



Let the Training Begin

More goes into training a young Thoroughbred racehorse than a prescribed course of diet and exercise for building a strong body. Along with physical conditioning that develops speed, strength, and stamina, another component must be built into the young competitor—confidence.

It is taken for granted that a horse will appear in the saddling paddock before a

Racehorses must be taught the ABCs before they can make it to the racetrack

race ready for tack to be put on and a jockey to be tossed aboard, and then stroll calmly into the starting gate. While it is true Thoroughbreds have a halter put on them at a couple of days of age, are halter broken to lead by a couple of months of age, and are handled daily by professional caretakers throughout the first year of their lives, it remains that the racehorse must be patiently taught the ABCs.



Thoroughbreds must be taught directional cues; this is typically done at a farm that specializes in breaking and training

BARBARA D. LIVINGSTON

Yearlings should be taught basic riding commands and what it is like to jog in company

CLASS IS NOW IN SESSION

From about mid-September through early November, Thoroughbreds are introduced to a rider and taught to obey basic directional cues. This typically is done at a farm that specializes in breaking and training.

The range of months when the first lessons begin is due to factors such as the actual birth month of the individual, its physical maturity, and—in the case of commercial sale yearlings—the month a horse is to be sold at auction and shipped from the sale to the training farm. Whether the current owner plans to race the horse or sell it in a 2-year-olds in training sale also can influence when training begins. The juvenile sale season begins in early February and runs through the end of June. Finally, many farms that provide breaking and training services handle upward of 100 head of yearlings in a single season. To keep class size manageable for the riders and farm staff, farms will divide large classes into smaller groups of yearlings and stagger the classes from September to November.

For about six weeks, yearlings are taught basic riding commands and what it is like to jog in company. Those lessons are usually followed by a few weeks or couple of months of turn-out and break time. Upon return to the training barn in January, the newly turned 2-year-olds begin a program of physical conditioning that will proceed to speed drills.

Tommy Town Thoroughbreds, nestled on 275 lush green acres in Santa Barbara County's Santa Ynez Valley in California, is a full service operation that counts breaking and training among its services.

"We'll break about 100 yearlings each fall," said Tommy Town Thoroughbreds farm manager Mike Allen, who oversees the training with help from assistant trainer Ishmael Cisneros. About 70% are owned by Tommy Town Thoroughbreds; the rest are client owned. Tommy Town Thoroughbreds usually takes about 20 of their own horses to the Barretts May 2-year-olds in training sale, held each year dur-

ing the first week in May. Most of the others go directly to the track. Some are sold privately.

The farm usually assigns a groom to five horses, and employs four or five exercise riders that will get on anywhere from 10 to 12 horses per day. The training barn has 70 stalls measuring 16-by-16 feet each. In addition to two covered round pens, a free-range exercise machine, and an arena, the farm has a seven-eighths of a mile training track, which has a sandy loam surface. Each day water trucks dispense three truckloads of water; then the track is harrowed. Santa Anita Park track superintendent Steve Wood serves as a consultant and visits several times each year to inspect and grade the track.

Young horses at Tommy Town Thoroughbreds receive regular handling beginning when they are foals. Some horses accept having a bridle put on and a bit in their mouth in one day, Allen noted.

"We start off ground driving in the round pen for as long as that takes until we feel they're going pretty good," Allen said. "We pony the horses quite a bit. We pony them before we ever get on them. We pony them in the round pen, then to the arena and we figure-eight them, and after two to three weeks, we're on the racetrack with them."

In the first 45 days, "They're just learning to switch leads and go around the track, and go in company," Allen said.

After 45 days, "If we feel we got a good handle on them, we turn them back out. We'll start the older, more mature ones back the first part of the year," Allen said. "We start them jogging back on the track around the fifteenth of January."

HAVE A GATE DAY

Starting gate proficiency is taught next. Tommy Town Thoroughbreds has a schooling gate, a must-have piece of equipment for a professional breaking and training facility. A schooling gate is a smaller, slightly roomier version of a racetrack starting gate. It typically has only four stalls. The first few sessions in the gate, horses are walked straight through it.

"When horses come back into training, we start by walking them through those gates, and eventually we would close the back gate, back them up to it, let them feel that the gate is shut behind them, and then walk them out," Allen said. "When we get up to it, we'll close the front gate, then open it by hand and let them walk out. It's a long process. It's little steps at a time, till we get up to where the horse is breezing, and we'll jump them out of the



gate a couple of times. We always try to do that before we send them to the racetrack. If we have horses that need more time, we'll take them in the afternoon and school them in the gate."

Galloping horses in company at an early age gets them accustomed to the kind of situations they will later face in a race.

"Because we have a bigger track and four or five riders, we're able to have bigger sets of horses," Allen said. "It's important for horses to be close to other horses as they're galloping and switch positions and be behind other horses, and have a little dirt on them, and move up to the front. Obviously, when we're first breaking them, everything is going at a slower speed. It's good that they learn that they can be close to other horses, and it's safe to be out there with other horses."

"Most of what we're doing on those young horses is to help them mentally," Allen said. "I think it does give them some confidence, and get them used to being on the track and seeing new things."

PRE-SCHOOL

A yearling will benefit from early conditioning before it starts school under a rider. This can entail anything from being handwalked by a groom, ponied alongside a horse and rider in a large enclosure, being worked in a round pen, or being worked in a free-range exercise machine.

Early conditioning can include adding supplemental weight onto the horse's back. This was discussed in the July 16 issue of *The Blood-Horse* (page 4020). The product featured in that article was the "Astride," a training tool made by Eponaire Equine Products.

A second benefit of the Astride is that it lends itself easily to ground driving with a bit in the horse's mouth. Large D rings are positioned on the Astride to allow the trainer to use side reins which attach to the bit, or to long line a young horse. Attaching long lines to the bit through the rings and working the horse from the ground "is a classical way to start young horses," explained Krista Towns, a horsewoman who developed the product.

"There is also the double lunging technique which uses two lines instead of one; the horse is worked on a large circle, the inside line goes to the trainer, and the outside line loops around the horse's hind end and is also held by the trainer. This helps keep the hindquarters engaged," Towns said.

"I do think the average smaller trainer

would benefit from learning how to lunge and long line, but it is pretty well-known that good ground work is as difficult as ridden work. There are good ways and detrimental ways to use this form of training," Towns said. "It's like its own science. You can see and develop so much from the ground."

For preparing horses to understand basic directional cues from a rider, a snaffle bit is used in ground driving. At all ages, but especially when a horse is first experiencing tack, bit size and proper cheek strap fit of the bridle, so that the bit rests comfortably in the horse's mouth, are of great importance. Discomfort from poorly fitting equipment creates a negative association for the young horse. "You could write a lot about proper bit fit, selection, and adjustment," Towns observed.

If you are considering installing a round pen or free-range exercise machine on your farm, be sure you have adequate space to build one that will be large enough. Small circles can be bad for joints. Figure on having the horse work on approximately a 60-foot circle.

ADAPTATION TO EXERCISE

Dr. Hilary M. Clayton is the Mary Anne McPhail Chair for Equine Sports Medicine. She is also a veterinarian, a professor at the College of Equine Medicine at Michigan State University, and a rider and trainer of sport horses. Over the past 20 years, she has become a leading researcher in the areas of equine locomotion and gait analysis, conditioning sport horses, and lameness mechanics. (Note: An article on some of Clayton's research is featured in the September 2005 issue of *The Horse*.)

Clayton was one of the researchers involved in a pair of studies done at Michigan State University in 2001, which concluded that adding supplemental weight during exercise is one way to stimulate



bone and muscle growth in horses ranging in age from 18-30 months. The study at MSU used a "weighted vest that's like a saddle pad with pockets for weight," Clayton said.

Conditioning with weight before riding the horse would benefit the back, too. The goal is to "gradually increase what the horse carries, rather than going from nothing to a rider. It would allow them to build up their back muscles a little bit more gradually," Clayton said. "Horses are not born with 100 pounds on the middle of their back. They need to strengthen their back muscles, and probably their abdominal or lumbar muscles as well, so that they can carry that extra weight easily."

In addition to her research, Clayton is the author of *Conditioning Sport Horses*, a textbook divided into three parts: exercise physiology, practical aspects of conditioning, and conditioning for specific sports.

From the book, we learn that the cardiovascular system and the muscular system respond and adapt quite rapidly to a conditioning program that includes daily exercise with progressive loading and volume of exercise.

In the respiratory system, the muscles that hold the upper airways open can improve as a result of exercise, but conditioning has very little effect on the lower respiratory tract. The supporting structures—hoof, bone, joint cartilage, tendon, and ligament—can become strained or otherwise injured if given too much work before they are ready. These structures adapt at a much slower rate than the cardiovascular and muscular systems.

Published in 1991, the book is still full of valid information about the interplay between complex physiological processes that occur when the equine athlete becomes physically fit. But equine research in the intervening decade and a half has

generated more information and Clayton has considered writing a revised edition. She cited research on thermoregulation and on the muscle disease known as tying-up as the kind of new information she would include, and also, new information on tendons and ligaments.

"That's one thing that there's been a lot of research on—adaptation or non-adaptation of tendons and ligaments," Clayton said. "The more research that's coming in, the more it looks like some of those musculoskeletal structures are refractory to training. In fact, especially with tendons, what you might be doing is not stimulating them to adapt, but just wearing them out, frankly, over time.

"Any adaptation that happens in those structures seems to be very early in life, the very first few months of life," Clayton continued. "Foals that get out and run and play in their early weeks and months of life are better off later on because they'll develop stronger structures. But after some time, the door kind of closes on being able to make the ligaments and tendons stronger with more exercise, and over time, you get sort of a cumulative damage effect."

Bone adapts slowly, but appears to have a longer window for adapting than tendon and ligament. "Bone can adapt for a longer period, and even in adult horses I think you will get some adaptation in bone," Clayton said. But, she added, "Bone can adapt both in a beneficial way and in a bad way." Complete stall rest is bad for horses, one reason being that bones weaken when not sufficiently challenged. "It's about the equivalent to bed rest in people," Clayton said.

A HEARTBEAT AWAY

Once serious physical conditioning begins, the equine cardiovascular system lends itself nicely to heart rate monitoring technology, and the principle of training on a percentage of maximum heart rate. Heart rate monitoring systems designed for horses are available from companies such as Polar Horse Heart Monitor and Equine Performance Technology. Some systems feature wireless technology which allows riders to wear a wristwatch-like display screen to monitor their mount's heart rate. In addition, Polar has a separate radio transmitter device that can send signals to a trainer up to a half-mile away. The systems allow information from a workout session to be downloaded to a computer file, so that a history can be kept of the horse's progress. Information can then be e-mailed to training consultants or owners anywhere.

A spokesperson for Polar reported that



The initial schooling of horses often starts in a round pen

in the past year, sales to Thoroughbred trainers in the U.S. have about doubled as heart rate monitoring becomes more of an accepted training technology.

Clayton is a proponent of heart rate monitoring as a part of the conditioning program, but she emphasizes that this is just a tool for trainers to use in a total fitness picture.

"A whole lot of things come into it, and I don't think a trainer should ever rely exclusively on one piece of technology. When you're working with a living animal, you have to have a feel for it. You have to know

your individual horses. You can't, for instance, expect the same heart rate for a lot of different horses, and you shouldn't make comparisons between different horses just based on their heart rate," Clayton said.

Heart rate monitoring is useful when measuring the fitness of an individual horse over a period of time. As in human aerobic conditioning, maximum heart rate is expressed as HRmax. Rather than train at HRmax, results are achieved while training on a percentage of the HRmax.


Heart rate monitoring is also useful to monitor the horse's return to a normal

heartbeat in the recovery period following exercise.

"One of the places where (measuring) heart rates are good is in assessing recovery," Clayton said. "You can get a real good feel for how quickly the horse is recovering by how its heart rate is coming along."

For the current crop of yearlings, the principles of training on a percentage of HRmax are months away. First, they must master their ABCs.

As with human adolescents, youthful and spirited Thoroughbreds can sometimes express themselves rebelliously. Correction is occasionally needed, but it must be properly applied. "There has to be a system of discipline," Clayton said. "You know what you expect and what you don't expect, and you draw a very definite line. What I try to do is allow the horses to retain some of their own personality, within the guidelines.

"The formative years are so important in the young horse's attitude to training and racing," she concluded. "You have to keep them happy in their mind in that early stage." 

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