

Preventing Colic in Horses

Written by

Dr. Christine King

BVSc, MACVSc, MVetClinStud

Consulting Editor

Dr. Anthony Blikslager

DVM, PhD, Dip. ACVS

Preventing Colic in Horses

Published by Paper Horse
PO Box 1771
Cary, North Carolina, 27512
USA

Copyright © 1999, 2016 Christine M. King

All rights reserved.

(Minor edits for clarity, 2016.)

ISBN: 0-9674926-0-2

Library of Congress Catalog Card Number: 99-96019

Front matter

Please note...

In writing and producing this book, every effort has been made to provide accurate information and sound advice on preventing colic in horses. But ultimately, it is up to the reader to determine whether and how to use the information contained in this book. We encourage you to discuss management changes that may impact the health and performance of your horse(s) with your regular veterinarian beforehand. As your veterinarian is familiar with your area, the scope and limitations of your facility, and your horse(s), s/he is the best person to consult for advice on horse healthcare. We defer to him/her in all matters discussed in this book.

Please note that neither the publisher, the author, nor the editor: (1) makes any warranty concerning, nor assumes any responsibility for, the results of following the guidelines described in this book; (2) can be held liable to anyone for damages resulting from reliance on any information contained in this book, whether with respect to feeding, care, treatment, patient evaluation, or drug usage, or by reason of any misstatement or inadvertent error; or (3) manufactures any of the drugs, feeds, or other products mentioned in this book, offers any guarantee of any kind on such items, nor will be held responsible for the results that may be obtained from the use of these items. Any trade names used in this book are for example only; their use does not imply endorsement of that product, nor that a similar product with a different trade name is in any way inferior or less effective.

Please read and follow the manufacturer's directions when using any product; and if there is disagreement between those directions and the recommendations contained in this book, discuss the situation with your veterinarian and follow his/her advice.

Thanks to...

Dr. Anthony Blikslager, my consulting editor, for ensuring both the scientific accuracy and practical value of the material in this book. Anthony is a gifted equine surgeon, a noted researcher in the field of gastrointestinal physiology, and, above all, a horseman—a potent combination, to the horse's benefit.

Dr. Richard Mansmann, for taking the time to review the manuscript and make suggestions. Also a born horseman, Dick has spent nigh on 30 years practicing equine medicine, in both private practice and academic settings, so he brings a wealth of experience and good sense to this project. (As with *Equine Lameness*, this book is far better for your contributions, Dick. Thanks, too, for your continued encouragement.)

Linda Mansmann, for acting as my guinea pig. As a horse owner, her perspectives and comments were really valuable; her enthusiasm for this project is also gratefully acknowledged. (Here's to many happy, colic-free years with Louis, aka "Red All Over.")

Dr. Kenneth Kopp, for casting an expert eye over the manuscript and ensuring that the nutritional advice is sound. Dr. Kopp is a consultant in equine nutrition who mixes a background in equine veterinary practice with the science of feeding horses.

Dr. James Kubiak, for agreeing to review the manuscript from yet another perspective. Dr. Kubiak teaches in the Department of Animal Sciences at North Carolina State University, and is the co-ordinator of REINS—the Regional Equine Information Network System—an organization of volunteers in North Carolina who offer their various skills and expertise (not to mention their time) to horsepeople throughout the state.

Liz Anderson, for her perspectives as both a horse owner and a publisher. Thanks for the pointers, and for not laughing (at least, not out loud) when I said I wanted to publish this book myself.

Dr. Robin Peterson, for the excellent illustrations. Robin trained and worked for some years as an equine surgeon before becoming a medical illustrator, so her drawings have the added dimension of actually having "been there." [2016 Note: Dr. Peterson's illustrations have been lost to time and have been replaced with more generic illustrations for this web reissue.]

*Thanks for so generously giving me your time
and the benefit of your experience.*

Table of Contents

Foreword by Dr. Anthony Blikslager

Chapter 1: What is Colic?	1
Signs of Colic	1
Abnormal behavior.....	1
Abnormal posture	2
Abnormal appearance	3
Abnormal body function(s).....	3
Correlating signs with specific problems	3
Correlating signs with severity	4
Individual response to pain	4
The Horse's Digestive System	5
Stomach.....	5
Small intestine	6
Cecum.....	7
Large colon	8
Small colon	9
Rectum	9
Incidence of colic at specific sites.....	10
What Causes Colic?.....	10
What's causing the pain?	10
1. Spasms.....	10
2. Distention (gas)	11
3. Traction	12
4. Ischemia (low blood flow)	12
5. Inflammation (with or without ulceration)	14
How common are these problems?	14
In summary.....	16
Table 1.1 Causes of colic not associated with the digestive tract.....	17
Table 1.2 Specific causes of simple obstruction.....	18
Chapter 2: Risk Factors for Colic	19
Interpreting Study Results	19
Intrinsic (Horse) Factors.....	20
breed	20
gender	22
age	24

use/activity	27
behavior	28
history of colic	29
genetics	30
Management Factors	31
diet	31
housing	38
internal parasites.....	41
dental care.....	45
stress	46
drugs and chemicals	47
Environmental Factors	50
geographic location	50
weather or season.....	51
poisonous plants	52
Table 2.1 Owner/manager-based study in Virginia-Maryland	55
Table 2.2 Owner/manager-based study in Michigan.....	56
Table 2.3 First veterinarian-based study in Texas.....	57
Table 2.4 Second veterinarian-based study in Texas.....	57
Table 2.5 Veterinarian-based study in the United Kingdom	58
Chapter 3: Strategies for Preventing Colic	59
Simple Management Strategies.....	59
1. match the horse's natural diet	60
2. match the horse's natural feeding schedule	62
3. match the horse's natural activity pattern	63
4. minimize changes	64
5. feed good quality feedstuffs.....	65
6. ample access to fresh, clean water	67
7. deworming program.....	68
8. regular dental care	70
9. environmental management.....	70
10. pay attention	71
Preventing Specific Types of Colic	72
spasmodic or "gas" colic.....	72
large colon impactions	72
avoiding colic at shows and competitions.....	73
large colon displacements.....	73
ileal impactions.....	74

small colon impactions in Miniature Horses	75
sand colic	75
enteroliths	76
gastric ulcers.....	77
right dorsal colitis	79
verminous arteritis (<i>S. vulgaris</i> infestation)	79
meconium impaction in foals	79
roundworm (ascarid) impactions	79
colic in senior horses	80
Table 3.1 Dietary proportions for specific types of horse.....	81
Table 3.2 Daily nutrient requirements for adult horses	82
Table 3.3 Average nutrient composition of common feeds	83
Chapter 4: Managing Colic (preventing disasters).....	85
Recognizing the Signs	85
Determining the Severity.....	85
assessing the horse's physical status.....	85
heart rate	86
gum color	88
capillary refill time.....	89
other indicators of hydration status.....	89
temperature of the extremities	90
other physical changes.....	90
assessing bowel function.....	90
evaluating bowel sounds.....	90
manure	91
What To Do with a Colicky Horse.....	92
monitoring the situation	92
drug therapy.....	93
things to avoid	94
recovery.....	95
Transporting Severely Colicky Horses	96
the trailer.....	
insurance	97
during the trip	97
Good planning	97
Final Word	98
Table 4.1 Recommended drug dosages.....	99

Many horses with colic benefit from fluid therapy to prevent dehydration and maintain blood supply to the kidneys and other vital organs. The fluids may be given either through the nasogastric tube or IV, depending on the particular intestinal problem (see General Concepts Regarding Fluid Needs in Dehydrated Horses). A common cause of colic in horses is simple obstruction of the large colon by dehydrated ingesta, sometimes mixed with sand. These impactions generally develop near the pelvic flexure or in the right dorsal colon but may involve any portion of the large colon, descending colon, or cecum. In most instances, lubricants or fecal-softening agents given through a nasogastric tube soften the impacted ingesta, allowing it to be passed. To help prevent colic, feed your horse a healthy diet, which means high quality forage (hay) plus horse feed that supplies vital nutrients (such as selenium and Vitamin E.) Feed at least twice daily, not one huge meal. NEVER grain your horse before riding. Give your horse daily turnout for several hours to help food move through their digestive system as they walk around. It is essential that every horsemen recognize colic in horses, so they can act immediately to prevent death or permanent debilitating lameness. Get the facts now. The Secrets of Equine Colic and How to Prevent It. Colic in horses is a term used to describe an equine stomach ache for horses, this spells big trouble. Horses have a very delicate digestive system. Great care must be taken to avoid potentially deadly disruptions. Unlike humans, horse colic progresses quickly and can be fatal. It is essential that horse owners understand the many causes of colic so they can prevent it from happening to their horse. Colic in horses is defined as abdominal pain, but it is a clinical symptom rather than a diagnosis. The term colic can encompass all forms of gastrointestinal conditions which cause pain as well as other causes of abdominal pain not involving the gastrointestinal tract. The most common forms of colic are gastrointestinal in nature and are most often related to colonic disturbance. There are a variety of different causes of colic, some of which can prove fatal without surgical intervention. Colic Treatment of colic in horses. For mild cases of colic, the vet may administer drugs to relieve pain and relax the horse, which may allow the gut to start working properly. Monitor your horse's progress and keep your vet informed of any changes. In more serious cases that do not respond to initial drug treatment, your vet may recommend surgery, which will involve transporting the horse to the local equine hospital. If you know your horse has a history of colic, be extra vigilant in all areas of your horse's routine and management. While waiting for the vet. Stress can also cause colic, so sensible management and consideration of the horse's needs can help minimise this and prevent associated health problems. Horses with choke. Horses with choke can present similar symptoms to colic.