

The Word That Sparks Fear Among Equine Caregivers

QUICKLY ADDRESSING **COLIC** LEADS TO BETTER OUTCOMES

By **AMANDA DUCKWORTH** / Photos by **ANNE M. EBERHARDT**

ALTHOUGH IT CONSISTS of five letters, for all intents and purposes, colic is a four-letter word to those who care for horses. Even though it is continually researched, colic remains the number one killer of horses. It is important to understand that colic itself is not an actual disease, but rather a combination of factors that an observant caregiver will recognize as signs of abdominal pain in a horse.

According to information from the National Animal Health Monitoring System survey, and as reported by the American Association of Equine Practitioners, for every 100 horses, there will be 4.2 colic events every year. Of those events, 1.2% will be surgical, and 11% will be fatal.

“The objective of a conscientious horse owner is to find ways to prevent colic so your horse doesn’t become one of these statistics, while also understanding how to appropriately manage colic if it does occur,” explained Dr. Nancy Loving in her paper “Colic: Updates and Prevention” for the AAEP. “A colicky horse might appear depressed or ‘zoned-out,’ or he may display anxious behavior like pawing, looking at his sides, lying down, getting up, rolling, and a general state of distress. A thorough veterinary examination helps determine the cause of these behaviors, and also rules out other medical conditions like tying-up, laminitis, pneumonia, or foaling difficulties.”

Many of the issues that lead to colic can become life threatening with startling speed. It is important to be able to recognize the signs and to know when to



Fast action at the first signs of colic saved the life of 2013 Horse of the Year Wise Dan who underwent surgery in 2014 and then made a successful return to the races just a few months later

call for qualified veterinary assistance. Ultimately, surgery may be required to save the horse’s life.

Recently, researchers have looked into what factors can help lead to a successful colic surgery in the study “Effects of age, disease, and anastomosis on short- and long-term survival after surgical correction of small intestinal strangulating diseases in 89 horses,” which was published by the Equine Veterinary Journal in November 2022.

“Although survival rates have been reported after small intestinal surgery for strangulating diseases in horses, none have followed survival for periods

relevant to the long lifespan of horses and none have described effect of age, disease, and surgical treatments over such long survival periods,” explained researchers.

Researchers developed a retrospective clinical study to examine the effects of age, disease, and type of surgery on long-term survival. In order to do so, the medical records were gathered for 89 horses who had undergone small intestinal strangulation surgery, and their owners were contacted. Using Kaplan-Meier statistics, the survival times from surgery to the date of death or the date of last follow-up were studied.

GUARANTEED RESULTS

U-7™ Gastric Aid

For a healthy foregut and hindgut

U-7 Gastric Aid is a clinically studied vitamin/herbal blend that helps promote a healthy equine digestive system.

This cost effective alternative for gastric health contains all natural active ingredients and has no known side effects.

Support your horse's appetite, performance, and attitude with U-7!



PROUDLY USED BY
Richard Mandella
Hall of Fame Thoroughbred Trainer

Scan for **SAMPLE**
\$30 shipping charge applies
Offer ends 10/30/2023



Limit one sample per household.

#FueledByFinishLine

More info and Where to Buy

800-762-4242 | Info@FinishLineHorse.com | www.FinishLineHorse.com | International Distribution Inquiries: 630-694-0000

©2023. Finish Line® Horse Products, Inc. All rights reserved.



GUARANTEED TO WORK OR YOUR MONEY BACK!

U7 Liquid Supplied in:
2 fl. oz, syringe
64 fl. oz, 32 day supply
128 fl. oz, 64 day supply
5 Gallon, 320 day supply

U7 Powder Supplied in:
1.6 lb, 30 day supply
3.2 lb, 60 day supply
12.8 lb, 240 day supply



Made in USA

“Short-term survival was not affected by any of the variables measured,” researchers found. “For long-term survival with Kaplan-Meier statistics, horses ≥ 16 years old had significantly shorter median survival times (72 months) than younger horses (121.7 months); horses without resection had significantly longer survival times (120 months) than horses that had jejunocostomy (76.8 months); and horses with miscellaneous diseases had significantly longer median survival times (161.9 months) than horses with strangulating lipoma (79.8 months). In the multivariable Cox Proportional-Hazards model, age and anastomosis had the most significant effect on median survival time.

“The remaining lifespan of older horses at the time of surgery had the greatest



THE OBJECTIVE OF A CONSCIENTIOUS HORSE OWNER IS TO FIND WAYS TO PREVENT COLIC SO YOUR HORSE DOESN'T BECOME ONE OF THESE STATISTICS, WHILE ALSO UNDERSTANDING HOW TO APPROPRIATELY MANAGE COLIC IF IT DOES OCCUR.”

—DR. NANCY LOVING

effect on survival. Age could influence long-term survival studies after colic surgery, and therefore needs to be considered for survival analyses. Horses that did not require resection and anastomosis had favorable outcomes, underscoring the potential importance of early intervention to reduce the need for resection.”

Making the decision to do colic surgery is not one many owners take lightly, given the many factors involved, including cost and the sometimes incorrect assumption that horses won't fully recover. However, the science shows deciding to do the surgery sooner rather than later gives the horse its best chance.

Dr. David Freeman, Appleton Endowed Professor at the University of Florida's College of Veterinary

www.equiade.com | 727-562-2832 | info@equiade.com

BODY BUILDER

If Works!

- Increase Strength
- Improve Stamina
- Enhanced Muscles
- Reduce Nervousness
- Reduce Stress



KEEP YOUR HORSE IN WINNING CONDITION ON AND OFF THE TRACK

ORDER TODAY: ANIMAL HEALTH - BIG DEE'S - FLORIDA HARDWARE - JACK'S MANUFACTURING - KBC - HAGYARD PHARMACY - PINKSTON'S TURF GOODS - RJ MATTHEWS - TRACTOR SUPPLY COMPANY - SMARTPAK - VALLEY VET - WECAN SALES (CANADA) - WESTERN SADDLERY

EQUIBASE

FREE

WAGERING TOOLS



ENTRIES PLUS






SMART PICK



STATLINES

LOOK FOR THESE ICONS
IN THE RIGHT-MOST COLUMN
OF RACE ENTRIES

Race #	Purse	Race Type	Distance	Surface	Starters	Est. Post	Free Products
Race 1	\$75,000	Maiden Special Weight	5 Furlongs	Turf	8	1:05 PM ET	  

Equibase.com/WageringTools

Medicine, was one of the co-authors on the previous study and also published “Fifty years of colic surgery,” in the *Equine Veterinary Journal* in July 2018.

“Colic surgery is one of few treatments in which a veterinarian can use a skill to save an animal’s life from a deadly disease within a short timeframe,” he explained. “Unfortunately, such success is not achieved without considerable risk for surgical failure, which is responsible for most complications in the immediate post-operative period.

“The last 50 years have witnessed considerable improvements in colic surgery, although a ranking of the most important ones might not meet with universal agreement. Teamwork plays a critical role in the final outcome, starting and finishing with the referring veterinarian and owner. These individuals are responsible for promptly transferring the horse to a surgical facility and then dealing with aftercare and delayed complications.”

It is logical that the sooner a horse that needs colic surgery undergoes treatment, the better the chances are for survival. In April 2023, the *Veterinary Clinics of North America: Equine Practice* published “Early Identification of Intestinal Strangulation: Why It Is Important and How to Make an Early Diagnosis.”

“Horses with colic caused by intestinal strangulation can have an excellent outcome with early surgical correction of the obstruction,” explained Dr. Louise Southwood, the author of the paper. “The expense associated with surgery is typically less with early lesion correction. The challenge is making an early diagnosis of intestinal strangulation. The most important contributing factor to a successful outcome for horses with intestinal strangulation is early identification and prompt surgical correction of the lesion.”

Studies have shown that longer colic duration is associated with higher odds of a negative outcome. Within three to four hours of a large colon volvulus



Surgery isn’t always required to treat colic; there are medications that can resolve the symptoms

developing, death can occur.

“Although for some horses with a strangulating obstruction, the need for surgery is made based on severe colic signs or lack of response to analgesia; in other horses, it is less obvious,” said Southwood. “Signalment, history, and meticulous physical examination, combined with some targeted diagnostic procedures can help with early diagnosis of intestinal strangulation. Improving the outcome of these horses requires diligence and a team-based approach from the owner or caregiver, primary care veterinarian, and specialists.”

Researchers recently examined performance outcome on Thoroughbreds who had colic surgery early in life. In December 2022, the *Equine Veterinary Journal* published “Sales and race performance of juvenile Thoroughbreds with surgically corrected large colon displacements.”

“Juvenile Thoroughbreds can be expensive to raise and train to race,” said researchers. “Part of the economic return in these juveniles are the weanling, yearling,

and 2-year-old in training sales at which major surgeries must be declared. The objective was to determine if surgically corrected large colon displacements were associated with a reduction of sales price and racing performance.”

For the retrospective cohort study, the medical, sales, and racing records of horses less than 2 years old that had a surgical diagnosis of large colon displacement were examined. Surgical cases were compared with a control group, whose sales and racing data were also evaluated. Overall, there were 110 surgical Thoroughbreds, and 299 in the control group.

“There was no significant difference in median sale price overall between the two groups,” researchers concluded. “Horses undergoing surgery had a reduced number of starts in the 2-year-old year (one start) when compared with control horses (2.32 starts), but no significant difference over the 2- to 4-year-old period. There was no significant association with surgery on earnings within the 2- to 4-year-old period of

Research Supports the Use of a Hindgut Buffer

The pH of the hindgut varies as bacterial populations increase and decrease in response to dietary modifications. Changes in the pH of the hindgut due to alterations in the microbial populations and acid profiles cause a condition known as subclinical acidosis. Signs of subclinical acidosis include decreased feed intake or complete inappetence in severe cases, mild to moderate colic, poor feed efficiency and subsequent weight loss, loss of performance, and development of certain vices such as wood chewing, weaving, and stall walking.

Because the hindgut is overwhelmed with lactic acid when a horse is experiencing acidosis, the intestinal lining becomes



inflamed and irritated, causing the horse discomfort. Long-term exposure of the intestinal lining to a low-pH environment may negatively affect the absorptive capacities of these structures, limiting the amount of energy available for performance.

EquiShure®, developed by Kentucky Equine Research, is a research-proven time-released hindgut buffer. EquiShure is recommended for horses receiving large grain meals as well as those grazing high-fructan pastures, especially those with a history of laminitis, along with horses with inappetence or weight loss, unexplainable behavioral problems, loose manure, or those prone to recurrent mild colic.

Targeted Nutrition for Total Digestive Tract Health

Horse owners and trainers understand the fragility of a horse's gastrointestinal tract, especially when it comes to two chronic conditions: gastric ulcers and hindgut acidosis.

From EquiShure®, a research-proven hindgut buffer, to ReSolvin EQ™, a revolutionary new way to manage gastric ulcers, KER Targeted Nutrition Digestive Health products are designed to support your horse's entire digestive tract.

Find science-based solutions at shop.ker.com.



859.873.1988 • info@ker.com

Developed by Kentucky Equine Research®
World Leaders in Equine Nutrition™



racing when compared with controls.

“Overall, the results of this study suggest that if the juvenile Thoroughbred requires surgery for a large colon displacement, there is minimal association with sales price or race performance compared with their siblings. With this information, it will be easier to make informed decisions to take young horses to surgery.”

While surgery can and does save the lives of many horses facing colic, ideally it is better to try and avoid the situation at all. In July 2019, PLOS One published “Risk factors for acute abdominal pain (colic) in the adult horse: A scoping review of risk factors, and a systematic review of the effect of management-related changes.”

“Consolidation of data through a systematic review is important to inform evidence-based medicine and clinical guidelines, but there are currently no published systematic reviews on colic in the horse,” explained researchers. “The aim of this study was to identify, categorize, and appraise the evidence on factors associated with increased risk of developing abdominal pain (colic) due to gastrointestinal disease in the adult horse.”

For this study, researchers performed a scoping review in regards to the risk factors for colic and then conducted a systematic review of management-related risk factors. For the first component, study and participant characteristics of included publications and key results were extracted and tabulated, while for the second component, cohort, case-control, or cross-sectional studies investigating acute abdominal pain in horses within two weeks of management changes were analyzed.

Overall, the scoping review identified 3,756 publications. Ultimately, 58 studies met final inclusion criteria, and 22 categories of risk factors were identified. These risk factors then were broadly considered either horse-related factors, management-related factors, or environment-related factors.

“The largest body of evidence related



Funny Cide, the 2003 Kentucky Derby winner, died July 16 at the age of 23 due to complications from colic while in residence at the Kentucky Horse Park

to management change,” concluded researchers. “The risk factors related to management change that were assessed were feed, care, exercise, pasture, water, and housing. The largest bodies of evidence for increased risk of colic associated with management change were changes in feed and recent change in housing.

“This is the first study to use a combined scoping and systematic review to analyze evidence for modifiable risk factors for a common condition in the horse. It provides a comprehensive review that will be a key resource for researchers, veterinary practitioners, and horse owners. It identified modifiable risk factors associated with an increased risk of colic which should be a key target for preventative health programs. The findings from the critical appraisal were used to develop recommendations for future research to improve the quality of evidence-based veterinary medicine.”

In October 2022, Veterinary Sciences published “Retrospective Study on Risk Factors and Short-Term Outcome of Horses Referred for Colic from 2016 to 2022.”

“Colic syndrome is the most common

out-of-hours call for equine practitioners,” explained researchers. “In most cases, medical treatment at home is effective for the resolution of the disorders. In 20% of cases, hospital intensive care is required. Several factors have been addressed as predisposing to the disorder. Cardiovascular and hemodynamic variables are the most reliable indicators of the severity of the condition and, thus, are important prognostic factors.”

For the study, the clinical records of horses referred for colic syndrome to the University of Teramo between January 2016 and May 2022 were reviewed. Reasons for exclusion included abdominal pain for reasons unrelated to the gastrointestinal tract. Additionally, if horses were admitted more than once in a year, only the first time was analyzed.

Data that was used included: age, gender, breed, progression of clinical signs before referral, medication received before referral, distance to be covered to reach the referral practice, time of the day and season of admission, and type of treatment attempted.

“When the predisposing or risk factors were considered on the whole

selected population, no difference was found between horses that were discharged and not discharged,” concluded researchers. “In the univariate model, time and month of admission had a significant association with the outcome, with horses admitted between October and December more likely to be discharged than those admitted between January and March, and those admitted in the morning less likely to be discharged compared with those admitted during afternoon and evening/night.

“When the same variables were considered for only the subsample of horses receiving a surgical treatment, the results were similar for the variable month but not for time on admission, which did not show an association with discharge in the univariate regression model.

Regarding the seasonality, our results are in contrast with previous studies which showed a strong association of winter months with a worse outcome. This difference could be ascribed to different weather conditions, frequency of weather changes, and latitude of the sites from where the horses came.”

In total, 157 clinical records were selected for the research, and of those: 82 (52%) were treated surgically, while 75 (48%) received medical treatment.

“Month, time of admission, cardiovascular variables (heart rate on admission and after 3-6 h, packed cell volume, capillary refill time, and mucosal membranes), and presence of gastric reflux were significantly associated with discharge in the univariate regression in all horses and in those surgically treated,”

concluded researchers. “In the multivariate regression model, heart rate, packed cell volume, and capillary refill time showed significant association with the outcome in the whole sample.

“Although the decision-making process for colic syndrome is multifactorial and based on owners’ personal decision, economic availability, and the horse insurance status, knowledge of prognostic indicators of outcome is mandatory for the veterinary surgeon to inform the owner and plan the most appropriate treatment.”

Whether it is a surgical case or not, the faster a horse is recognized to be experiencing an episode of colic, the better chance everyone involved has to provide proper treatment and achieve a favorable result. **BH**



QUILLIN
Leather & Tack

**This Might Be The Last Belt
Or Halter ...
You'll Ever Need To Buy**

Since 1982 - Made In Paris, Kentucky ... And Made To Last
1929 Main Street • Paris, Kentucky • Quillin.com • 859-987-0215