## **The Safety Page**

"The safety of our athletes, both human and equine, is our number one priority at Del Mar. We make it our responsibility to establish the highest standards in the industry for the health and safety of our participants and are committed to allowing no less than the very best in this regard. We work closely with other tracks, veterinarians and industry leaders to ensure that we continuously improve conditions and uphold the integrity of the sport we love so much."

—Joe Harper, DMTC CEO, President, General Manager

# The things that Del Mar does to help ensure the safety of its horses and riders

A. For the start of its 2007 race meeting, Del Mar installed – at a cost of approximately \$9,000,000 — an engineered racing surface known by the brand name Polytrack to replace its dirt main track. The new racing surface, which consists primarily of sand, rubber and organic fibers held together by hot wax, presents a kinder, more consistent and safer racing ground that takes much of the pounding and "shock" out of horses going over it as part of their training and/or racing. The track was the first facility to introduce the synthetic surface for racing in its unique environment — next to an ocean amidst summer heat — and has gone



through a learning period for proper set-up and maintenance of the strip. Despite these adaptations, the new surface has done its primary job quite well, enabling the track to notably reduce catastrophic injuries to its horses (see following chart). With the additional maintenance knowledge gained in the seasons since its installation, Del Mar believes the Polytrack surface will only prove to be even safer for horse and rider in the future.

**B.** Del Mar has joined with most of the other racetracks in North America who have engineered racing surfaces to form a coalition that shares knowledge and information about their tracks. The group, which works under the belief that safety of horse and rider is the first order of business in running a racetrack, includes Arlington Park, Keeneland, Turfway Park and Woodbine. Their active website — engineeredracingsurfaces.com — contains a vast amount of technical information about the surfaces and is kept up to date with additional data and news stories as they appear. It is a source for information and education to racing fans, media and industry representatives. In North America, there are eight tracks that offer engineered surfaces. Throughout the world there are an additional 14 major racetracks that use one of the four main engineered surfaces (Polytrack, Tapeta Footings, Cushion Track, Pro-Ride), as well as many training centers that employ "synthetic," or "all weather," surfaces.

#### Main Track Racing Fatalities/1,000 Starts

(Completed Meets through 11-08-09

Deviced 11 16 00

California Tracks, present surface	Prior to Conversion to Synthetics From Jan 1, 2004		After Conversion to Synthetics	
	Dates	Fatalities Per 1,000 Starts	Dates	Fatalities Per 1,000 Starts
Hollywood Park - Cushion Track	Apr. 2004 – July 2006 (3 meets)	2.87	Nov. 2006 – July 2009 (6 meets)	1.57
		(36/12,435)		(24/15,275)
Del Mar – Polytrack	July 2004 – Sept. 2006 (3 meets)	2.47	July 2007 – Sept. 2009 (3 meet)	1.65
		(17/6,907)		(12/7,291)
Santa Anita (including Oak Tree) – Cushion/ProRide	Jan. 2004 – April 2007 (7 meets)	2.81	Sept. 2007 – Nov 2009 (5 meets)	1.64
		(59/20,972)		(22/13,413)
Golden Gate – Tapeta	Jan. 2004 – June 2007 (7 Meets)	3.90	Nov. 2007 – Oct 2009 (6 meets*)	1.84
		(72/18,445)		(30/16,287)
Bay Meadows	Jan 2004- May 2008 (9 Meets)	2.99	CLOSED	
		(65/21,723)		
Combined Total Experience to Date With Synthetics vs. Dirt	249/80,482 (29 Meets)	3.09	88/52,266 (20 Meets*)	1.68

Sudden Deaths, Racing Accidents & Starting Gate accidents not included

\* Includes CARF-I & CARF-II @ GGF 2009

Rick M. Arthur, DVM, Equine Medical Director

- C. In September 2009, Del Mar became a member of the National Thoroughbred Racing Association's Safety and Integrity Alliance. The Alliance's aim is to establish national uniform standards in the areas of safety and integrity. Its certification standards cover five broad areas: injury reporting and prevention; creating a safer racing environment; aftercare and transition of retired racehorses; uniform medication, testing and penalties, and safety research. In awarding it accreditation to Del Mar, NTRA officials noted that the track "exceeded prescribed benchmarks on many fronts with industry-wide best practices established in several areas."
- **D.** Del Mar keeps four ambulances three equine, one human on site and at the ready throughout its summer racing season. In the event of an injury or medical emergency, Del Mar stands ready to quickly respond to the circumstance virtually anywhere on its grounds. Besides its two in-house veterinarians who are on-call and on-duty throughout a racing day, there are at any one time as many as 20 private veterinarians on the grounds ready and able to assist a horse in distress. Additionally, the track has a doctor on duty each racing day as well as two fully trained EMTs ready to assist in any human medical emergencies. Further, a completely equipped fire station, with a standard compliment of equipment and personnel, sits on the fairgrounds that is home to the racetrack.
- E. On the day of a race, horses entered to run at Del Mar go through four separate veterinarian checks prior to being allowed to compete. All horses scheduled to run on that afternoon's card are extensively examined by one of the track's veterinarians on race morning at their barns. This exam is literally hands on and also allows the veterinarian to see the horse jogged both toward them and away. Horses are then given visual inspections upon arrival at the receiving barn prior to the race and when they enter the paddock. Finally, they are closely observed with riders up during warm-ups and at the starting gate prior to the race itself. Additionally, all horses are checked for injury or other problems following the running of each race and can be scheduled for a follow-up inspection if one of the track's veterinarians suspects problems of any kind.

- **F.** During its race meeting, Del Mar maintains and staffs a complete radiology and ultrasound facility on its backstretch for use on its horses. Horsemen who have concerns about their racing animals, especially in regard to possible leg or general body injuries, can address those issues directly on-site through the use of advanced radiology and ultrasound technology. Additionally, a state-of-the-art equine hospital facility exists less than seven mile and 10 minutes away from the racetrack at the Helen Woodward Animal Center, which is used by many of the veterinarians who practice at Del Mar.
- **G.** Del Mar was the first racetrack in America to install the state-of-the-art Fontana Safety Rail around the inside of its main track. The rail, made of aluminum, patented rubber and thermoplastic materials and featuring an offset construction and a slide/safety cover, was initially installed in 1981 and subsequently updated and reinstalled in 2000. Currently, more than three-quarters of the racetracks in North America feature the Fontana Safety Rail and it has been pointed to repeatedly for its role in avoiding or limiting horse and/or rider injury in the sport.
- **H. In 2010, Del Mar hired the man who many consider the foremost track maintenance expert in the west Richard Tedesco to take over maintenance of its racetrack.** Tedesco, who came on board with more than 46 years of track maintenance expertise under his belt, has worked on racing surfaces around the world, including dirt, turf and engineered strips. The California native has done extended tours of duty at the other two major Southern California racetracks (Santa Anita and Hollywood Park) and is considered by the state's horsemen and racing officials to be the best there is at the business of keeping a racetrack safe and viable for racing. With a year's worth of experience behind him at Del Mar, the veteran trackman expects even better things for the 2011 season.
- I. Del Mar's trackman, along with members of its upper management, make a point of daily contact throughout the racing season with the jockeys who make up the track's riding colony. The riders, naturally, are the ones who best know and feel the condition of the racing surface on a day-to-day basis. Many of those riders are veteran and astute horsemen who can offer insightful suggestions concerning the surface which can quickly be implemented. The feedback from the jockeys also has the positive affect of giving them the trust of a teamwork environment that encourages them to go about their business in a confident manner, which can be a key element in the safety process.
- **J.** Del Mar was one of America's leaders in encouraging and enabling its jockeys to switch to a kinder and safer racing whip. The track was one of the national leaders in bringing about a change in riding whips/crops used by its jockeys to guide and encourage their horses. In 2009, with the aid of the Jockeys Guild, Del Mar facilitated the change to a lighter, kinder whip/crop for its riders during its live meeting through education and the actual purchase (at approximately \$85 each) of several dozen of the whips for use by its riders during both a testing period, then a full-use conversion time. In circumstances where a rider indicated he/she could not afford to buy the new whips/crops, the track gave them to the riders. By the end of the summer, the conversion to the newer whips/crops was all but universal in Del Mar's jockey room.

## Additional Safety Items Shared Throughout the Racing Industry

The American Association of Equine Practitioners (AAEP), the organization that speaks for many of the veterinarians involved in the racing industry, is one of the prime forces for advancing safety issues throughout the industry. Below, in a question and answer format, are some of its statements and attitudes regarding horse safety: **How often do injuries occur?** 

The goal of everyone involved in horse racing is to prevent injuries to the athletes. As competitive equine athletes, Thoroughbreds occasionally suffer injuries. Fatal injuries are infrequent, however. When they do occur, many times they are largely unpreventable — the equivalent of an athlete landing awkwardly or taking a bad

step. Regardless of the cause, reducing injuries to our athletes is the number one priority for veterinarians and the industry.

A new equine injury database is now compiling injury data from most racetracks in the U.S. While it is too soon to draw conclusions, the database will help the industry accurately identify the frequency of injuries, markers for horses that may be at increased risk for sustaining an injury, as well as research priorities for the prevention of injury.

#### Is it safe to train and race two-year-old horses?

Several research studies in the last decade have indicated that exercising and even competing racehorses at the age of two is better for the long-term soundness of the horse. Researchers have also found that horses that began racing at age four were twice as likely to die of catastrophic injury as horses that began racing at age two. However, certain two-year-old horses are not able to withstand the rigors of racing and training, so there is a need for additional investigation of conditioning and racing regimens for this group of horses. Each horse is unique and should be treated as such.

Regarding the number of times two-year-old racehorses compete each year, statistics from The Jockey Club show that modern two-year-olds run less frequently than ever before, with the average number of starts being 3.2.

**Note:** For detailed research information, visit the Grayson-Jockey Club Foundation web site: <a href="http://www.grayson-jockeyclub.org/resources/dec-03.pdf">http://www.grayson-jockeyclub.org/resources/dec-03.pdf</a>

#### What is the role of medication?

Just like in human medicine, therapeutic medications given to racehorses are used to heal or cure medical conditions. The use of therapeutic medication in racehorses is a complex issue. Oftentimes, there is more than one way to address an illness or injury, and veterinarians follow a set of practices and policies that correspond to the individual health needs of the horse. Best practices within veterinary medicine demonstrate that therapeutic medications play a vital role in ensuring the health of all horses when a medical condition is present. Therapeutic medications are closely regulated in horse racing, and veterinarians must follow the rules in the jurisdictions where they practice.

#### Are racehorses tested for drugs? What types of medications are allowed on race day?

In many respects, drug testing in horse racing is superior to that in human athletics. Generally, a wider variety of drugs are tested for and many more samples are tested than in human athletics. Medication(s) used to control exercise-induced pulmonary hemorrhage (EIPH) are allowed in all states on the day the horse is racing. Non-steroidal anti-inflammatory medications are permitted 24 hours prior to a race. Most states (including California) have banned anabolic steroids for horses that are in training. Other therapeutic medications are allowed but not on the day of the race.

#### What recently has been done in the Thoroughbred racing industry to ensure the safety of its athletes?

All of us involved in the sport care about the safety and well-being of the horse. As veterinarians, we continue to pursue advances in veterinary medicine that make it easier to stabilize, diagnose and treat injured horses. Advances in diagnostic tools, such as nuclear scintigraphy, help us spot potential injuries before they happen. Many equine medical research foundations are devoting significant resources to discovering other advances and inroads.

Several groups in the industry – including the National Thoroughbred Racing Association, The Jockey Club and the AAEP – have implemented new programs designed to protect the health and welfare of the horse. The industry is working to create safer racing surfaces, improve health inspections for the horses, enhance drug testing and ensure systematic reporting of injuries. Racetracks are now encouraged to get accredited to demonstrate their commitment to safety.

#### Talkin' With the Doc

(Dr. Rick Arthur, a practicing veterinarian on the Southern California racing circuit since the 1970s, took on the role of California's Equine Medical Director for the California Horse Racing Board in September, 2006. The 1976 graduate of UC Davis School of Veterinary Medicine has been a leading force in the state – and across the country – in equine safety and medical issues for more than 20 years and in his new role has been a well-spoken voice for the horse and its safety. He agreed to the following interview on matters of safety and medication in May, 2011 for Del Mar's Safety Page.)



Q — "With a human or many other animals, if they break a leg there are various ways to treat it. But in the world of Thoroughbred racing, a horse who breaks a leg can often, it seems, be euthanized because of it. Why is that?"

A—"First of all, most horses who are pulled up (in a race) and don't finish, survive and do well. There are times when horses do have to be euthanized and there are a number of reasons for that. Some of them are directly related to how the horse is built and their rather unique physiology. Horses have to be up and standing within a very short period of time after whatever surgery needs to be done to repair a fracture. They are not like you and I where we could be lying in bed for months. Horses can't lie down for extended periods — they get terrible, terrible bed sores and other health problems— so they have to stay on their feet. Just as importantly, if they don't distribute their weight evenly when they are standing they can develop a condition called laminitis. Laminitis is inflammation of the tissue that holds the hoof to the foot. Horses stand on their hooves, which are homologous to our fingernails. Laminitis it is an extremely painful condition and usually horses can't survive that. It would be like your fingernails coming off and you'd have to stand on your fingernails.

Barbaro is a good example of this condition. (Barbaro was the 2006 Kentucky Derby winner who fractured a leg in his next start in the Preakness Stakes, then went through several surgeries and a recovery period that lasted eight months before he had to be euthanized). Barbaro's fractures healed, but it was laminitis that actually caused his demise. And it is not just Thoroughbred racehorses that are subject to this disease – in fact they probably get laminitis less than horses in other endeavors. But it is a problem with horses not being able to distribute their weight evenly over all four legs. The key issue is that they have to be standing in a very short period of time.

There is a difference between horses and other animals – for instance, you can actually amputate a dog's leg and they get along very well. But amputation in horses has not been a viable alternative. There have been some efforts to do this; I've been involved in a couple. For instance, Boitron was a stallion here in California after an amputation of a hind leg, but they just don't do well.

Another consideration is the quality of life question. Many times evaluates a particular injury and know the horse may not have a good quality of life. If the horse will have degenerative joint disease or will experience chronic pain. Anyone with a dog or a cat most likely has had to make similar decisions. There are fractures that simply can't be repaired for one reason or another. The blood supply is very poor blood below the knee and the hock in horse. If a fracture is open (compound), the wound is very prone to infection – they are very hard to heal. A contaminated wound, poor blood supply, surgical implants (metal screws and plates) and fractured bone are a bad combination to keep infection out and get bone healing.

### Q – Can you give us an idea of what sort of screening a racehorse goes through before he or she is allowed to race?

A—Even before the horse is entered, they have to have at least 3 recorded works before they are allowed to enter to demonstrate they are fit and in condition to race. The morning of the race all horses are examined by an examining veterinarian. At Del Mar that is the official CHRB veterinarian or one of the two Del Mar track veterinarians. Every horse that races in California is examined the morning of that race by one of the examining veterinarians. The veterinarians maintain examination records on each horse. That examination includes watching the horse jog, palpating its limbs, making sure that there is no inflammation or swelling or any other health or soundness problems. If the horse doesn't pass that examination, that horse is scratched. The next step is when the horse

arrives at the receiving barn prior to the race. The CHRB official veterinarian and assistant veterinarians have those horses under observation. From the receiving barn the horses go to the paddock where the track veterinarian takes charge until the horses leave the track after the race. The horses are under observation the whole time they are on the track.

Del Mar will have two track veterinarians this year for better coverage. The veterinarians maintain very good communication with the jockeys. If they have any concern with a horse they'll bring the horse up and be examined by the track veterinarian prior to going into the gate. If a horse acts up in the gate, the veterinarian is there at the gate to examine the horse and be sure the horse wasn't injured. The track veterinarian follows the horses around the track, watch them pull up after the race, watch the horses walking off the racetrack just to make sure there are no injuries. We have an extensive monitoring program. There are three specific times horses are observed and or examined prior to racing: they are examined in the morning, they are observed in the receiving barn when they gather up prior to going to the paddock and from the time they're in the paddock until they leave the track they are under the observation of the track veterinarian.

## Q – If you look in the racing program, you can note that virtually every horse that races has been administered Lasix. What is Lasix and why does every horse have to have it in order to race?

A – Lasix is a diuretic (a drug which increases urine production) used to treat a exercise-induced pulmonary hemorrhage (EIPH), bleeding that develops from the lungs during hard exercise. Historically, you can go back to the very beginnings of horse racing showing horses have always bled. Herod, one of the three foundation sires of the Thoroughbred breed, "burst a vessel" in a race in York. The great grandsire's name of Eclipse, predominant foundation sire of the Thoroughbred breed, was Bartlett's Childers. But he was called 'Bleeding Childers' because he bled badly. In fact he never raced.

Exercise-induced pulmonary hemorrhage is an occupational condition of racehorses and other equine doing high intensity exercise. Barrel racers and draft horse in heavy pull events also have EIPH. The condition is a rather fascinating physiological phenomenon and subject of considerable research. Simply, horses develop pulmonary hypertension when they exercise. You and I, when we are resting, our heart rate is around 60 to 70 for people of average fitness; 50 if you're very fit. Horse's heart rates are typically around 30 or 32. But when a horse exercises, his heart rate will go up to 220 or 240. Human heart rates, however, seldom go over 140 for fit athletes. Lasix at one time was one of the most commonly prescribed drugs for hypertension in humans. Because it is a diuretic it lowers the blood volume and this mimics the old-timers' remedy for treating bleeding and that was to withhold water for a long period of time prior to racing. It has been shown that Lasix reduces the amount of hemorrhage, albeit a small reduction, so it is effective in reducing the amount of hemorrhage and that's why racing jurisdictions in the U.S. have allowed its use.

The use of furosemide or Lasix is controversial today. Lasix is not permitted in much of the rest of the world. There is a re-examination going on over its use, but it is commonly used. Lasix administration is tightly regulated and cannot be administered within four hours of race time to avoid any compromise of post-race testing.

## Q – Can we ask the same question about phenylbutazone, or 'bute' as it is commonly known, and is also administered to most, if not all, racehorses.

A-Butazolidin or phenylbutazone is a non-steroidal anti-inflammatory drug. Aspirin and ibuprofen (Advil, Motrin) inflammatory are examples of non-steroidal anti-inflammatory drugs people would use. Phenylbutazone can be used in humans, but it is only done rarely because the drug has serious side-effects in people. Phenylbutazone is not allowed on race day. It is allowed the day before, and is the amount remaining in the blood on race day is restricted by the CHRB. This is another issue that is under debate. The Association of Racing Commissioners International and the Jockey Club safety Committee have called for a reduction in the permitted levels of phenylbutazone residues allowed at race time. The California Horse Racing Board has a proposal to reduce the amount of permitted phenylbutazone by about 60% on the concern that it may interfere with the veterinarians prerace examinations. This is another drug that is prohibited internationally, but is permitted in the U.S. The levels we permit should have minimal effect at the time of racing.

## Q – Are there any other 'safety' items you'd care to speak about regarding racing in California, and at Del Mar in particular?

A – Del Mar actually has used multiple veterinarians to examine their horses for a long period of time. Del Mar takes a very serious interest in horse safety and that has been a guiding principle of Del Mar's management for as long as I can remember. California Horse Racing Board has had a tremendous focus on safety. As an example, the reason Del Mar installed Polytrack was an effort to improve safety. Overall Polytrack has decreased fatal racing injuries by 40%. In addition the California Horse Racing Board has restricted the use of toe grabs (on horseshoes), which had been associated with increased injuries. Reducing the amount of permitted phenylbutazone to make the pre-race examinations more indicative of the true condition of the horse is another.

Safety is an on-going theme for the California Horse Racing Board. The board just approved a safety program with the University of California at Davis veterinary school to look at factors involved in injuries so to improve the safety of horse racing. Safety has been a major focus since I've been Equine Medical Director and it will continue to be. What makes horse racing unique is the horse and the jockey. Obviously our primary responsibility to protect their safety and make sure that horses and jockeys are racing as safely as they possibly can.  $\Omega$ 

