

# Unit 14: Understand the Principles of Horse Rehabilitation and Therapy

<b>Unit code:</b>	<b>J/601/0347</b>
<b>QCF Level 3:</b>	<b>BTEC National</b>
<b>Credit value:</b>	<b>10</b>
<b>Guided learning hours:</b>	<b>60</b>

## ● Aim and purpose

This unit aims to provide learners with an understanding of the principles of horse rehabilitation and therapy and how these can be applied in practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or further education and training.

## ● Unit introduction

Participation in competitive disciplines continues to grow in popularity within the horse industry. One of the results of this has been a greater demand for horse rehabilitation and therapy, as both the risk of injury and the need for a higher level of performance increase. This is coupled with modern technological advances being increasingly used in veterinary medicine, as well as an increase in interest in complementary and holistic approaches to horse health.

This unit will develop learner understanding of common sites and types of performance injuries and their causes and effects, relating them to different disciplines. This understanding is important in order to help prevent them occurring, but is also an important foundation to understanding their diagnosis, treatment and rehabilitation.

Learners will develop an understanding of the associated diagnostic and therapeutic techniques and their uses and effects. A wide range of rehabilitation techniques used to improve performance, both conventional and complementary, will be investigated. The laws and regulations relating to equine rehabilitation, and their impact, are also covered in this unit.

## ● Learning outcomes

**On completion of this unit a learner should:**

- 1 Understand the nature of horse performance injuries
- 2 Understand the requirements and effective use of therapeutic and diagnostic techniques
- 3 Know equine rehabilitation techniques used to improve performance, including complementary therapies
- 4 Know the laws and regulations relating to equine rehabilitation.

# Unit content

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## 1 Understand the nature of horse performance injuries

*Performance-related injuries and conditions:* common sites (eg common in eventing, racing, show jumping, dressage); types (eg strains, sprains, fractures, wounds, dislocations); effects and responses (eg physiological, infections, inflammation, concussion, immunological, psychological, behavioural)

*Causes of poor performance:* eg fatigue, inadequate fitness, inadequate training, conformation, horse/rider interaction, injuries or underlying conditions (eg musculoskeletal, respiratory, cardiovascular, nervous, gastrointestinal)

*Processes for identifying injury:* history; observation; physical examination; health checks; lameness analysis (eg trotting up, lungeing, loose schooling, flexion tests)

## 2 Understand the requirements and effective use of therapeutic and diagnostic techniques

*Therapeutic techniques:* use for different injuries and conditions; methods of use (eg application, length, frequency); procedures (eg stabilise, initiate therapy, monitor progress); types of therapy (eg nursing, rest, controlled exercise, medication, ultrasound, laser, surgical, diet, management, massage, herbalism, acupuncture and acupressure, homeopathy, chiropractic, osteopathy); effects

*Diagnostic techniques:* types eg nerve blocks, radiography, ultrasound, nuclear scintigraphy, thermography, endoscopy, gastroscopy, electrocardiography, sample analysis (eg blood, urine, bronchoalveolar lavage, biopsy); evaluate use

## 3 Know equine rehabilitation techniques used to improve performance, including complementary therapies

*Rehabilitation techniques:* use for different scenarios; methods of use (eg application, length, frequency); effects; types eg working from the ground, ridden work, exercise programmes, horse walker, hot and cold therapy, physiotherapy, ultrasound, massage and stretching, hydrotherapy and swimming, treadmills

*Complementary therapies for rehabilitation:* use for different scenarios; methods of use (eg application, length, frequency); effects; types eg chiropractic, osteopathy, acupuncture and acupressure, magnetotherapy, laser, Bowen Technique and Equine Muscle Release Therapy (EMRT), touch, electrical stimulation, herbalism, homeopathy, aromatherapy, shiatsu, reiki

*Methods of assessing effect:* eg research on clinical efficacy, case studies, qualifications and credentials, time off work, measures of performance improvement (eg degree of lameness, recovery rates, competition results, behaviour and attitude); difficulties of measuring effect accurately

#### 4 Know the laws and regulations relating to equine rehabilitation

*Legislation and regulations relating to treatment:* current legislation; qualifications; authorised treatments; governing bodies; registration; impact (eg protecting welfare, protecting consumers, restricting welfare, restricting consumer choice, protecting/restricting practitioners, regulation of practices)

*Practitioners:* eg veterinary surgeons, veterinary specialists, horse hospitals, physiotherapists, equine dentists, farriers, complementary practitioners

*Veterinary referral:* procedure (eg investigation, diagnosis, second opinion, referral to other practitioners)

*Factors associated with rehabilitation referral:* eg costs, insurance, loss of use, time out of training, travelling, welfare, retirement, euthanasia, quality of service, efficacy

## Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
<b>P1</b> explain the common sites of performance- related injuries and conditions found in the horse [SM]	<b>M1</b> describe the types of common performance - related injuries and conditions in horses	<b>D1</b> analyse the effects of common performance- related injuries and conditions in horses
<b>P2</b> discuss the factors that put horses at risk of injury [SM]		
<b>P3</b> discuss the processes used for identifying injury [SM]		
<b>P4</b> review the use of therapeutic techniques [SM, EP]	<b>M2</b> analyse the effects of selected therapeutic techniques	<b>D2</b> justify the use of selected therapeutic techniques.
<b>P5</b> compare the use of therapeutic techniques [SM, EP]		
<b>P6</b> evaluate diagnostic techniques used in specific injuries/conditions of the performance horse [SM, EP, IE]		
<b>P7</b> review rehabilitation techniques [SM, EP]	<b>M3</b> examine methods of assessing the effect of rehabilitation techniques, including complementary therapies	
<b>P8</b> evaluate the use of complementary therapies used to support rehabilitation [SM, EP, IE]		
<b>P9</b> justify the use of selected rehabilitation techniques and complementary therapies [SM, EP, IE]		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
<b>P10</b> outline legislation and regulations relating to the treatment of horses for given practitioners [SM]	<b>M4</b> evaluate the impact of current legislation and regulations relating to the treatment and rehabilitation of horses.	
<b>P11</b> discuss the procedures for veterinary referrals [SM]		
<b>P12</b> describe factors associated with equine rehabilitation referral. [SM]		

**PLTS:** This summary references where applicable in the pass criteria, in the square brackets, the elements of the personal, learning and thinking skills. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

<b>Key</b>	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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# Essential guidance for tutors

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## Delivery

In order to study this unit, learners should have access to horses and, ideally, witness the daily challenges associated with managing performance horses. Centres are encouraged to manage their horses in a way that gives learners the opportunity to witness complementary therapies in action. Alternatively, centres could arrange for guest speakers and demonstrations, as well as visits.

Learners should have a basic knowledge of anatomy, physiology and horse health to study this unit.

Adequate time should be given to cover a wide range of rehabilitation and therapy techniques, as suggested in the unit content.

Common sites and types of performance-related injuries and conditions could be delivered through a combination of formal lectures and research tasks, but reinforced through video footage or practical involvement in different disciplines. This would enable learners to observe the differing demands on the horse's body. Causes of poor performance could be highlighted through spectating at or taking part in competitions. The processes for identifying injuries, the first, more practical phase of diagnostic techniques, would benefit from being delivered using practical demonstrations and learner participation. Health and safety precautions must be observed at all times, for example the use of personal protective equipment (PPE). Time spent developing their understanding of the injuries and conditions and their causes and effects, should make learners better able to understand the diagnosis, treatment and rehabilitation of horses in their care.

Learning outcome 2 could be linked to learning outcome 1, through using the same examples of performance-related injuries and conditions, to discuss diagnostic and therapeutic techniques. There is a clear link between processes for identifying injuries and diagnostic techniques. A range of diagnostic techniques must be identified and their uses evaluated. Delivery could be through a combination of formal lectures, discussion and research tasks, work experience, visits to yards and veterinary practices or hospitals, guest speakers or demonstrations. All of the above approaches could be used to deliver understanding of the uses and effects of a range of therapeutic techniques. It is worth noting that some methods of treatment may be considered as complementary, so there could be some cross over with learning outcome 3. In the case of both diagnosis and therapy, learners should have the opportunity to witness the practical application of these techniques wherever possible.

Rehabilitation techniques have a clear link to therapeutic techniques as it is often difficult to define where and when therapies are used to treat or improve performance, and they frequently overlap. Similarly, it can be difficult to define which therapies are considered as complementary, and again, there may be some cross over. Learners will benefit from using a similar approach to delivery for learning outcome 2, including having the opportunity to witness the practical application, and even use these techniques, wherever possible. Health and safety precautions must be observed at all times, for example use of PPE.

Laws and regulations, and the associated issues, have an impact on diagnosis, treatment and rehabilitation, so linking learning outcome 4 effectively with learning outcomes 2 and 3. Learners should consider these issues to inform their understanding of the reality of treating and rehabilitating injured horses. Discussion and research tasks are likely to be effective approaches.

## Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value.**

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction and overview of the unit.
<b>Assignment 1: Performance Horse Injuries</b> (P1, P2, P3, M1, D1)
Tutor introduces the assignment.
Theory sessions: performance- related injuries and conditions – sites (relating to disciplines), types, effects, responses
Video footage/practical involvement in disciplines.
Discuss causes of poor performance.
Spectating at/taking part in competitions.
Discuss processes for identifying injury
Time allocated for practical demonstration and participation in processes.
<b>Assignment 2: Horse Diagnosis, Therapy and Rehabilitation</b> (P4, P5, P6, M2, D2, P7, P8, P9, M3)
Tutor introduces the assignment.
Theory sessions: diagnostic, therapeutic and rehabilitation techniques (including complementary therapies) – types, application, methods of use, procedures, effects.
Time allocated for learner research on the above.
Time allocated for visits guest speakers/demonstrations practicals.
Time allocated for learner presentations.
Discuss methods of assessing effect of rehabilitation.
<b>Assignment 3: Laws and Regulations for Horse Rehabilitation</b> (P10, P11, P12, M4)
Tutor introduces the assignment.
Theory session: legislation and regulations for treatment and rehabilitation
Time allocated for discussion, learner research and feedback.
Discuss referral procedures and associated factors.
Unit review.

## Assessment

For P1, learners must explain the common sites of performance-related injuries and conditions relating to specified disciplines. They should cover a range of common disciplines, and in each case identify and explain a range of common sites of problems. Explanations will show how the demands of different activities may cause a pre-disposition for particular problems. Diagrams may be used to support explanations.

P2 requires learners to discuss possible causes of poor performance in horses. Case studies, scenarios, or specific examples taken from P1, could be used as a framework for discussing this issue. A range of causes should be covered, as suggested in the unit content.

For P3, learners will discuss the processes used to identify injuries. Replication of work carried out for P6 should be avoided, using the unit content for guidance on the differentiation. Discussion could take place verbally in a practical context as an alternative to written evidence.

For P4 and P5, learners will review and compare the use of therapeutic techniques. This should encompass a brief overview of procedures for dealing with an injury/condition, as well as detail on different specific types of

therapy. How techniques are used should be reviewed, as well as their application in differing situations. Case studies, scenarios, or specific examples of injuries/conditions, could be used as a framework for discussing this issue. Presentations would be suitable evidence.

P6 requires learner to evaluate diagnostic techniques used in specific injuries/conditions of the performance horse. Some discussion of how these tools work, how they are used, and particularly their differing applications, will help learners to evaluate them. Again, case studies, scenarios, or specific examples of injuries/conditions, should be used as a framework for discussing this issue. P6 could be linked to P4 and P5 through use of the same examples of injuries/conditions, where learners investigate the method of diagnosis followed by treatment methods for selected scenarios.

For P7, learners will review rehabilitation techniques. How the techniques are used should be reviewed, as should their application in differing situations. Case studies, scenarios, or specific examples of performance improvement, could be used as a framework for discussing this issue. Presentations or a poster would be suitable evidence.

For P8, learners will evaluate the use of complementary therapies used to support rehabilitation. Some discussion of how these therapies work, how they are used, and particularly their differing applications, will help learners to evaluate them. Again, case studies, scenarios, or specific examples of performance improvement, should be used as a framework for discussing this issue. Presentations or a poster would be suitable evidence.

P9 builds on P7 and P8, as learners must justify the use of selected rehabilitation techniques and complementary therapies. Some discussion of how the techniques work, and any positive or negative effects on the horse and its performance, will aid learner understanding and evaluation. Using scenarios or specific examples of performance improvement, learners could make recommendations about the rehabilitation techniques to use. Justification for these choices must be given.

For P10, learners must outline legislation and regulations relating to the treatment of horses for given practitioners. A range of different practitioners should be covered and their associated roles, restrictions and governing body regulations.

P11 and P12 require learners to discuss procedures for veterinary referral and factors associated with rehabilitation referral. Discussion should highlight a range of associated practical aspects, demonstrating learner understanding of the reality of treating and rehabilitating injured horses.

M1 will build on P1 by learners selecting different types of performance-related injuries and conditions and describing them.

For M2, learners will analyse the effects of the therapeutic techniques discussed for P4 and P5. How the techniques work should be discussed, as well as any positive or negative effects on the horse and its recovery.

For M3, learners must examine methods of assessing the effect of rehabilitation techniques, including complementary therapies. A range of methods and their merits should be covered, as suggested in the unit content.

M4 requires learners to evaluate the impact of current legislation and regulations relating to the treatment and rehabilitation of horses. The impact on horses, their owners and practitioners should be included.

For D1, learners will build on M1, by learners analysing the effects of the performance-related injuries and conditions they have described. How the body responds to them and the overall effect on the horse should be covered.

D2 requires learners to justify the use of selected therapeutic techniques. Using scenarios or examples of specific injuries/conditions, learners could make recommendations about the therapeutic techniques to use. Justification for these choices must be provided.

## Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, P3, M1, D1	Performance Horse Injuries	<p>Explain and describe the sites of injuries common in different disciplines.</p> <p>Analyse the effects and the responses to injuries.</p> <p>Discuss causes of poor performance.</p> <p>Discuss processes for identifying injury.</p>	<p>Written evidence.</p> <p>Verbal discussion.</p> <p>Practical.</p>
P4, P5, P6, M2, D2, P7, P8, P9, M3	Horse Diagnosis, Therapy and Rehabilitation	<p>Investigate diagnostic, therapeutic and rehabilitation techniques, including complementary therapies. Link them to specific examples of injuries/conditions.</p> <p>Examine methods of assessing effects.</p>	<p>Written evidence</p> <p>Presentation/poster.</p>
P10, P11, P12, M4	Laws and Regulations for Horse Rehabilitation	<p>Discuss legislation and regulations for the treatment and rehabilitation of horses and evaluate their impact.</p> <p>Explain aspects of veterinary referral.</p>	<p>Written evidence.</p>

## Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Land-based sector suite. This unit has particular links with:

Level 2	Level 3
Understand the Principles of Horse Biology	Understand the Principles of Animal Biology
Maintain Animal Health and Welfare	Understand Animal Anatomy and Physiology

## Essential resources

Learners will need access to horses and the opportunity to use and/or observe diagnosis, treatment and rehabilitation techniques, as well as a range of library material and the internet.

## Employer engagement and vocational contexts

Centres are strongly encouraged to create and develop links with equine veterinary practices and hospitals and a range of equine establishments and practitioners. This could be via guest lectures, workshops, demonstrations, work placements or visits to see a range of techniques in action.

## Indicative reading for learners

### Textbooks

Brennan M – *Complete Holistic Care and Healing for Horses* (Trafalgar Square Publishing, 2001)  
ISBN 1570760454

Bromiley M – *Equine Injury, Therapy Rehabilitation, Third Edition* (Blackwell Publishers, 2007)  
ISBN 1405150610

Bromiley M – *Natural methods for equine health and performance, Second Edition* (Blackwell Publishers, 2009)  
ISBN 1405179295

Emich G – *Naturopathy for Horses* (J A Allen, 1994) ISBN 085131600X

Hastie S – *The BHS Veterinary Manual* (Kenilworth Press, 2006) ISBN 1872082572

Loving N and Johnston A – *Veterinary Manual for the Performance Horse* (Blackwell Science, 1996)  
ISBN 0632041668

Marlin D and Nankervis K – *Equine exercise physiology* (Blackwell Publishers, 2002) ISBN 0632055529

Sutton A – *The Injured Horse* (David & Charles Ltd, 2003) ISBN 0715314211

### Magazines

*Equus*

*Horse and Hound*

*Horse and Rider*

*Your Horse*

## Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
<b>Independent enquirers</b>	analysing effects of injuries analysing effects of therapies evaluating diagnostic techniques evaluating the use of complementary therapies examining methods of assessing the effect of rehabilitation evaluating the impact of current legislation and regulations relating to treatment justifying the use of selected therapeutic techniques justifying the use of selected rehabilitation techniques and complementary therapies
<b>Self-managers</b>	completing all work for assessment
<b>Effective participators</b>	participating in presentations poster on diagnostic, therapeutic and rehabilitation techniques.

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
<b>Independent enquirers</b>	researching performance injuries/conditions researching diagnostic, therapeutic and rehabilitation techniques investigating legislation and regulations relating to treatment and rehabilitation of horses
<b>Reflective learners</b>	reviewing their progress.

## ● Functional Skills – Level 2

Skill	When learners are ...
<b>ICT – Find and select information</b>	
Select and use a variety of sources of information independently for a complex task	using the internet to research information on diagnostic, therapeutic and rehabilitation techniques using the internet to research information on legislation and regulations
<b>ICT – Develop, present and communicate information</b>	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> <li>• text and tables</li> <li>• images</li> <li>• numbers</li> <li>• records.</li> </ul>	producing written assignments using ICT programmes producing a poster/PowerPoint presentation on diagnostic, therapeutic and rehabilitation techniques
Bring together information to suit content and purpose	producing a poster PowerPoint presentation on diagnostic, therapeutic and rehabilitation techniques
Present information in ways that are fit for purpose and audience	producing a poster/PowerPoint presentation on diagnostic, therapeutic and rehabilitation techniques
<b>English</b>	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	Producing a poster/PowerPoint presentation on diagnostic, therapeutic and rehabilitation techniques
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	reading and utilising information on diagnostic, therapeutic and rehabilitation techniques reading and summarising information on legislation and regulations
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	completing the range of written assignment work.