

Treatment Protocols—Feedlot

- All IM injections given in the neck, with no more than 10 cc per site.
- Use 16 x 1” needles for IM injections; use 16 x ½” needles for SQ injections

Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal Period (slaughter)
Allergic/Anaphylactic Reaction	-Can happen in response to either a medicine or vaccine -Animal may have a reaction immediately(minutes) or hours later -Convulsions, collapse, shaking, stumbling -Problems breathing, salivation, -Bloat, diarrhea -Swelling/edema +/- fever	1. Epinephrine (Epiclor): 3 to 8 cc / animal IM (or can go IV if very severe reaction, just go with 1/5 of original dose) 2. Dexamethasone 5: 1 to 4 cc /animal IV or IM immediately after the epinephrine 3. +/- Antihistamine (Pyrahist): 2 cc/100 lbs IM or SQ, can repeat every 2 hours if necessary.	None listed 10 days None listed
Stomach Problems			

Bloat	Distended abdomen, especially on the upper left side	<ol style="list-style-type: none"> 1. Pass a stomach tube to see if free gas is expressed, or if it is a frothy bloat. Allow swelling to go down if a free gas bloat 2. Administer Anti-gas (dioctyl) /Mineral oil via the stomach tube: <ul style="list-style-type: none"> -Dioctyl : 300mL for adult cattle, 150 mL for smaller cattle. -Mineral oil: 1 Liter 3. In an emergency situation, contact a veterinarian for assistance. If animal is recumbent dying from bloat, use a trocar or sharp knife to puncture rumen on the left side of animal to release pressure <ul style="list-style-type: none"> -location about 1 handwidth behind the last rib and 2 handwidths below the edges of backbone 4. If re-pulled again, repeat above directions and administer Tetraject LP (3cc/cwt) IM and Tetraject LA (5 cc/cwt) IM and Pyrahist (10 cc) IM (for chronic bloaters) 	<p>No meat withdrawal time listed.</p> <p>At least 60 days (off label use)</p>
Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal Period (slaughter)
Grain Overload (Carbohydrate engorgement)	<ul style="list-style-type: none"> -Profuse watery diarrhea, often with grain visible in it -Depression, dehydration -Animal may be weak, staggy, down and unable to rise -Signs usually appear 6-8 hours after consumption of toxic amount. 	<ol style="list-style-type: none"> 1. Administer via a stomach tube: <ul style="list-style-type: none"> -Oxamin powder: Mix 454 g (1/2 tub for calves) with 2.27 L of water and administer orally. May need to give daily for 2 to 3 days. -Mineral oil: Administer ½ to 1 gallon (1/2 gallon for calves) orally once a day, may need to repeat. 2. Anti-inflammatory—give if animal is clinically depressed, or sore feet <ul style="list-style-type: none"> -Banamine: 1-2 cc/100 lbs IM or SQ daily for 3-5 days. 3. In acute cases of known grain overload, restrict access to water for 12 to 24 hours, and offer animals good quality hay. 	<p>No meat withdrawal time listed</p> <p>6 days (12 days if IM or SQ—off label)</p>
Colic (belly ache)	<ul style="list-style-type: none"> -kicking at stomach -laying down, thrashing, getting up -restless 	<ol style="list-style-type: none"> 1. Make sure if calf is a steer it is able to urinate/no swelling on belly (if so, see water belly section) 2. Administer mineral oil (1 to 4 Liters, depending on size) with stomach tube 	

		4. Banamine: 1-2 cc/100 lbs IM, SQ or IV once, if no response to treatment may need examination by a veterinarian	6 days (12 days if IM or SQ—off label)
Won't Eat (Rumen Stopped?) -no specific diagnosis made	-thin -not eating -very sucked up abdomen	1. Drench with 4 Liters of warm water and 2 oz. Ketamalt (or ½ cup of sugar) and 1 –2 handfuls of brewers yeast 2. Rumex bolus: 1 bolus/330 lbs body weight 3. Hemostam: 4 to 8 cc a day IM or IV 4. Separate animal from pen and give good quality long hay to stimulate eating	
Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal Period (slaughter)
Hardware Disease	-thin -abcess-like swelling in brisket (edema) associated with heart failure -abdominal pain, grunting, hump backed	1. Give a magnet 2. Antibiotics: -Liquamycin LA 4.5 cc/100 lbs IM or SQ -If quite sick, go with Tetraject LP (short acting) 3 cc/100 lbs IM once a day for 2-3 days, followed up by the long acting oxytet 3. Banamine 1-2 cc/100 lbs IV once a day for 3 days for pain control 4. If brisket edema, give salix/lasix 10 cc/cow IM once daily or divided into 2 doses	IM = 21 days SQ = 42 days IM = 18 days 6 days (12 days IM or SQ—off label) 48 hours
Manure/Urine Problems			

Kidney/Bladder Infections	-passing blood or pus in the urine -possibly quite thin -common in some groups of feeder cattle	1. Antibiotics (chose ONE of the following options) -Long acting penicillin (Propen LA): 3 cc/100 lbs IM or SQ -Short acting penicillin (Procillin/PenVet 300): 3 cc/100 lbs IM once daily for 3 to 5 days (best if cow seems quite sick) -Excenel: 1 cc/100 lbs IM or SQ once a day for 3 to 5 days	IM = 21 days SQ = 14 days IM = 10 days 3 days
Waterbelly (Urinary Stone)	-signs of colic in a steer or a bull -unable to urinate, dripping urine from urethra -swelling on lower abdomen from between back legs to urethra	1. Surgical correction is required	
Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal Period (slaughter)

Nervous Disorders			
Undifferentiated Nervous Disease Treatment	-try to identify the cause of the symptoms first to treat for appropriate disease -legs out straight, head back, convulsing, shaking	Day 1: 3 cc/cwt IM Nuflor, repeat this dosage in 48 hours ¼ to ½ cc/cwt IM Vitamin A&D 4-8 cc per animal a day Hemostam IV or IM 1 cc/cwt IM Thiamine twice daily, up to 5 times a day 1 to 4 cc per animal IM Dexamethasone 5 Quarantine from others in a warm, dry, dark place Day 2: 1 cc/cwt Thiamine twice daily	36 days 10 days
ITEME (Haemophilus somnus)	-“Sleeper Syndrome” find calf lying down with head tucked into flank, almost comatose -head tilt -twitchy eyes -staggery -fever +/- weak swollen joints -seizures -blindness	Nuflor is the basis of treatment with this disease	
Nervous Coccidiosis	-Very spastic -Fits of paddling, convulsions and may be normal inbetween -convulsions, seizures -may or may not find coccidia in feces -downward flexion of head -rolling/twitchy eyes	Sulfa drugs should be added into the protocol above (instead of Nuflor) if this disease is suspected. Steroids are contra-indicated—should remove dexamethasone from the protocol if suspected. Isolation in a warm, dark pen is recommended.	
Polio	*Blindness (differentials would be lead poisoning or Vit A deficiency) -head pressing -comatose	Thiamine is the basis of treatment in this disease Make sure animals are getting enough roughage in ration, as too high of grain diets may contribute to this.	
Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal

			Period (slaughter)
Vitamin A deficiency	-night blindness -loss of body condition -convulsions followed by recovery -episodes of fainting	Vitamin AD treatment should resolve this disease if caught early enough, usually within 48 hours. Blind animals may not respond.	
Calcium/Magnesium/Phosphorous Deficiency	-usually a problem in mature cows, down cows -Ca deficient: down, lethargic, cold ears, weak -Mg deficient: convulsions -P deficient: bright and alert -may not be able to differentiate based on above signs, so treat for all.	<ol style="list-style-type: none"> 1. Cal Plus: Give 1 to 2 bottles per animal IV (slow) or SQ in many different locations. (no more than 10cc per site) 2. Phosphortonic: 60 cc per cow IV, IM or SQ 3. If no response in 24-48 hours, re-evaluate diagnosis. 	None listed
Respiratory Disease			

Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal Period (slaughter)
Bovine Respiratory Disease (Pneumonia, Shipping Fever)	Head down Sunken eyes Depressed, off-feed Fever (>40.0°C/104°F) Snotty nose Labored breathing +/- coughing	<p>On arrival: (“Shipping Fever”)</p> <p>Administer medicine as per the animal’s temperature. If temperature indicates a treatment however the animal’s symptoms seem more severe, adjust as necessary.</p> <p>Temp: 103.5 – 105.0 Liquamycin LA</p> <p>105.1 – 106.4 Micotil 106.5 over Micotil and Dex (3cc)</p> <p>Add in one of the following anti-inflammatories for really sick calves with high fever and labored breathing</p> <p>-Banamine 1- 2 cc/100 lbs IV, SQ or IM once a day for 3 days</p> <p>-Anafen 1.5 cc/100 lbs IM or IV once a day for up to 3 days</p> <p>-Dexamethasone 5: 1- 4 cc IM once a day may repeat if necessary</p> <p>Recent repulls:</p> <ul style="list-style-type: none"> Nuflor 3 cc/cwt IM and hold in sick pen for 2 days. Check temperature again and if gone down give 3 cc/cwt IM and send home * <p style="text-align: center;">Or 6 cc/cwt SQ and send home</p> <ul style="list-style-type: none"> If temperature still high, switch to Excenel 1 cc/cwt IM or SQ for 3 days Next pull, treat with Baytril 5 cc/cwt SQ single dose <p style="text-align: center;">Or A180 1.5 cc/cwt SQ, may repeat in 48 hours</p>	<p>IM = 28 days SQ = 48 days 28 days 28 days</p> <p>IV = 6 days IM/SQ = 12 days 24 hours 10 days</p> <p>36 days</p> <p>55 days</p> <p>3 days 36 days</p> <p>7 days</p>

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Diphtheria (Necrotic Laryngitis)	-Calves look ok, however breathing sounds very raspy from throat -Honkers, loud breathing	<ol style="list-style-type: none"> <li data-bbox="1055 424 1738 512">1. Nuflor 3cc/cwt IM, repeat in 48 hours (max of 5 treatments) Or 6 cc/cwt SQ once <li data-bbox="1055 544 1749 600">2. +/- Dexamethasone 5: 1- 4 cc per animal IM every other day for no more than 5 days. 	<p data-bbox="1794 424 1877 448">36 days</p> <p data-bbox="1794 480 1877 504">55 days</p> <p data-bbox="1794 536 1877 560">10 days</p>
Lameness			
Foot-rot	Swelling above hooves (above both claws) Lameness Redness/spreading of claws	<ol style="list-style-type: none"> <li data-bbox="1055 762 1738 999">1. For mild early cases or first treatment, can use long-acting antibiotics: -Propen LA(long-acting): 1 mL/15 kg SQ or IM, can be repeated in 72 hours. (3cc/100lbs) or -Liquamycin LA-200 (long-acting): 1mL/10 kg SQ or IM (4.5cc/100 lbs) <li data-bbox="1055 1031 1738 1238">2. For more severe cases or second treatments should do once a day treatments: Procillin (short-acting) : 21,000 i.u./kg IM daily for 3-5 days (3cc/100lbs) or Tetraject 100 LP (short-acting): 3 mL/45 kg IM or IV daily for 3 days. (3cc/100lbs) <li data-bbox="1055 1270 1637 1358">3. Another option that is labelled for footrot is Nuflor 3cc/100 lbs IM, repeat in 48 hours or 6cc/100 lbs SQ once <li data-bbox="1055 1390 1727 1477">4. If no response to the above treatments, should contact your veterinarian as the problem may not actually be footrot and may require a different treatment (ie) septic arthritis---claw 	<p data-bbox="1794 823 1939 879">SQ = 14 days IM = 21 days</p> <p data-bbox="1794 911 1939 967">SQ = 48 days IM = 28 days</p> <p data-bbox="1794 1062 1877 1086">10 days</p> <p data-bbox="1794 1150 1877 1174">18 days</p> <p data-bbox="1794 1270 1939 1326">IM = 36 days SQ = 55 days</p>

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Mycoplasma bovis	-chronic, sick, thin calf -sore/swollen joints (single or multiple)	<p>amputation, sole abscess----hoof trimming</p> <ol style="list-style-type: none"> <li data-bbox="1055 424 1771 544">1. If early in disease, Draxxin may be beneficial (1.25 cc/cwt SQ), but the key to treatment does not seem to depend on what drug is chosen, but rather the duration of treatment (and then expense comes into play...) <li data-bbox="1055 568 1771 632">2. Pain medication? (Banamine, anafen) may help in acute flare-ups. <li data-bbox="1055 655 1771 719">3. Separate from the rest of the pen for TLC and easy, low competition for feed and water 	44 days
Miscellaneous Problems			
Ear Infection	-droopy ear -possibly oozing white pus +/- head tilt	<ol style="list-style-type: none"> <li data-bbox="1055 850 1771 999">1. Try to remove any pus/chunks with finger, then flush with a warm water and betadine solution (about the color of weak tea). Shake ear and try to remove any pus loosened up by the flushing. Then treat with ½ tube of Special Formula 17900 in infected ear <li data-bbox="1055 1023 1771 1062">2. Nuflor: 3 cc/cwt IM, repeat in 48 hours OR 6 cc/cwt SQ once <li data-bbox="1055 1086 1771 1126">3. or Penicillin short acting (3 mL/cwt) IM once a day for 3 days <li data-bbox="1055 1134 1771 1174">4. or long acting Penicillin (3 mL/cwt) IM or SQ once 	24 days IM = 36 days SQ = 55 days 10 days IM = 21 days SQ = 14 days
Pinkeye	Runny, red eye(s) Cloudy eye/white spot on eye	<ol style="list-style-type: none"> <li data-bbox="1055 1214 1771 1270">1. Liquamycin LA-200 (long-acting): 1 mL/10 kg SQ or IM (4.5cc/100 lbs) <li data-bbox="1055 1294 1771 1476">2. Topical treatments: -subconjunctival injection of 2 mL penicillin G (short acting) into inner eyelid for cows or bulls and 1 mL penicillin G for calves and 1 cc dexamethasone 5 (for both) with a 18 ga 1 ½ needle into 2 or 3 different areas OR -Topical SF 17900 Special Formula mastitis ointment daily 	SQ= 48 days IM= 28 days 20 days (off label) 24 days

		<p>for 3-5 days</p> <p>-a squirt or two of Purple pink eye spray</p> <p>3. If no response, contact veterinarian—may be a foreign body or want to rule out a possible cancer eye (=eye enucleation)</p>	
Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal Period (slaughter)
Abscesses/Lumps	<p>Soft/firm swelling on any number of locations, confirmed by clipping the area, cleaning the skin and aspirating pus from the site (14 ga 1 ½ needle)</p> <p>-if blood comes, leave it alone</p> <p>-if white pus or clear fluid comes out—lance it</p> <p>-A lump in the brisket could be a sign of hardware disease</p>	<p>1. If possible, the abscess should be lanced, drained and flushed with betadine solution diluted in water. Lance at the bottom of lump for better drainage.</p> <p>2. Administration of a long-acting antibiotic</p> <p>- Liqueamycin LA-200: 1 mL/10 kg SQ or IM (4.5 cc/100lbs) once</p>	<p>SQ=48 days</p> <p>IM=28 days</p>
Feedlot Cows			

Mastitis	Enlarged, firm, hot udder, may look blue Milk is clumpy May or may not be clinically sick -Cow may be gaunt and off feed, moving slowly and maybe stiff	<ol style="list-style-type: none"> 1. Strip milk out of udder 3-4 times/day, if possible 2. Antibiotics: <ul style="list-style-type: none"> -Trivettrin: (3 cc/100 lbs) IM or IV once a day for 3-5 days <li style="text-align: center;">Or -Tetraject 100 LP (short acting): 3 cc/45 kg IM or IV daily for 3 days <li style="text-align: center;">Or -Micotil 1.5mL/100 lbs SQ once, may repeat in 3 days 3. Anti-inflammatories (good especially if the cow is quite sick) <ul style="list-style-type: none"> -Banamine: 1-2 cc/100 lbs IV, IM or SQ daily for 3 to 5 days. 4. Intramammary infusion <ul style="list-style-type: none"> -Special Formula 17900-Forte Suspension: 10 mL/quarter Infuse the contents of one syringe into the affected mammary gland after stripping out as much of the mastitic milk as possible first. May be repeated once after a 24 hour period if necessary. Ensure strict cleanliness. 5. Drench with warm water if dehydrated. 	 10 days 18 days 28 days 6 days IV (12 days if giving IM or SQ—off label) 24 days
Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal Period (slaughter)

<p>Prolapses</p>	<p>Uterine Prolapse -happens shortly after calving, never before -usually quite large, with buttons on the surface</p> <p>Vaginal Prolapse -happens before or after calving -smooth surface -usually the size of a basketball</p> <p>Rectal Prolapses</p>	<p>1. Seek veterinary assistance immediately!!!! Cow can bleed to death! -keep cow quiet, try to avoid having the uterus swinging around, and if she will let you, clean straw and dirt off the uterus and wrap in a warm wet towel while waiting -Clean protruding tissue and surrounding area as well as possible with water and a disinfectant solution. With rubber gloves on try to push the mass back in and work it back into its position. Someone to hold the tail and push on the spine with something mildly sharp may help to stop the cow from pushing. Once back in position use the little knife/trochar to poke a hole on either side of the vulva and use the prolapse pin set to tie shut on uterine prolapse cases. -Treat with 5 cc/cwt Liquamycin IM or SQ</p> <p>-or with 3 cc/cwt long acting penicillin IM or SQ</p> <p>2. If vaginal prolapse goes in and out on its own, monitor -if prolapse stays out but is quite small, clean it up and gently replace it and monitor -if prolapse is large or keeps falling out, contact veterinarian to come administer and epidural and suture back in place</p> <p>3. For rectal prolapses, just sew up moderately tight with the special thread</p>	<p>IM = 28 days SQ = 48 days IM = 21 days SQ = 14 days</p>
<p>Lump Jaw</p>	<p>-initially a painless, hard, immovable bony swelling on the jaw -eventually will discharge small amounts of pus through one or more openings in the skin</p>	<p>1. Sodium iodide (200 mg/ mL) 15 mL/45 kg administered IV, repeat this dose in 7-10 days. -do not administer to pregnant animals</p> <p>2. Trivettrin: 3 mL/45kg IM or IV (3 ccL/100 lbs) once a day for 3-5 days</p>	<p>No meat withdrawal time listed.</p> <p>10 days</p>
<p>Diagnosis</p>	<p>Clinical Signs</p>	<p>Treatment Protocol and Dose</p>	<p>Withdrawal Period (slaughter)</p>

Problems Calving		<ol style="list-style-type: none"> After every assisted calving, give 5 cc of oxytocin IM Any cows that do not clean properly, refer to treatment of retained placenta 	
Retained Placenta/Metritis -very common with twins and abortions	-A failure to shed the placenta within 12-24 hours of calving (normal = 2-6 hrs) -placenta hanging from vulva -putrid smell -fever +/- very ill +/- loss of appetite	<ol style="list-style-type: none"> If given within 2-4 hours of parturition, Oxytocin may aid in expulsion: Oxytocin 20 to 60 I.U (1-3 cc) IM, can repeat every 2 hours if necessary up to 48 hours after calving. Injectable antibiotics—most useful when cows are showing signs of being sick -Penicillin (short acting): 3 cc/100 lbs IM once a day for 3-5 days -OR Excenel (ceftiofur): 1 cc/100 lbs IM or SQ once a day for 3-5 d. -Penicillin (long acting): 3 cc/100 lbs IM or SQ once, may repeat Supportive treatment—required if cow is very sick/septic and toxic -Banamine (flunixin meglumine): 2 cc/100 lbs IV once a day for 3 d. Intra-uterine antibiotics—consider only if cow is very sick/septic and in combination with systemic therapy -Oxytetracycline 3-5 grams of powder in at least 500 mL of water/saline (luke warm) daily for at least 3 days. Use a soft plastic tube to avoid further contamination/uterine rupture Hormonal Treatment—none of these treatments have shown overwhelming success rates. The goal is to increase uterine tone and contractility. -Prostaglandins (Estrumate or Lutalyse): 2 to 3 IM injections per day –not shown to increase uterine tone dramatically, short acting -Oxytocin: May increase uterine contractility <ul style="list-style-type: none"> First 3 days after calving: 1 cc (20 IU) IV, IM, or SQ three to four times a day By day 4 after calving, may increase dose to 1 ½ cc (30 IU) every 2 hours 	 10 days 3 days IM: 21 days SQ: 14 days 6 days OFF LABEL USE—talk to veterinarian first OFF LABEL USE--talk to veterinarian first
Diagnosis	Clinical Signs	Treatment Protocol and Dose	Withdrawal Period (slaughter)

Not letting milk down		1. Oxytocin 2 to 5 cc IM or IV 5 to 10 minutes prior to milking -will only work within a few days of calving	