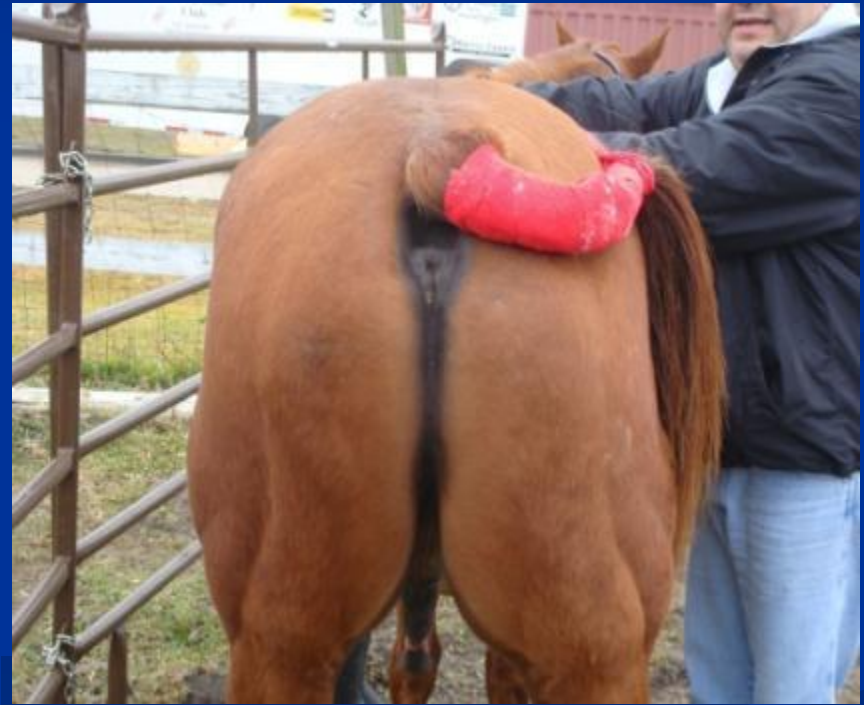
The finished product!



D

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Bandage on the tail



For transportation or reproductive procedures



Loading to the trailer

- video

Horse stock



- They are designed to confine the horse to small area with restricted movement, usually only 1 to 2 feet lateral movement and 1 to 2 feet of front to back movement

Horse stock



- **SPECIFICATIONS:**
- Sides measure 80" long
- Front measures 38" long with 32" open at the top and 40" of wood at the bottom
- 12" from mounting plate to steel bar
- Stocks may be adaptable

The first thing that should be done after leading a horse into the stock is to close and latch the rear gate. Notice how the guy to the left is getting ready to nudge the horse into the stock.



Stocks are the safest way to manage horses.



Cleaning the sheath



The beans



External reproductive organs examination



Scotch Hobble

Denies use of hind leg



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Neck Cradle



This muzzle is to prevent the horse from eating prior to sx. It does however have small holes to allow for water consumption.



Restraint of Foals

- Always begins with catching and controlling the mare
- Touching the foal neck or withers simulates the natural approach of the mare, but human touch is seldom appreciated at this age



Fig. 3-21. Proper foal restraint.

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Restraint of Foals

- Foals are properly restrained with one arm around the shoulder or base of the neck, the hind end is controlled by placing the arm around the hind quarter or by using a tail hold with the hand



Chemical Restraint

- Many surgical and medical procedures can be accomplished in the standing horse if appropriate combinations of physical and chemical restraint are employed



Chemical Restraint

- It's preferable to perform procedures with the horse standing rather than under general anesthesia where possible because horses have a greater risk of complications from general anesthesia than other species



"No single drug produces 'ideal' standing chemical restraint in every horse,"

- There are nine medications approved in the United States for restraining horses, only five are currently on the market:
- Acepromazine,
- butorphanol,
- detomidine,
- romifidine, and
- xylazine.



Phenothiazines (such as acepromazine) “ace”

- Calm horses (sedative), but do not provide analgesia (pain relief). However, they can enhance the analgesic effects of some other medications. They can be given orally, intramuscularly, or intravenously



Acepromazine

- In particular yields sedation without significant ataxia (incoordination), but a known issue is rare persistent penile prolapse/paralysis
- DOSAGE 0.044-0.088mg/kg (2-4mg/100lbs) IV, IM, SQ
- Good for 20 minutes



Alpha-2 agonists (including xylazine, detomidine, and romifidine)

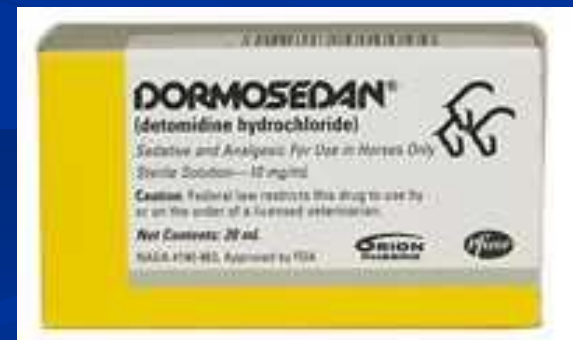
- Provide sedation, muscle relaxation, ataxia, and analgesia when given sublingually (under the tongue), intravenously, or intramuscularly. Sedation is more powerful than that provided by phenothiazines.
- Xylazine is one of the cheapest and most commonly used drugs in this class



Dosage **XYLAZINE**
1.1mg/kg IV
2.2 mg/kg IM

Detomidine

- It is 100 times more powerful than xylazine and lasts at least twice as long, but it is more expensive.
- Detomidine placed under the tongue can give you good sedation after 30-45 minutes.
- Simple dosing: 1 or 2 mL per 1,100 lbs horse IM or IV



DORMOSEDAN GEL

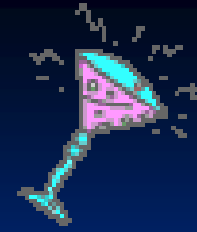
- Produces sedation when administered sublingually at 0.018 mg/lb (0.040 mg/kg).
- Dormosedan Gel must be placed beneath the tongue of the horse, and is not meant to be swallowed. One 3 ml oral syringe provides dosage for up to 1210-1320 lbs. body weight..



alpha-2 agonists

- Side effects of alpha-2 agonists can include decreased heart rate and cardiac output, heartbeat irregularities, hypertension (increased blood pressure), decreased respiratory rate, and reduced salivation/swallowing/gastrointestinal motility

Cocktails



- Acepromazine
0.02mg/kg with
Xylazine 0.6 mg/kg IV
- Xylazine 0.55 mg/kg
with Ketamine 1.1
mg/kg IV



Questions? Ask the Old Royals

