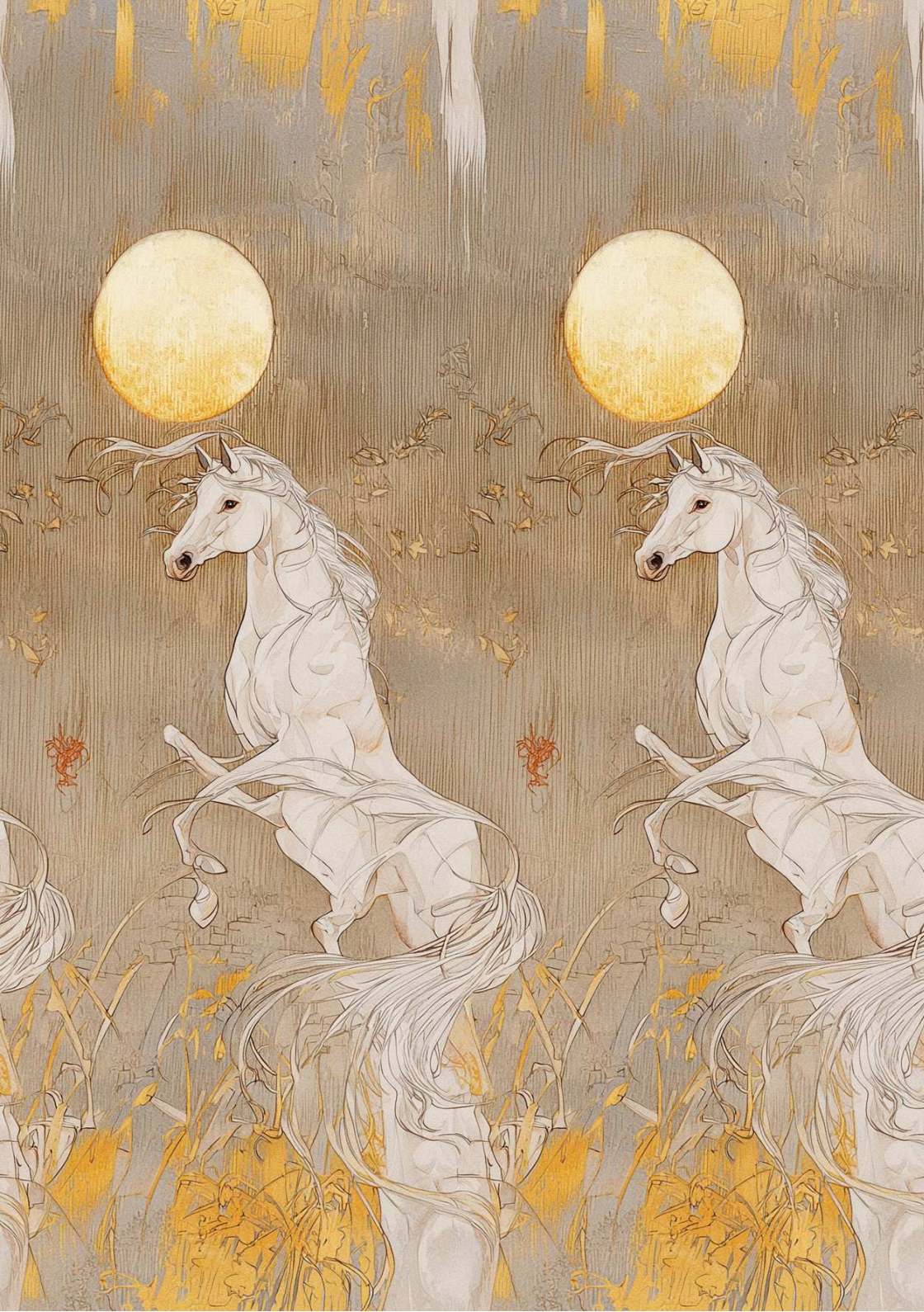

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Artemis Saage

Horse Training and Health: A Complete Guide to Equine Wellness and Horsemanship

Master Horse Riding, Learn Essential Horse Care Techniques, and Understand Horse Breeds for Better Training and Health Management

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Horses are fascinating beings that enrich our lives as loyal companions through sport and leisure. However, their proper care and management present many horse owners with complex challenges. This comprehensive manual offers well-founded insights into all important aspects of modern horse keeping—from correct feeding and preventive health care to effective training methods. Particularly valuable are the practical guidelines for interpreting equine body language and building a trusting human-horse relationship. Benefit from detailed instructions on stable hygiene, familiarize yourself with common health issues, and receive valuable tips for various riding disciplines. The combination of scientifically grounded expertise and years of practical experience makes this guide a reliable resource for your daily work with horses. A practice-oriented companion that helps you better understand your horse's needs and respond optimally. Discover now how you can provide your horse with a species-appropriate and healthy life.
I now wish you an inspiring and insightful reading experience. If you have any suggestions, criticism, or questions, I welcome your feedback. Only through active exchange with you, the readers, can future editions and works become even better. Stay curious!

Artemis Saage
Saage Media GmbH

- support@saagemedia.com
- Spinnereistraße 7 - c/o SpinLab – The HHL Accelerator, 04179 Leipzig, Germany

Introduction

To provide you with the best possible reading experience, we would like to familiarize you with the key features of this book. The chapters are arranged in a logical sequence, allowing you to read the book from beginning to end. At the same time, each chapter and subchapter has been designed as a standalone unit, so you can also selectively read specific sections that are of particular interest to you. Each chapter is based on careful research and includes comprehensive references throughout. All sources are directly linked, allowing you to delve deeper into the subject matter if interested. Images integrated into the text also include appropriate source citations and links. A complete overview of all sources and image credits can be found in the linked appendix. To effectively convey the most important information, each chapter concludes with a concise summary. Technical terms are underlined in the text and explained in a linked glossary placed directly below. For quick access to additional online content, you can scan the QR codes with your smartphone.

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1. Basics of Horse Care

The appropriate housing and care of horses requires in-depth knowledge and practical experience. How can optimal nutrition be ensured? What role do regular exercise and systematic training play in health? And how can the daily care routine be designed efficiently and in a horse-friendly manner? The fundamentals of horse care encompass central aspects such as needs-based feeding, a well-thought-out exercise routine, and systematic health care. It is essential to consider both the species-specific needs and the individual requirements of each horse. Successful horse care is based on the interplay of various factors—from the choice of the right bedding to effective pasture management and age-appropriate training design. The following chapters provide the most important fundamentals and offer practical tips for daily work with horses.

1. 1. Feeding and Nutrition

ie richtige Ernährung eines Pferdes stellt Halter vor vielfältige Herausforderungen: Wie viel Raufutter benötigt ein Pferd täglich? Welche Rolle spielen Mineralien und Spurenelemente für die Gesundheit? Und wie lässt sich die Fütterung optimal an Alter, Nutzung und individuelle Bedürfnisse anpassen? Als Pflanzenfresser und Dauerfresser ist das Verdauungssystem des Pferdes auf eine kontinuierliche Aufnahme faserreicher Nahrung ausgelegt. Eine artgerechte und ausgewogene Ernährung bildet das Fundament für Gesundheit, Leistungsfähigkeit und Wohlbefinden. In diesem Kapitel erfahren Sie, wie Sie die Ernährung Ihres Pferdes wissenschaftlich fundiert und praxisorientiert gestalten können.

> *„An adult horse requires at least 30 liters of water daily; during intense work or high temperatures, the demand can be significantly higher.“*

1. 1. 1. Basic Food for Horses

The basic food for horses forms the foundation of a species-appropriate diet that aligns with the natural needs of these herbivores. The most important basic food is water, which must be available to horses at all times in sufficient quantity and clean quality [s1]. An adult horse requires at least 30 liters of water daily; during intense work or high temperatures, the demand can be significantly higher [s2]. Roughage in the form of hay or pasture grass constitutes the second essential pillar of horse nutrition. As herbivores, horses are designed to consume the majority of their food (at least 50%) in the form of fiber-rich materials [s3]. A 500 kg horse should receive about 11-12 kg of high-quality hay daily, divided into several small portions [s2]. When selecting hay, attention should be paid to a bright color, leafy structure, and mold-free quality [s4]. The digestion of horses is adapted to a continuous intake of small amounts of feed [s5]. Therefore, the daily feed ration should be divided into at least three, preferably four to six meals. This not only promotes saliva production but also prevents digestive disorders. A practical tip is to use hay nets with small mesh sizes, which slow down feed intake and extend the time spent feeding. Carbohydrates play an important role as energy suppliers [s6]. They are divided into structural (fiber) and non-structural (sugar and starch) carbohydrates. While fibers are fermented in the large intestine by bacteria, sugars and starches are already broken down in the small intestine. Caution should be exercised when feeding grains as energy sources—not every horse requires additional concentrated feed. A guideline is that the amount of concentrated feed per meal should not exceed 1 kg [s7]. Proteins are essential for muscle building and tissue renewal. The protein requirement of an adult horse is 8-12% of the total ration, while for growing horses, it is 12-18% [s1]. High-quality hay, especially legume hay like alfalfa, can already cover a large part of the protein requirement [s7]. Fats are valuable as a concentrated energy source and support the absorption of fat-soluble vitamins. However, they should not make up more than 10% of the total ration [s3]. In practical implementation, it has proven effective to gradually introduce oil over several days to avoid digestive disturbances. Vitamins and minerals are important in balanced amounts for various metabolic processes. For horses with access to pasture and high-quality hay, additional supplementation is often unnecessary [s8]. An exception is made for horses with high

workloads or specific health requirements. An important practical aspect is the regular monitoring of feed quality and quantity. Changes in feeding should always be made slowly over 7-14 days to minimize the risk of digestive disturbances [s2]. Observing manure, appetite, and body condition provides important insights into the adequacy of feeding. It is particularly important to note that feeding must be individually adjusted to the horse's age, weight, type of use, and health status [s8]. A leisure horse has different needs than a sport horse, and a young horse has different needs than a senior. Therefore, regular review and adjustment of the ration is essential.

1. 1. 2. Feeding Times and Quantities

The proper timing and measurement of quantities in horse feeding is fundamental for the health and well-being of the animals. Horses are naturally designed to consume small amounts of feed continuously throughout the day. A regular, predictable feeding schedule reduces stress and provides important orientation in the daily routine [s9]. The total amount of feed should be between 1.5% and 2.5% of the horse's body weight, depending on the quality of the feed and the physiological condition of the horse [s10]. For a horse weighing 500 kg, this corresponds to a daily total feed amount of 7.5-12.5 kg. It is important to note that the roughage amount should never fall below 0.75% of the body weight to avoid digestive problems [s11]. A practical tip is to always weigh the feed instead of estimating by volume [s12]. The feeding frequency has a direct impact on eating behavior: studies show that with 8 meals a day, the feed intake per meal is lower, and the horses chew more calmly and for longer [s13]. In practice, at least 3-4 feedings per day are recommended, ideally more. Many stable operators have had good experiences with automatic feeders that allow for more frequent feeding. When it comes to concentrate feeding, the important rule of thumb is to feed no more than 0.5% of the body weight per meal [s12]. For a 500 kg horse, this means a maximum of 2.5 kg of concentrate per meal. Distributing this over several small portions is essential. Special attention is required in specific situations such as feeding foals or undernourished horses. Foals need about 2-3% of their body weight in daily feed intake [s14]. In the rehabilitation of undernourished horses, the feed amount must be increased very carefully and gradually to avoid the dangerous Refeeding Syndrome [s15]. In such cases, one starts with small, frequent portions of fiber-rich feed and gradually increases the amount over several weeks. For horses on pasture, it is important to offer hay in addition [s16]. This allows the animals to regulate their fiber intake themselves. A practical approach is to offer hay in nets with different mesh sizes, which can regulate the eating speed. The amount of feed should be regularly adjusted to the horse's condition [s12]. A proven tool is the regular documentation of weight and Body Condition Score. In group housing, special attention should be paid to ensure that lower-ranking animals can consume enough feed. Establishing multiple feeding stations that are at least 1.5 horse lengths apart has proven effective. For practical implementation, a detailed feeding plan that

considers the individual needs of each horse is recommended. This should include the exact feeding times, feed quantities, and any special considerations. Changes in the feeding regime should always be introduced slowly over several days to give the digestive system time to adjust.

Feeding behavior [i1]

Glossary

Body Condition Score
A standardized scoring system from 1-9 that allows for the objective assessment of a horse's nutritional condition by palpating specific body areas. The optimal value usually lies between 5-6.

Refeeding Syndrome
A potentially life-threatening metabolic disorder that can occur when undernourished animals are fed normally too quickly. This results in a dangerous drop in phosphate, potassium, and magnesium levels in the blood.

1. 1. 3. Water Supply

The water supply for horses is a complex and vital topic that deserves special attention. Horses exhibit a characteristic drinking behavior as episodic and circadian drinkers - they take long sips with many small gulps several times a day [s17]. An average horse weighing about 450 kg requires approximately 23-38 liters (6-10 gallons) of water daily [s18]. However, this requirement can vary significantly. Water intake is influenced by various factors. Horses that primarily eat hay and grain require significantly more water than horses on lush pasture [s18]. During intense work or high temperatures, the water requirement can increase to 57-76 liters (15-20 gallons) per day [s19]. Particularly lactating mares have a 50-80% increased water requirement [s18]. For the practical implementation of optimal water supply, there are various options: buckets, troughs, or automatic water dispensers are all suitable [s20]. Regular cleaning of the drinking troughs is essential. A practical tip is to check water levels and inspect troughs for contamination daily during stable visits. Automatic troughs should also be tested for functionality weekly. In winter, the water supply presents particular challenges. It is essential to prevent the freezing of water sources [s21]. Heated troughs or special heating rods have proven effective. A cost-effective alternative for buckets is to regularly refill them with warm water or to use floating balls that prevent complete freezing. In athletic use, the water supply is especially important. During intense work, water and electrolytes should be offered regularly in small amounts [s19]. After training, it is advisable to provide warm water at frequent intervals [s22]. A well-established practical tip is to soak hay in water after intense work, which additionally promotes water intake. Monitoring hydration is essential. Signs of dehydration include delayed skin recoil and darker urine [s17]. A simple test is the skin fold test on the neck: when the skin is pulled up, it should immediately return to its original position. If the fold remains for a longer time, this indicates a lack of fluids. Water quality plays an important role. Fresh, clean, and cool water is most attractive to horses [s17]. Ice-cold water should be avoided for overheated, sweaty horses [s23]. Contrary to previous assumptions, horses can also drink when overheated - there is no scientific evidence that they must cool down first [s18]. To promote water intake, sodium chloride can be added to the feed [s17]. Caution is advised with electrolyte supplementation: it should not be forced if the horse is

already dehydrated [s22]. Electrolytes are particularly important during prolonged work or competitions in heat [s20]. Proper hydration is fundamental for many bodily functions, including material transport to and from cells and tissue repair [s23]. Insufficient water intake can lead to colic [s20], which is why the continuous availability of fresh water is essential.

1. 1. 4. Special Nutritional Needs

The special nutritional needs of horses vary significantly and must be tailored individually, especially for older animals, horses with metabolic disorders, or other health limitations. Careful adjustment of the diet is crucial for the health and well-being of these animals [s24]. Older horses present a particular challenge. Their ability to digest and absorb nutrients decreases with age [s24]. A common issue is dental health —regular "Floating" (professional smoothing of sharp tooth edges) is essential for optimal feed intake [s25]. For chewing and digestive problems, feeding soaked beet pulp has proven to be a valuable supplement. It is easily digestible and high in fiber [s25].

For horses with metabolic disorders such as the Equine Metabolic Syndrome (EMS), a strictly controlled diet is essential [s26]. The ration should be low in sugar and starch to avoid blood sugar spikes. In practice, this means:
- Limiting grazing time, especially on lush pastures
- Using special high-fiber hay with low sugar content
- Distributing the daily ration into many small portions
- Regular exercise to support metabolism

When grazing, special care is required. While healthy horses can meet most of their nutritional needs through grazing [s27], the grazing management for horses with special needs must be adjusted. A proven approach is the use of grazing muzzles or limiting grazing time to the early morning hours when the sugar content in the grass is lowest. For horses with joint problems, avoiding overweight is particularly important [s28]. The feed ration should be energetically adjusted but contain all necessary nutrients. Additionally, special joint supplements may be beneficial. A practical tip is to use feed scales and regularly monitor the Body Condition Scores. Creating an individual feeding plan should always be done in consultation with a veterinarian or qualified nutritionist [s26]. It is important to establish a feeding budget that considers the horse's special needs while remaining economically viable [s29].

In the practical implementation of special feeding plans, the following measures have proven effective:
- Keeping a feeding diary to document feed amounts and reactions
- Regular weight checks using a measuring tape or scale
- Adjusting feeding in small increments
- Observing manure consistency and appetite

Feeding must be specifically tailored to the individual horse [s30]. What is optimal for one horse may be unsuitable or even harmful for another. Especially in older horses, needs can vary greatly—while some require little adjustment, others need a completely revised feeding strategy [s25].

Glossary

Body Condition Score
A standardized scoring system from 1-9 used to assess a horse's nutritional status based on fat deposition and musculature.

Equine Metabolic Syndrome
A metabolic disorder in horses characterized by insulin resistance, obesity, and an increased risk of laminitis.

Floating
A dental treatment for horses in which special rasps are used to smooth the chewing surfaces of the molars to ensure better chewing function.