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**C**astration of domestic male animals, including horses where it is called *gelding*, has been around for thousands of years and has always been a relatively simple, low-risk procedure. However, with modern sensibilities and awarenesses, we can now accomplish the same goals hopefully with even fewer possible side-effects and certainly with more understanding of both the process and special needs.

### Castration and what it does

The act of castration removes the procreative ability of the colt and, generally speaking, makes him more manageable. Since very few horses are truly of quality breeding potential, and since we believe that both stallion (intact male horse) and stud (active breeding stallion) handling should be reserved only for the very knowledgeable, it is our opinion that most modern male horses should be gelded.

The operation consists of removing the *testicles* (and their covering) where sperm cells are produced, the *epididymus* where the sperm cells are matured and stored, and part of the *spermatic cord* which is made up veins, artery, nerves, and including the *vas deferens* which delivers sperm from the *testicles*. Besides growing sperm, the *testicles* are also the main source of testosterone in the male body. It is this hormone which produces all the male secondary characteristics which come with puberty such as a cresty neck, thicker body, greater stamina and flash, and “teasing” behaviors such as intense vocalizations, biting, pushing, rearing, striking, generally fractious behavior (think teenage boy!), etc. which, while perfectly normal behaviors for horses, are not acceptable within human realms.

Geldings continuing to show such behaviors are typically referred to as being “proud cut” meaning that some testicular material was left behind. While this may have been true in previous centuries, usually today’s knowledge of anatomy and a good veterinarian make this a very questionable answer. Far more likely it is due either to poor ground manners and/or continued (and normal) testosterone production via the adrenal glands. Proper training and nutrition seem to be key in such instances.

### When to castrate

**AGE** - Generally speaking, we suggest gelding colts between the ages of 8 months and 2 years. Many colts are gelded younger, but we think they need to get past all weaning trauma and be well on their way to self-sufficiency and proper education before adding yet another trauma on top of everything else. Gelding prior to puberty, which generally occurs at around 18-24 months (but there are many exceptions to this!), allows the *epiphyseal plates* (where bone growth takes place), longer, slower maturation so geldings tend to grow a bit taller than stallions whose testosterone rush at puberty closes the plates. Over-

all, however, timing as to age usually depends on behavior and management issues including the ability to safely and securely keep young stallions upwind and double-fenced away from either mares (including their dams) or fillies.

**SEASON** - Because the natural exudate from the incision draws flies, early Spring or late Fall tend to have the fewest flies and the briskness of temperature to allow good exercising following surgery. However, local variations such as rain or frost which can make footing treacherous also need to be taken into consideration. A good natural fly-spray like **DYNAMITE DynaShield**, especially when diluted with a 4:1 vinegar (**Super ACV**) mixture rather than plain water, can be sprayed directly on the surgical site for fly control.

**LUNAR PHASE** - Rather than being a laughable superstition, the phases of the moon can most definitely have a bearing on appropriate timing for all elective surgery including castration. Our bodies, which are 98% water, feel lunar gravitational pulls similar to the tides in the ocean. Therefore, more bleeding can take place during a full moon (although a great time to perform all deworming) and even during a waxing, or growing-towards-full, moon. Check your OLD FARMER’S ALMANAC or [WWW.ALMANAC.COM](http://WWW.ALMANAC.COM) for good castration dates. Generally speaking, the late waning of the moon just before the new one is the most appropriate time for this and for all “endings” such as weaning.

### Preparation for castration

**MANAGEMENT** - At whatever age you choose to geld your colt, he should certainly be old enough and handled enough, including the scrotal area, to have excellent ground manners and to be able to tolerate the necessary exercise following the surgery. Trying to introduce a nervous youngster to halter, lead rope and handling while the vet is standing there is simply an invitation to a bad wreck. Additionally, human force, bullying and aggressive behavior (including twitching), can make for long-term distrust from the colt’s point of view and perhaps even leading to long-term behavioral problems.

We have found that giving **DYNAMITE Relax** 2-3 times per day for 3 days prior to, and on the day of, the surgery, can aid handling on the big day when the colt can pick up some of your own nervousness. Many distributors also give themselves sprays at such times, ourselves included! About a half hour before the vet is expected, we also give a dose of **Tranquil** every 15 minutes until the vet is ready. In our experience, this lessens the amount of sedative/anesthesia necessary which means faster recovery/detox time.

The colt should also have been conditioned and educated into whatever exercise mode you choose to activate following the procedure. Starting any of these activities with a stiff, hurting, inexperienced colt is again guar-

anteed to bring behavioral problems later as they will be associated with discomfort.

**NUTRITION** - Assuming that your colt is on the full *DYNAMITE* program of free choice grass hay, all the **Free Choicers** (**NTM Salt, 1:1, 2:1, and Izmine**) plus the concentrate of your choice (**PGR, TNT, Dynamite Regular or Plus**), we suggest stimulating the immune system by starting a round of **SOD** (according to label directions) a few days before and up to a week or so afterward; especially important for dark horses whose copper requirements are often higher anyway. We also like to add 10-20 (depending on size of colt) drops of **Trace Minerals Concentrate** to the feed starting about 3 days before and keeping it up for about 10 days afterward; we have found this to almost entirely eliminate excessive bleeding and seems to further stimulate the immune system to avoid infection. Also, a little extra **HES** at this time (1/4-2 cups/daily) seems to give the added protein/energy necessary for fast and complete recovery. And of course daily **DynaPro**, which youngsters under 2 should be receiving anyway to keep the intestine healthy and happy especially during a relatively stressful time.

**OTHER** - Most vets like to give all vaccines and even worming medication during the castration timing to save a farm call. However, we strongly disagree. Read our **BASIC:PARASITES** and **FAQ:VACCINES** for full information, but essentially, we believe that doing everything at once is far too traumatic for a living body. Rather, take care of any deworming needs (preferably herbal cleansing such as with **Herbal Tonic**) during the previous full moon and allow only a *tetanus antitoxin* at the time of castration.

### The surgery itself

Routine gelding of a horse that has two descended testicles is generally a simple on-the-farm procedure. We always have a clean, level, grassy area available which includes enough shade to keep out potentially strong sun. Vets usually sedate first and then anesthetize. Some vets prefer to keep the horse standing for the operation using a local anesthetic. Our experience has always been with general anesthesia and the horse being carefully laid down on his side usually with some gentle guide ropes. We always provide a padding for under the head to avoid possible temporary paralysis due to the weight of the head pressing the halter into a sensitive spot. Throwing a corner of this padding over his eyes and face is also a good idea. Restraints are usually added as a safeguard since all horses react differently to anesthesia and some can become agitated while coming out of it.

The scrotal area is generally washed first with an antiseptic solution. Then usually two incisions are made in the scrotum and the testicles are pulled out so that about two inches of the spermatic cord can be removed with the testicles. This cord is crushed with an *emasculator* for about sixty seconds to sever it. The veterinarian enlarges the scrotal incisions and trims any excess scrotal tissues that would interfere with proper drainage and flushes it thoroughly with an antiseptic solution. If your vet is will-

ing, this last flush can consist of **Trace Mineral Concentrate** in sterile water which really seems to control bleeding and possible infection incredibly well. If there is major bleeding present, the **TMC** can be dropped full-strength directly onto the bleeder for almost instant positive results.

The new gelding will get up on his own shortly after he comes out of anesthesia but it takes 20-40 minutes for him to fully recover from the drugs.

### Post-surgical care and exercise

Before turning him out into a safe, private place such as a round pen, arena or his own grassy paddock, many individuals find it helpful to apply some **DYNAMITE Wound Balm** to the insides of his hind legs where exudate will later drip. While we have not found it necessary, it can forestall future scalding, sloughed hair and chafed skin plus making cleaning easy: just a gentle once-a-day hosing, **not** on the incision site, patting dry and renewing the **Balm** where necessary.

Because of surgical trauma alone, your colt's sheath will swell to some degree. Accumulation of fluids in the area is normal for 4-5 days and initial copious drainage from the surgical site is both normal and desirable; it will gradually decrease over 2-3 weeks. We have found that liberal and frequent spraying of the entire surgical site with **DYNAMITE Release** can greatly ease most swelling discomfort and encourage increased circulation of both blood and lymph and thus speeding healing. We usually recommend **DYNAMITE MSM** for swelling but in the case of castration it is *contraindicated* in large doses as the blood thinning effects can actually cause excessive bleeding (as can over-enthusiastic use of Vit E). However, after about 3-5 days, if alarming swelling persists, smaller doses of **MSM** may be used if monitored very closely. Also helpful, if necessary, is a warm, moist compress (we like **NTM Salt** in warm water) placed over the incision site. By softening existing encrustations in this way, and following this immediately with appropriate exercise, the incision will usually open allowing the accumulated pus to drain.

Notify your vet immediately if draining suddenly stops before 2 weeks; if an offensive odor becomes apparent; if swelling becomes extreme even to going down the hind legs; if swelling is accompanied by heat; or if you are concerned in any way about the progression of healing. Also, if premature closure is persistent, your vet may need to enlarge the incisions.

Exercise is vital in helping to keep the swelling under control by activating all circulatory systems. Because your new gelding will be understandably stiff and sore, do not expect him to exercise adequately on his own; it is necessary to implement a formal program. Depending on colt's age and experience, and your own timing, 2-3 15 minute sessions each day for 2 weeks is generally all that is required; older horses can be exercised a bit more vigorously and longer if desired. We suggest hand-walking the first day following the surgery and simple free-lunging at a long trot in a round ring (we prefer about a 65' diameter one) or arena thereafter. Make sure the colt does not fran-

tically run about or he could seriously injure himself. After even just five minutes of carefully forced exercise, the incisions will usually reopen and drain, relieving the pressure which caused the stiffness in the first place. The horse then will appear more comfortable, striding out more freely. Free exercising is generally suggested only in between formal sessions although we had one colt who exercised himself beautifully enough in the arena that we never did have to formally exercise him. Again, observation and common sense must prevail.

After most healing has taken place, and when extra nutritional supplements (aside from hay, grain and the free choice minerals) can be safely suspended for a time, many **DYNAMITE** distributors choose to detoxify the colt from all the necessary drug use by putting him through a cleansing round of **Excel**. However, if this does not work for you, just the clays and regular products alone can generally detox a healthy animal quite adequately.

### Possible complications

Horror stories abound, but in actuality complications of routine castration of descended testicles tend to be rare in the overall picture as long as a well-practiced and competent vet is performing the procedure on a healthy horse. Two examples of improper vet techniques concern the spermatic cord: if not emasculated thoroughly, excess bleeding may result and the cord may need to be clamped or, if too much cord was pulled out of the abdominal cavity during the surgery after emasculation, the stump may retract into the abdomen with the resultant bleeding/infection perhaps requiring major abdominal surgery. As you can see, vet competency is of paramount importance.

Of course, if your colt is dealing with one or two undescended testicles, a *unilateral* or *bilateral cryptorchid*, that takes the procedure out of the realm of routine and into the vet clinic. Normally both testicles are within the scrotal sac at birth. With cryptorchids, however, the retained testicle/s can be located high in the abdominal cavity or in the *inguinal* canal between the abdomen and scrotum and require surgical removal via the *inguinal* canal, the abdominal wall, or the flank by a vet well versed in such a procedure.

### Long-term gelding care

About two weeks after your colt's surgery, outward appearances indicate that he is a gelding. However, the *ampulla*, a sperm reservoir which can keep sperm viable for up to one month after castration, was not removed. Depending on the age of the colt, an unplanned breeding could occur. Also, past behavior patterns and a low level of *androgens* can continue stallion behaviors. Because of these considerations, use caution in turning the new gelding out with a group of mares who, unless the colt grew up in a mixed herd situation, could teach a fatal lesson. Depending at what age he was gelded, he may need as long as 4-6 months to mentally and physically forget he was a stallion. During this time, it is best to continue to keep him upwind of all mares and fillies and separated, like a stallion,

by a safe, secure double-fence. Usually yearlings and under are fine after only a few weeks, but it did take the full 6 months for our two 4 year old stallions to finally come into their complete new gelding status.

After castration, the gelding's metabolism may slow down some. To maintain optimum condition, a gelding can require less feed (calories, *not* nutrition!) and more exercise than as a stallion. The slower metabolism can also result in a thin layer of fat over his formerly chiseled muscle definition; this is normal and not a cause for starving the horse down or over-working it.

Because geldings will drop their penises (a self-cleaning action) less frequently than stallions, their sheaths can accumulate *smegma*. Such clumps are called "beans" and, if left alone, can grow large enough to become quite painful and even block urination. Some owners will clean their gelding's sheaths overmuch and thus interfere with the natural pH balance of the delicate tissue. However, an annual examination and cleaning may be advisable. Many **DYNAMITE** distributors have found that **Wound Salve**, with no water necessary, works as an excellent lubricant and cleanser that maintains the correct pH balance while healing any areas of existing irritation. Most distributors, however, discover that the longer their horse is on the total **DYNAMITE** program, thus becoming more fully nutritionally balanced, the less they have to be concerned about *smegma* accumulations. In fact, some report never having to clean geldings' sheaths at all.

Some geldings, despite perfect technical operations and perfect education and training for manners, still seemed "studly" or hyped. For these individuals nutritional support beyond the basics may be required. Frequently, the addition of some **DYNAMITE Easy Boy** with its high magnesium content is enough to do the trick (**TNT** contains **Easy Boy**) while other geldings require the addition of **Breeder Pac**. If you think about it, gelding is really quite an assault on the hormone balance of these horses so that actually makes perfect sense. Begin with one ounce/daily and increase to 2 ounces if necessary.

AS WITH MOST ENDEAVORS, proper preparation and management are key to having the best possible outcome. Most individuals will find they have a **DYNAMITE** gelding by taking these suggestions to heart. ■