

The Clinical Examination of the Cow

Ken Newman, BSc(Agr),
DVM, MRCVS



Acknowledgements

To my mentor Dr. JD Baird
and
To Lindsey Long, Senior 2003
for her assistance in demonstrating
the physical examination

There is NO substitute for a
thorough physical examination.

You will miss more by not looking
than you will by not knowing.

What is the animal telling you?

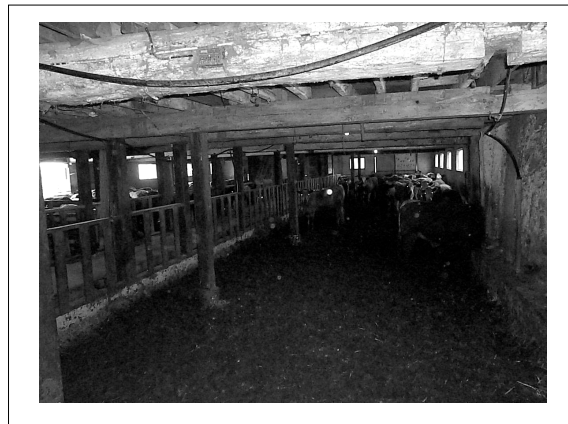
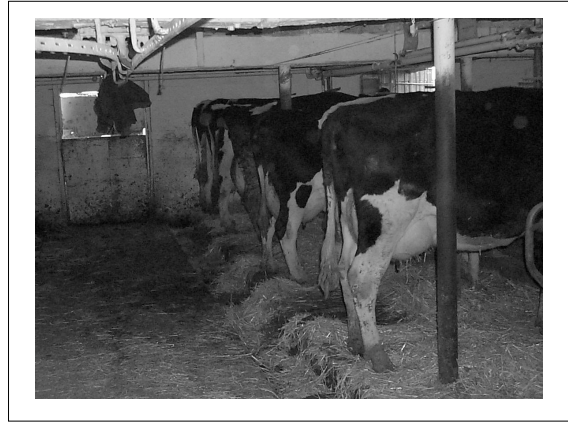
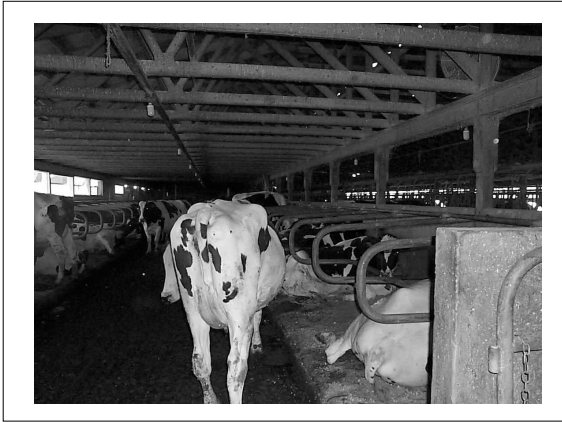
The Clinical Examination

Part I – Background Information

The Clinical Examination

- Patient Data
- History
- Environment – verify information
- General Inspection
- Systematic Physical Examination
- Detailed Physical Examination





Clinical Examination cont.

- Differential Diagnosis
- Appropriate Lab tests
- Diagnosis
- Treatment
- Client Education

General Inspection

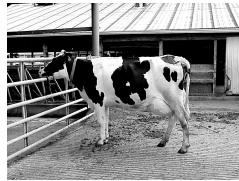
- Need light & space
- STAND BACK - LOOK - DON'T TOUCH
- Observe at rest and critically assess

Inspection cont.

- General appearance & conformation
- Behavior
- Facial expression
- Eye appearance
- Body condition
- Skin & hair coat
- Respiratory movements
- Abdomen
- Stance & Posture
- Gait

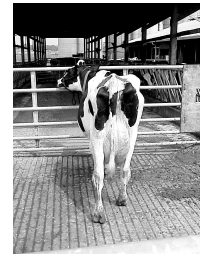
General Appearance

- VIEW ALL SIDES
- Symmetry muscles/skeleton
- Shape
- Size - appropriate for age/breed
- Compare abdomen & thorax
 - deviations from normal?
 - physiological vs. pathological



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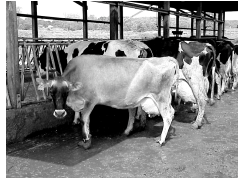
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Inspection cont.

- Conformation
 - breed variations
- Abnormalities:
 - Head: "parrot mouth"
 - Limbs: "base wide", "winged" elbows, "post legged", cow hocks, sickle hocks
 - Back: kyphosis, lordosis, scoliosis



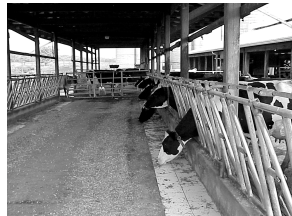
Behaviour

- Temperament
- Voice
- Vices
- Facial expression



Ingestive behaviour

- Prehension
- Mastication
- Swallowing
- Regurgitation



Eliminative behaviour

- Defecation
- Urination



Appearance of eye

- Bright & shiny vs. dull & cloudy
- Position
- Discharge
- 3rd eyelid

Body condition

- Indicates past health, diet, management & production
- Relative to breed, age, stage of pregnancy, lactation,
- Be careful with woolly or hairy animals – need to palpate!
- Compare to neighbors



Skin & Hair Coat

- Indicative of systemic vs. local dz.
- Indicates previous health status

Respiratory Movements

- Rate
 - Temperature, BCS, excitement, exercise
- Rhythm
- Depth
 - Shallow, deep
- Type
- Symmetrical vs. asymmetrical movements

Abdomen

- Size
 - Increased
 - Decreased
- Shape
 - Unilateral
 - Bilateral



Abdominal pings

- Location
- Size
- Intensity
- Persistency



Requirements to hear a ping

- Gas/fluid interface
- Viscous under pressure
- Viscous adjacent to abdominal wall

Stance & Posture

- Arched back
- Saw-horse
- Sternal
- Star gazing
- Shifting weight
- Head & neck extended
- Leaning back
- Forelimbs wide apart



Gait

- Any abnormalities
- Musculoskeletal system
- Neurological system

The Physical Examination Part II - Procedure

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**There is NO substitute for a
thorough physical examination.**

You will miss more by not looking
than you will by not knowing.

What is the animal telling you?

Equipment required

- Halter
- Watch
- Stethoscope
- Thermometer
- Black plate
- CMT paddle & solution

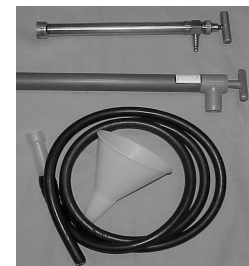


Equipment cont.

- Flashlight
- Rectal sleeve
- Betadine & lube
- Compass
- Ketone powder/stick
- 16g 1_ needle & alcohol

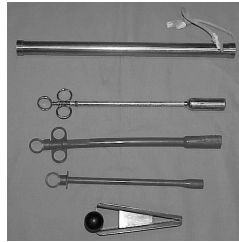
Additional equipment

- Mouth gag
- Frick speculum
- Stomach tube
- Funnel/pump
- U/A strip
- Rope

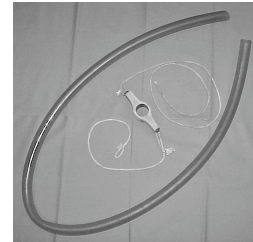
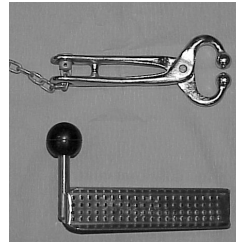


Additional equip. cont.

- New methylene blue
- Slide
- Blood collection vials
- Balling gun
- Nose lead



Equip. cont.

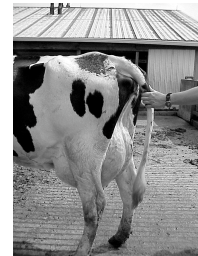


Basics

- Begins before touching animal
 - Don't get focused on one abnormality
- Consistent routine
 - Avoid becoming sidetracked
 - Miss other abnormalities
- Done by regions, not systems
- Modified if no restraint & fractious animal

Physical Examination

- Proper restraint !
- Tail tone & perineal reflex
- Rectal temperature
- Pulse (coccygeal artery)
- Skin & hair coat
- Vulval mucous membranes
- Urine sample



Normal Values

P/E cont.

- Mammary lymph nodes
- Shape & symmetry of abdomen/thorax
 - Remove thermometer
- Feces
- Mammary glands
- Milk samples
- Subcutaneous abdominal veins



Left neck

- Skin - hydration
- Left jugular vein
- Trachea & Larynx
 - auscultate & compress
- Thyroid glands
 - Not normally palpable
- Left superficial cervical lymph node



Left foreleg

- Inspection & palpation
- Note if any evidence of:
 - heat
 - pain
 - swelling
 - redness
 - skin temperature



Left thorax

- Heart
 - palpate
 - auscultate - note intensity, location, thrills
 - rate (60-80/min)
 - compare heart with pulse rate
 - cardiac rhythm
 - valve locations (PAM)



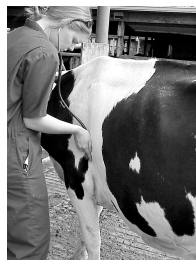
Left thorax

- Respiratory system
 - palpate topline
 - auscultate esp. hilar region & ant. ventral
 - palpate ventral thorax



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 - palpate ventral thorax



Left thorax

- Magnet check
- Brisket/axilla
 - Swelling/edema
- Umbilical region
 - Hernia, edema, heat, swelling
- Left abdominal vein



Left abdomen

- Rumen
 - inspection, palpation
 - auscultation - frequency & character
 - 1-2/minute
 - 1° rumen/reticulum
 - 2° rumen only

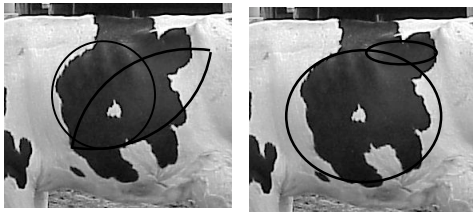


Left abdomen

- Auscultate over 9-12th IC spaces
- Ballotement & succussion
 - Grain overload



Left ping locations



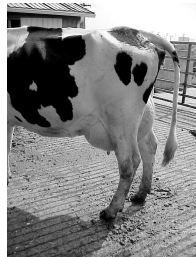
Left abdomen

- Left sub-iliac lymph node



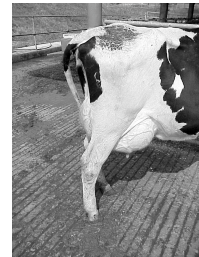
Left hindleg

- Inspection & palpation
- Note if any evidence of:
 - heat
 - pain
 - swelling
 - redness
 - skin temperature



Right hindleg

- Inspection & palpation
- Note if any evidence of:
 - heat
 - pain
 - swelling
 - redness
 - skin temperature



Right abdomen

- Right sub-iliac lymph node

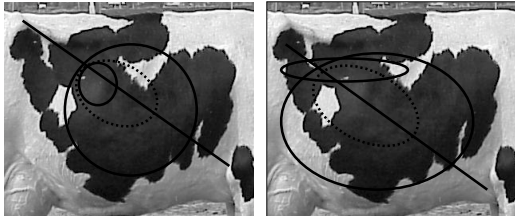


Right abdomen

- Auscultation
- Succussion



Right ping locations



Right abdomen

- Liver



Right thorax

- Heart
- Respiratory system
- Withers pinch



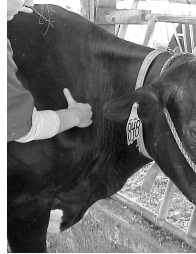
Right foreleg

- Inspection & palpation
- Note if any evidence of:
 - heat
 - pain
 - swelling
 - redness
 - skin temperature



Right neck

- Superficial cervical lymph node



Right neck

- Jugular vein
- Jugular refill



Head

- Carriage of head & ears
 - Neurological dz
- Symmetry
- Facial expression
- Eye movements
- Nostrils
 - Discharge, odor, ulcers



Head

- Eyes
 - position
 - Menace (CN II, CNVII)
 - ocular discharge
 - conjunctival & scleral mucous membranes
 - Cornea
 - PLR
 - Eyelid tent



Head

- Submandibular lymph nodes
- Salivary glands
- Ears
- Oral cavity
 - Odor, tone, ulcers, tongue (CN XII)



Vaginal examination

- Pre-calving
- Post calving
- Before rectal examination
- Wash
- Note for any evidence of:
 - Tears – vaginal & cervical
 - Retained fetal membranes
 - Metritis

Rectal examination

- After taking temperature
- Presence & consistency of manure
- Pressure
- Pelvic bones
- Rumen – size, position,
- Left Kidney – size, position, pain

Rectal cont.

- Aorta – fremitus, enlarge iliac lymph nodes, pulse & quality
- Females - cervix, vagina, uterus, ovaries
Males – base of penis, accessory sex glands, internal inguinal rings
 - Urolithiasis – size of ureters? Pulsations?
- Right - abnormal viscera, distended spiral colon, cecum, small intestines, RDA

References

- Vet. Clinics of North America: Food Animal Practice – Physical Examination July 1992 8:2
- Smith, BP.(ed) 1996. Large Animal Internal Medicine