



Hands-On Flock Health

PRACTICAL SKILLS FOR THE BARN

Blood Draws · Injections · Splinting · Breeding Soundness · Vaccination · Medicine Cabinet

Presented by

Autumn Badelt-Fanning, DVM

Vineyard Valais · Swiss Legacy Sheep · Paso Robles, California

Black Sheep Gathering · Gotland Show

Welcome, and How to Use This Guide

Thank you for joining this session. This guide is your take-home reference for the hands-on skills we cover today: drawing blood, giving injections, splinting a contracted-tendon lamb, running a pre-breeding soundness check, building a sensible vaccine plan, and stocking a medicine cabinet you will actually reach for. Keep it in the barn, mark it up, and make it yours.

Everything here is meant to be practical and repeatable. Where doses, products, or schedules appear, they are written as general guidance only. **Always read and follow the product label for dose, route, and withdrawal time, and partner with your own veterinarian,** especially for prescription products, anything given to a pregnant animal, and anything entering the food chain.

Know Your Normals

Before you can spot trouble, you need a baseline. Take a resting temperature, pulse, and respiration on a few healthy animals so you know what normal looks and feels like in your own flock.

Vital Sign	Normal Adult Sheep Range
Temperature	101.5 to 103.5 degrees F (average near 102.3). A hot day, handling, or stress can push it up.
Heart rate	70 to 90 beats per minute (faster in lambs).
Respiration	12 to 20 breaths per minute at rest.
Rumen motility	1 to 2 contractions per minute. Listen at the left flank.
Mucous membranes	Moist and pink. Use FAMACHA scoring to screen the lower eyelid for anemia from parasites.
Body condition	Score on a 1 to 5 scale. Most breeding animals do best near 3 to 3.5.

IN THIS GUIDE

1. The Shepherd's Medicine Cabinet
2. Building Out the Cabinet (Rx and OTC)
3. Giving Injections (SQ and IM)
4. Drawing Blood
5. Splinting Contracted Tendons
6. Pre-Breeding Soundness Examination
7. Vaccination Protocols for Ewes and Rams

SECTION ONE

The Shepherd's Medicine Cabinet

A good medicine cabinet is organized, in date, and stocked before you need it. An emergency is never the moment to discover an empty bottle. Build the kit below, store it clean and dry, keep cold-chain items in the refrigerator, and check expiration dates each season.

Category	What to Stock	Notes
Vitals and exam	Digital thermometer, stethoscope, exam light, scale, marking crayon, records notebook.	You cannot treat what you cannot measure.
Injecting and dosing	Syringes (1 to 20 mL), needles (18 to 20 ga, 1/2 to 1 in), drench or dosing syringe, sharps container.	New, sterile needle for every animal. Single use only.
Core vaccines	CDT (Clostridium C and D plus Tetanus). Add abortion vaccines if your vet advises.	Keep cold, watch dates, do not freeze.
Parasite control	FAMACHA card, dewormers from more than one drug class, coccidiostat, fecal sample kit.	Treat by need and fecal results, not the calendar.
Metabolic support	Oral propylene glycol (energy), oral calcium, electrolytes, B-complex and thiamine, probiotic paste.	Often emergency items. Use under veterinary direction.
Wound and hoof	Chlorhexidine or iodine scrub, wound spray, vet wrap, gauze, bandage scissors, hoof trimmers, hoof rot treatment.	Clean the area before you treat it.
Restraint and ID	Halter, ear tagger and tags, elastrator and bands or Burdizzo, nitrile and OB gloves.	Plan tetanus protection any time you band.
Prescription and pain	Antibiotics and anti-inflammatory or pain medication as prescribed for your flock.	Prescription only. Follow label dose and withdrawal.

STAY LEGAL AND SAFE

Many antibiotics now require a veterinary prescription or a feed directive. Record every product, lot number, dose, route, date, and the animal treated. Honor all meat and milk withdrawal times. When in doubt, call your veterinarian first.

SECTION TWO

Building Out the Cabinet

Some of what belongs in a good cabinet you can still buy off the shelf, and the rest now goes through your veterinarian. A 2023 federal rule (FDA Guidance 263) moved nearly every injectable and oral antibiotic, oxytetracycline and penicillin included, from over the counter to prescription only. Plan to source those through your vet, and build that relationship before you need it.

Ask Your Vet First: Prescription Items

These need a current veterinary relationship. Ask your vet to set you up ahead of need, with the dose, route, and withdrawal time written on each label.

Ask Your Vet	Why It Earns a Spot
Meloxicam tablets	An oral anti-inflammatory and pain reliever. A standout for banding and castration pain, tail docking, and lameness. Long acting and easy to give.
Ampicillin or Penicillin G	Injectable antibiotics for bacterial infection, now prescription only. Your vet guides the choice, the dose, and the meat and milk withdrawal time.
Oxytetracycline (LA-200)	A broad-spectrum injectable for pinkeye, foot rot, and respiratory infection. The classic OTC antibiotic, now prescription only since 2023. Your vet sets dose and withdrawal.
Silver sulfadiazine cream	A topical antibacterial for burns, raw wounds, and skin infections. Keeps the wound bed moist, clean, and protected while it heals.
Bo-Se (selenium and vitamin E)	For white muscle disease on selenium-deficient ground. Prescription only, and only where your soil and forage call for it. Your vet confirms whether your area qualifies.

Over the Counter: Stock These Yourself

Over the Counter	Why It Earns a Spot
Thiamine and B complex	B vitamins for appetite, rumen function, and nerve support. Fortified B complex is easy to find; ask your vet about prescription-strength thiamine, the front-line treatment for polio.
Corid (amprolium)	Treats and prevents coccidiosis, a common cause of scours in young stock. Not an antibiotic. Follow the label closely, since long courses can work against thiamine.
Dewormers for your area	Anthelmintics chosen for the parasites and resistance patterns in your region. Use FAMACHA and fecal counts to deworm by need, and ask your vet which classes still work locally.
Children's gas drops	Simethicone to break up frothy gas. A gentle first response for mild gas and bloat discomfort while you assess the animal.
Therabloat (poloxalene)	A targeted anti-bloat drench for frothy or pasture bloat. The stronger tool to have ready when gas drops are not enough and minutes matter.

Over the Counter	Why It Earns a Spot
Aluspray	An aerosol aluminum bandage that seals and protects wounds and post-procedure sites from dirt and flies. Sprays on where a wrap will not stay.
Catron IV	An insecticidal wound spray. Protects open wounds from flies and treats fly strike and maggots in warm weather.
Fleet enemas	For constipated lambs. Gentle, ready relief for a lamb that is impacted or straining.
Vetericyn eye gel	An antimicrobial ophthalmic gel for pinkeye, irritation, and minor eye injuries. Soothes and protects the eye without a sting.

SECTION THREE

Giving Injections: Subcutaneous and Intramuscular

Most sheep medications are given either under the skin (subcutaneous, SQ) or into the muscle (intramuscular, IM). The label tells you which. Giving an SQ product into muscle, or the reverse, can cause poor results or tissue damage, so always check the route before you draw it up.

Before the Needle

1. Read the label. Confirm the dose, the route (SQ or IM), and the withdrawal time.
2. Restrain the animal calmly. A haltered sheep against a wall or held by a helper is safest for both of you.
3. Use a new, sterile needle for each animal, single use only. Match the needle to the job and the thickness of the product.
4. Draw up your dose, tap out air bubbles, and choose a clean, dry site. Do not inject through wet, dirty wool.

Route	Needle	Best Site	Key Points
SQ (under the skin)	18 to 20 ga, 1/2 to 3/4 in	Loose skin over the neck, behind the elbow, or over the ribs.	Tent the skin, slide the needle into the tent, draw back, then inject. Preferred when the label allows, since it is gentler on tissue.
IM (into muscle)	18 to 20 ga, 1 to 1 1/2 in	The muscle of the neck, ahead of the shoulder and below the crest.	Insert firmly, draw back to be sure you are not in a vein, then inject slowly. Keep to about 5 mL per site and split larger volumes. Favor the neck to protect valuable cuts.

Clean Technique Every Time

- Use a new, sterile needle for every animal, single use only, then drop it in the sharps container. A reused needle is dull, contaminated, and carries disease between animals.
- Keep the bottle clean. Draw each dose with a fresh needle, and never re-enter the bottle with a needle that has been in an animal.
- Draw back (aspirate) before any IM injection. If you see blood, reposition before injecting.
- Give the injection slowly and rub the site briefly to spread the dose and reduce a lump.
- Record the product, lot number, dose, route, date, site, and withdrawal time for each animal.

LUMPS AND REACTIONS

A small, firm swelling at the site is a common local reaction that usually fades. Watch for heat, pain, abscess, or a sick animal, and call your vet if those appear. Favoring SQ over IM when the label allows, and rotating sites, keeps reactions and carcass blemishes to a minimum.

SECTION FOUR

Drawing Blood: Jugular Venipuncture

A clean jugular blood sample lets you test for disease, confirm pregnancy, and check mineral or metabolic status. The jugular vein runs in the groove along each side of the neck and is the standard site in sheep.

Gather Your Supplies

- A new, sterile needle (18 to 20 ga, 1 to 1 1/2 in) with a vacuum tube holder, or a fresh needle and syringe. Use a new needle and syringe for every sample.
- The **correct tubes for your tests**. Confirm these with your lab before you draw, since the wrong tube can ruin a sample.
- Alcohol or a clean swab, labels and a marker, and a cool place to hold samples.

Tube Top	Additive	Common Use
Red	None (serum)	Serology such as OPP, Brucella ovis, and Johne's, plus chemistry and mineral panels.
Tiger or gold (SST)	Clot activator and gel	Serum tests with faster, cleaner separation.
Purple (lavender)	EDTA anticoagulant	Complete blood count, many PCR tests, and usually the right tube for pregnancy testing.

Step by Step

1. Restrain the head high and turned slightly away from your working side, by setting the sheep up on its rump or haltering against a wall. Good restraint is most of the job.
2. Find the jugular groove along the lower neck. Press a thumb across the groove low, near the chest, to occlude the vein. It should fill and rise toward the head.
3. Part or clip the wool and swab the site. Hold the needle bevel up, angled about 30 to 45 degrees, pointing up the neck toward the head.
4. Enter the raised vein. With a vacuum system, seat the tube; with a syringe, draw back gently and steadily.
5. Release your occluding thumb before you withdraw the needle. Press the site briefly to prevent a bruise.
6. Fill tubes to the correct level, invert anticoagulant tubes gently several times, label every tube fully, and keep samples cool. Spin and separate serum if your lab requires it.

TROUBLESHOOTING

No flow usually means the needle slipped off or through the vein, or suction collapsed it. Ease back, re-occlude, and redirect rather than digging. Let vacuum tubes fill at their own pace. A swelling during the draw is a hematoma: stop, apply pressure, and try the other side.

SECTION FIVE

Splinting a Lamb with Contracted Tendons

Some lambs arrive unable to straighten the lower front legs. They knuckle forward at the fetlock or walk on the front of the pasterns. Mild cases often correct on their own with a little help. Moderate to severe cases need a splint to hold the leg in a better position while the tendon stretches and gains strength.

Stretch First, Splint When Needed

For a mild case, support the lamb so it can stand and nurse, and gently extend the leg several times a day. Many straighten within a few days. Reach for a splint when the lamb cannot bear weight correctly, knuckles fully over, or is not improving with stretching alone.

Applying the Splint

You will need: a first aid foam-wrapped aluminum splint (the malleable, foam-padded aluminum kind that bends to fit the leg), a little extra padding for bony points, cohesive bandage (vet wrap), and scissors.

1. Pad any bony points and add a light wrap of cast padding or cotton. The foam on the splint cushions the rest and helps prevent pressure sores.
2. Ease the leg into a straighter, more functional position. Improve it, do not force it fully straight at once, since overcorrection strains the tendon and joints.
3. Bend the aluminum splint to match the straighter position and set it against the leg on the side that will prevent the bend, cut to reach from below the knee to the foot. Leave the toes exposed so you can check them.
4. Wrap snugly with vet wrap, firm enough to hold but loose enough to slip a finger under. Never wrap so tight that the leg swells below it.
5. Stand the lamb up and confirm it can rise and nurse. Help with the first feedings if needed.

WATCH AND RE-WRAP

Check the splint several times a day for swelling, coldness, or color change in the exposed toes, and for any rub sores. Re-pad and re-wrap every day or two, and take the splint off briefly for gentle stretching. Most lambs improve within days to a couple of weeks; wean off the splint as the leg holds on its own. If a joint is involved, sores develop, or there is no progress, call your vet, who can also check for a selenium or vitamin E deficiency (see Bo-Se in Section Two).

SECTION SIX

Pre-Breeding Soundness Examination

A breeding animal that cannot travel, eat, or carry condition will not produce a strong lamb crop. Examine rams and ewes 6 to 8 weeks before breeding so you have time to correct problems, adjust nutrition, treat feet, or replace an animal that does not pass.

The Ram: Built to Work

The ram is half of every lamb in the flock, so he earns the closest look. A sound ram is fit, structurally correct, and fertile.

- **Condition and structure:** aim for a body condition score near 3 to 3.5, not fat and not thin. Check eyes, teeth and bite, and sound legs and feet, since he must travel and mount.
- **Testicles:** palpate both for symmetry, firm tone, and a free, healthy epididymis. Feel for lumps, heat, or pain, which can signal infection such as *Brucella ovis* epididymitis.
- **Scrotal circumference:** measure it and track it over time, since size correlates with sperm output. Many mature rams measure above roughly 32 cm, but use breed-, age-, and season-specific guidance for your animal.
- **Fertility:** a full breeding soundness exam by your veterinarian adds semen evaluation for motility and morphology, and a check of the penis, prepuce, and libido.
- **Disease screen:** test for *Brucella ovis* before the breeding season, especially in multi-ram flocks.

RAM POWER

A sound, mature ram can cover roughly 35 to 50 ewes in natural service. Lower that ratio for ram lambs, large or rough pastures, and short, tight breeding windows. Always run more than the bare minimum of rams when you can.

The Ewe: Ready to Settle

Ewes should enter breeding healthy, structurally sound, and on a rising plane of nutrition.

- **Condition and flushing:** target a body condition score near 3 to 3.5. Lifting the nutritional plane for 2 to 3 weeks before breeding (flushing) can improve ovulation.
- **Mouth and age:** check teeth and the bite. A broken or worn mouth limits how well an older ewe can hold condition.
- **Udder:** feel for two soft, functional halves with open teats and no hard lumps, scars, or old mastitis damage.
- **Feet, legs, and eyes:** trim and treat feet, confirm she moves freely, and check for sound vision.
- **Health status:** bring vaccines and parasite control current, address mineral needs (with care on copper in sheep), and confirm she is open and not already bred.

PLAN AHEAD

Pre-breeding is the moment to give any abortion-prevention vaccines your veterinarian recommends and to settle mineral status. Decisions made 6 to 8 weeks out show up as a tighter, healthier lamb crop the following season.

SECTION SEVEN

Vaccination Protocols for Ewes and Rams

Vaccination is cheap insurance against diseases that kill quickly. The cornerstone for nearly every flock is CDT, which protects against *Clostridium perfringens* types C and D (enterotoxemia, or overeating disease) and tetanus. A broader 8-way clostridial vaccine such as Covexin 8 can be used in its place where you want wider coverage. Build your program around one of these, then add regional vaccines on your veterinarian's advice.

The Core Schedule

Animal or Stage	Core Vaccine (CDT or Covexin 8)	Timing
Naive adult (ewe or ram)	CDT	Two doses 3 to 4 weeks apart, then a yearly booster.
Pregnant ewe	CDT booster	4 to 6 weeks before she is due, so protective antibodies pass to the newborn.
Ram	CDT booster	Once a year, conveniently at the pre-breeding check.
Lamb from a vaccinated dam	CDT	First dose at about 6 to 8 weeks, booster 3 to 4 weeks later.
Lamb from an unvaccinated dam	CDT plus tetanus protection	Start the CDT series earlier, and give tetanus antitoxin at docking or banding for immediate cover.

Optional and Regional Vaccines

Add these only when your history and your veterinarian point to a real risk in your area. They are not core for every flock.

- **Abortion diseases:** killed bacterins against *Campylobacter* (vibriosis) and *Chlamydia* (enzootic abortion, or EAE), given before or early in breeding where these are a known problem. Examples are a *Campylobacter fetus* bacterin and a *Chlamydia psittaci* bacterin. Ask your vet what fits your area.
- **Caseous lymphadenitis (CL):** where the disease is established in the flock or region.
- **Soremouth (orf):** a live vaccine. Use it only on already affected farms, since it can introduce the virus to a clean flock. Handle with gloves.
- **Footrot and rabies:** situational, based on local risk and history.

GET THE MOST FROM EVERY DOSE

Store vaccines cold and never frozen, and check expiration dates. Do not vaccinate sick or heavily stressed animals. Give CDT and most sheep vaccines under the skin (SQ) in the neck. Boosters matter: a single first dose primes the immune system, but the second dose is what builds real protection. Keep written records of product, lot, date, and animal.



VINEYARD VALAIS

SWISS LEGACY SHEEP

Questions after today? I would love to stay in touch and talk sheep.

Autumn Badelt-Fanning, DVM

Website Vineyardvalais.com

Email autumnbadelt@gmail.com

Facebook and Instagram [@vineyardvalais](#)

A NOTE ON THIS GUIDE

This guide is provided for education. It is not a substitute for veterinary care or for the directions on a product label. Read every label for the correct dose, route, and withdrawal time, and work with your own veterinarian on diagnosis, prescription medications, and any animal entering the food chain.