

Presented by the Paint Barrel Racing Incentive Program

# Can Racing 2-Year-Olds Help Soundness?

By TRACY GANTZ



*Studies suggest racing 2-year-olds might lead to improved musculoskeletal health. As the young horse's bones remodel following exercise, they might also become stronger, which could lead to greater longevity on the track.*



## Studies indicate racing at age 2 might help racehorses' bones remodel and become stronger, though care should be taken to address customized needs.

**B**arney Ofield is the kind of racehorse anyone would love to own. A multiple APHA racing champion, he has earned \$166,223 while starting 35 times over five seasons. His nine wins—five of them stakes victories—included two Grade 1s in 2012, and he ranks eighth on the list of all-time leading Paint earners.

“It seems like the more mature he gets, the better he gets,” said Justin Haywood, whose wife, Julie, owns the gelding with Joni Willis, wife of trainer Eddie Lee Willis. “He’s turned out right now, resting up to get ready for Remington.”

Now 7 years old, Barney Ofield began his career at age 2, when he started 10 times. Racing at such a young age did not adversely affect him. In 2011 and 2012, he was named the Champion Running Solid Paint-Bred Aged Gelding and Aged Horse.

While every horse is an individual and needs to have training tailored to his physical capabilities, studies are showing that training and racing horses at 2 allows their bones to remodel in response to that work and can perhaps even help them stay sound.

Because rich futurities offer far more money than racehorses can win at age 3 and beyond, the incentive is to run horses at 2, before they are fully mature. For example, the 2012 Speedhorse Graham Paint & Appaloosa Futurity sported the largest total purse—\$240,760—of any Paint race, regardless of age.

Ubuyillfly won last year’s Speedhorse Graham, and his 2-year-old earnings of \$124,368 were higher than that of any other Paint in 2012. On the list of leading Paint racehorse earners last year, 2-year-olds held the first four spots and six of the top 10. Three of the other four spots went to

3-year-olds, with Barney Ofield, at age 6, ranking ninth.

### Legitimate Longevity

Racehorses of the major racing breeds—Paints, Quarter Horses and Thoroughbreds—don’t regularly follow Barney Ofield’s pattern of racing at age 6 and beyond. Though injuries play a role, horses are retired for many reasons.

Good colts and fillies can make their owners more money as breeding animals. Particularly with Paints and Quarter Horses, second careers beckon. For example, many Paint racehorses have gone on to win money as barrel racers.

Lower purse structures for older horses can also lead to retirement, though racing associations are working to change that. As more opportunities

for older horses are created, horses are remaining in training longer. At age 7 in 2012, Rylees Boy (QH) became the oldest horse to win the Champion of Champions, Quarter Horse racing’s richest race for older horses. Among Thoroughbreds, Monterosso won the richest race of 2012, the Dubai World Cup, at age 5.

The great Got Country Grip, the all-time leading Paint earner, raced through age 7. He began his career at 2, starting—and winning—seven times. At 2, Got Country Grip captured the Graham Paint Futurity, Speedhorse Sprint Futurity and PSBA American Paint Classic Futurity.

It sounds counter-intuitive to think that a racehorse can last longer and stay sounder if he races at 2. After all, pounding on bones and tendons can’t be good for a still-growing horse, can it? Yet, in 2012, 11 Paint racehorses age 3 or older won stakes, and only one of those did not race at 2.

The January 2013 issue of the *Equine Veterinary Journal* reported on a study conducted in New Zealand at the Institute of Veterinary, Animal and Biomedical Sciences at Massey University. The researchers examined

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*In his 2-year-old season, Ubuyillfly earned \$124,368—more earnings than any other Paint Horse in 2012.*



JESSICA HEIN





*Born in January 2006, Barney Ofield had the advantage of being a more physically mature horse when he started racing at age 2. With careful attention paid to the horse's individual needs and genetics for longevity, the result has been a long-lived career on the track—the gelding has earnings of more than \$166,000 in 35 starts over five years, and a pair of 2011 and 2012 APHA Champion Aged Solid Paint-Bred Horse titles.*

the careers of 4,683 Thoroughbreds and what type of training and racing, if any, they had as 2-year-olds.

The results demonstrated that horses raced as 2-year-olds started more often in subsequent years than those that began racing at age 3 or older, and they competed for more racing seasons.

“Horses in training or racing as 2-year-olds may have better musculoskeletal health throughout life than horses that are first in training or racing at a later age,” the study noted.

This mirrors previous studies and echoes a theory dating back to the 19<sup>th</sup> century. German anatomist and surgeon Julius Wolff developed what became known as Wolff’s law, postulating that human or animal bone adapts to the loads under which it is placed.

Larry Bramlage, D.V.M., a partner in the Rood and Riddle Equine Hospital in Lexington, Kentucky, noted in a report to the 2012 Welfare and Safety

of the Racehorse Summit, that “horses carry this to the extreme” with regards to Wolff’s law.

“The skeleton has to be literally molded into a performance skeleton,” his report stated.

Rick Arthur, D.V.M., the equine medical director for the California Horse Racing Board and a former president of the American Association of Equine Practitioners, explained how young bone responds and remodels.

“Bone is an organ that responds to stress and exercise,” he said. “It needs to adapt to what sort of stresses are going to be put on the bone when the horse is racing.”

Arthur described a cross-section of an unbroken yearling’s cannon bone as spherical. After training and by the time the horse begins racing, the cannon bone becomes egg-shaped, with the thicker part toward the front and inside, Arthur says. This occurs because the bone has remodeled in reaction to the training and

conditioning, becoming stronger in that direction.

As this process occurs, some bone can first become de-mineralized—actually weaker—before it re-mineralizes to become thicker and stronger.

“That provides a weak period where the bone is prone to overuse,” Arthur said. He added that good trainers know when to back off on a horse in these situations.

That is where individualized training becomes so important, especially with young, growing horses.

### **A Leading Example**

Bill Hoskin bred, owned and trained Barney Ofield early in his career.

“I never did overrun him,” Hoskin said. “I took care of him. And conformation-wise, he was kind of thick-boned. He just took to racing like a duck takes to water.”

Barney Ofield began racing at 2 in March at Remington Park. He started twice a month in March, April and



May, made only two starts during the summer and finished up with a couple of races at Blue Ribbon Downs in October.

Just as a halter horse born early in the year can have a maturity advantage over those born later, racehorses can benefit from an early foaling date. Barney Ofield, for example, was a late January foal.

Tom Hutchins, D.V.M., is an associate veterinarian with the racetrack division of Equine Sports Medicine and Surgery in Weatherford, Texas, currently based at Turf Paradise in Phoenix. In his practice, he sees Paint, Quarter Horse and Thoroughbred racehorses.

“I believe that the 2-year-olds that were early foals do respond well due to bone development and response to stress,” Hutchins said.

Foals born later in the season don't have as much time to develop before racing, Hutchins points out, and their bone is usually correspondingly less mature.

“These later foals seem to respond better if they are given a bit more time before intense training begins,” Hutchins said.

Hutchins and many other veterinarians recommend radiographs to determine bone maturity. One indicator can be the amount of closure there is in a horse's knee—how much of the immature cartilage has matured into bone.

Ask a young horse for more than he is capable of too early and he could develop epiphysitis, or inflammation of the growth plates. Hutchins says epiphysitis can be common in 2-year-olds that are “being pushed too hard too soon.”

Two-year-olds in race training are also prone to shin soreness, often called bucked shins.

“A bucked shin is an overabundant response to stress,” Arthur said. “The shin was overstressed too early, which caused a pathological problem.”

Good trainers know to watch for these problems. They constantly check a horse's legs for heat, which could indicate inflammation. The Thoroughbred I'll Have Another raced only three times as a 2-year-old in 2011 because he developed sore shins following that third race, which was run over a wet, sealed racetrack. Rested and unraced for five months, I'll Have Another returned as a 3-year-old to win all four of his races, including the Kentucky Derby and Preakness Stakes.

## Comparison Between Breeds

Racing at 2 has become a crucial factor in the Kentucky Derby. That classic race has been run 138 times since 1875, and only once has a horse won who did not race at 2—Apollo in 1882.

Thoroughbred racehorses typically receive longer gallop training than do Paints and Quarter Horses because they race longer distances. But even Thoroughbreds usually compete over shorter distances at 2 than at age 3 or older. Paints and Quarter Horses might start out at 350 yards or even shorter at 2, only lengthening to 400 yards and beyond later in their 2-year-old season or thereafter.

Training and racing at shorter distances could help with shin soreness.

“These can be reduced in severity or avoided if the horses are sprinted for short distances, approximately 200–300 yards, then pulled up,” Hutchins said. “This stimulates remodeling without enough fatigue to induce dorsal cortical stress fractures.”

Hutchins also points out that shin soreness can be due to other factors, such as how the foal was raised.

“If horses have limited room to exercise and ‘be a horse,’ so to speak, they do not experience normal stress remodeling that occurs as one would experience in a large turnout/pasture environment,” Hutchins said.

Horses given that ideal pasture environment can then receive their initial breaking and training late in their yearling season prior to being started in race training at age 2. Knowing when to give a young horse a rest period can be crucial to their success at 2 and beyond.

“I try to encourage a brief period of time off after breaking, but not so long as to feel like you've lost what you were teaching,” Hutchins said. “I try to have people wait as long as possible into the yearling year to break them and then give a break. Then you can return the horse to training early in the 2-year-old year and continue with an increasingly progressive regimen.”

These are still very young horses, however, and if they don't receive enough time off or are started too

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*A horse's individual needs should be taken into consideration. Failure to do so could lead to the development of epiphysitis or bucked shins, for instance.*





JESSICA HEIN



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*Above: Racehorses of all ages should be continuously monitored, allowing handlers to intercept and remedy potential problems at earlier stages.*

*Left: Veterinarian Tom Hutchins recommends waiting as long as possible to break coming 2-year-old racehorses and then giving them a break before futurity trials commence in the spring.*

soon, injuries can end their racing career before it ever gets a chance to start.

“I have had the experience of people prepping 2-year-old Quarter Horses for futurity trials in early March,” Hutchins said. “That winter break might not be long enough. Some of those horses don’t make it past the first set of trials due to early chips and sore shins. They need more time to train appropriately to handle the stresses.”

Treating horses as individuals probably contributes substantially to their ability to perform over several years. Some horses fare better if they begin later in the 2-year-old season or even the following year.

Paul Jones, a 10-time Quarter Horse national champion race trainer and three-time winner of the All-American Futurity, is also the all-time leading Quarter Horse trainer by earnings. Much of Jones’ success comes from knowing what each individual needs. He says a horse that comes in as a 3-year-old might develop the same shin soreness that he would have at 2. That bone still has to remodel in response to training.

“We give horses a good bottom of conditioning before they’re worked (at speed),” Jones said. “We try to

monitor them closely, checking their legs often. If we see a horse with a problem, we can act accordingly.”

### Breeding for Development

Another reason that horses might do better long term having raced at 2 is breeding selection. Because purses are so heavily weighted in favor of 2-year-old futurities, breeders have chosen stallions and mares that can produce horses that develop early and can run well as young horses.

For example, Barney Ofield is by Judys Lineage, the all-time leading sire of Paint racehorses by earnings. Judys Lineage started seven times at 2, winning two stakes and placing in two others. He became a champion at age 3, and he has since produced many other champions.

Barney Ofield’s dam, Shero, also produces good foals. Hoskin says

every foal out of Shero has had the same strong bone as Barney Ofield. A daughter of Texas Hero, another leading Paint sire, Shero started three times at 2. Her other foals include Spotless Redneck, stakes-placed at 2 and 3 in 2011 and 2012; and Laus Deo, who won the Oklahoma Paint Futurity at 2 in 2012.

So many things go into a racehorse’s success that no one factor will determine how long a racehorse can compete. While the research may indicate that racing or at least training at 2 might help a young horse develop strong bones, ultimately it will be how well he is managed and his innate ability that will lead to many return visits to the winner’s circle. **PHR**

*Tracy Gantz is a special contributor for Paint Horse Racing. To comment on this article, email [feedback@apha.com](mailto:feedback@apha.com).*

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Announcing the

# Paint Barrel Racing Incentive Program

PBRIP is proud to announce the formation of a new incentive program that will promote APHA horses in barrel racing for stallion owners, breeders and competitors.

The first step for this exciting new program is a **stallion service auction** that will run on <http://www.stallionauctions.com/> from March 1–31, 2013.

The proceeds will finance added sidepots for APHA horses at designated barrel races. All APHA and AQHA stallion owners are encouraged to participate by donating stallion services.

Breeders: don't miss your chance to bid on services from some of the top sires in AQHA and APHA racing and barrel racing, as well as some fantastic new stallions.

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Stallion service auction forms are available at [racing.apha.com/barrelracers](http://racing.apha.com/barrelracers). For more information on this program, please contact the Paint Barrel Racing Incentive Program at [PBRIP@ymail.com](mailto:PBRIP@ymail.com) or any of the following individuals:

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