

# Frequently Seen Long Term Health Conditions and Impairments

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## INTRODUCTION

Equestrian activity can help in many ways depending on the long-term health condition. Equestrian activity in RDA covers riding, driving, vaulting and unmounted activities with a horse. Further reading may help understand the implications of the long-term health condition on participants. Please use trusted sources such as an RDA Physio or the recommended websites in this document for further support.

This document describes the most often found health conditions and impairments within an RDA environment; however, we strive to follow a social model of disability where possible. The model says that people are disabled by barriers in society, not by their impairment or difference. Barriers can be physical, like buildings not having accessible toilets. Or they can be caused by people's attitudes to difference, like assuming disabled people can't do certain things. If a person has a condition not covered within this document, please speak to your regional physio or regional coach for advice.

The social model helps us recognise barriers that make life harder for disabled people. Removing these barriers creates equality and offers disabled people more independence, choice, and control.

Not everyone uses, knows or understands the social model and that's ok. How anyone chooses to talk about their impairment is up to them. There is more advice on use of language in the video listed at the end of this document.

**RIDING** is not suitable for every participant. If you are unsure, please ask a physio, occupational therapist or a more experienced coach in your group, county or region for advice. Make sure to include the participant, parent and carer in this discussion.

**CARRIAGE DRIVING** may be more suitable if the participant cannot mount /dismount safely or has problems with posture control and balance or they cannot maintain a balanced/ optimal lower leg position due to muscle tightness or weakness. Some participants who are over the weight limit for riding may be able to drive where there is a suitable horse/carriage combination.

**GROUNDWORK** activities may be more suitable if the long-term health condition or impairment is a contraindication for riding and or driving. If the person lives with anxiety, it is a useful introduction to being around horses.

**VAULTING** is especially suitable for young people who would enjoy the group environment and are more ambulant, but do not discount potential participants who cannot walk beside the horse, this is not essential. One-to-one sessions are also suitable for some. People with dyspraxia, ADHD and ASD could find this very beneficial. For some participants, they may only use the barrel and not a real horse.

**MECHANICAL HORSE** is useful for initial assessments of participants. Groups use the MH to help participants that can't access mounted activities on a horse due to weight limits, difficulty in mounting or riding as frequently a hoist may be available and more support can safely be given on the MH. The MH is useful to learn and improve riding skills prior to practicing on a horse. Most of the advice for riding also applies to the MH. If you are unsure, contact an RDA Physio or an experienced group who uses them regularly. Models will vary in their weight limits so do check with the manufacturer.

Throughout this guide, 'RDA activities' is used to cover all the above; but, if something is specific to one discipline, this is highlighted. The term participant is used throughout, although it is likely that you will also have several volunteers with some of the long-term health conditions listed.

## NEUROLOGICAL and NEUROMUSCULAR CONDITIONS

### 1. Acquired Brain Injury

#### Condition

Damage to the developed brain. This could be due to an accident, fall, near drowning, tumour, poisoning or infection (e.g. meningitis)

#### Symptoms

- Changes in muscle tone or muscle weakness
- Changes in sensation on one or both sides of the body
- Balance problems, loss of motor memory, (forgotten a skill such as walking)
- Change in personality, mood swings, difficulty planning/organising or a loss of memory.
- They may also have seizures and sensory problems.

#### How RDA activities can help

- The walking pattern of the horse whilst riding can help restore the motor memory of walking. It will also help activate balance reactions and help improve core strength and sitting balance.
- Muscle tone may be normalised, and functional activities can be improved by activities using the upper limbs e.g., passing objects from hand to hand, posting etc.
- For those who cannot sit astride Driving will help improve coordination and planning. As with other neurological conditions there are a huge range of abilities and if carriage driving or riding causes pain or increased muscle tightness then groundwork might be more appropriate.
- Hippotherapy may be required before being able to participate in an RDA group setting. This is delivered by a qualified physio, OT or Speech and language therapist who has had specialist postgraduate training.

### 2. Cerebral Palsy

#### Condition

Is a neurological disorder of movement resulting from a permanent, non-progressive defect or lesion in the immature brain. This could be from damage in the motor cortex in the brain which will affect movement. Cerebral Palsy is a congenital condition and those who have the condition vary in their physical and learning abilities. There are different classifications of cerebral palsy dependent on the distribution of the abnormal tone and symptoms: i.e., diplegia, hemiplegia, and quadriplegia. They may show distinct types of muscle activity such as hypertonia, hypotonia, athetosis, ataxia, or dyskinesia.

#### Symptoms

- Not only does CP affect individual movements, but also balance, use of the eye muscles, breathing, speech and swallowing, and facial expression.
- When the sensory cortex is affected, it will cause sensory issues such as visual impairments and spatial/perceptual awareness. Some people are unaffected in their intellectual ability, others can be generally affected in their development.

- Participants with Cerebral Palsy have changes in their muscle tone, either causing high tone (hypertonia or spasticity) or low tone (hypotonia) or a mixture of both. Muscle tone is the amount of tension in our muscles that help keep our bodies upright and allows us to move in a controlled manner. If there is high muscle tone (sometimes referred to as spasticity), movement will be stiff and there may be a limited range of movement in some joints. If they have a lower tone, they will find it difficult to maintain their posture on a horse or in a moving carriage.
- Some people with CP lack postural stability and have exaggerated movement which is difficult for them to control (dyskinesia). Participants with CP are likely to show muscle fatigue more quickly than usual.
- Growth and environmental factors will affect their development and very often as they get older these problems are more difficult to manage, particularly during adolescence when there are hormonal influences and growth spurts.
- Re-assessment at regular intervals is necessary. Participants with cerebral palsy may also have epilepsy.
- Participants with cerebral palsy often need careful assessment of their methods of mounting and dismounting, or entering/exiting a carriage, allowing them the time and encouragement to use their abilities to actively participate, while keeping them safe.

You may have to work harder to understand some participants' speech. Many will have excellent understanding, and everyone should be spoken to directly, rather than assuming that a carer/companion will answer for them. Some participants with CP may use communication aids or augmentative communication such as Makaton, symbol book or voice output electronic aid.

### **How RDA activities can help**

- Riding helps to normalise muscle tone by the steady, rhythmical, regular, repetitive movement of the horse helping to relax high tone or brisk, bouncy movement stimulating low tone.
- It also helps improve awareness of movement and balance, which helps with sensory integration. Muscles can be strengthened, and joint range may be maintained. RDA activities also give a huge sense of achievement and can improve self-confidence and self-esteem.
- Driving may be more appropriate if the participant cannot mount safely and can be comfortably seated in a moving carriage. Driving offers these participants the benefit of an activity that promotes motor planning and spatial awareness and communication as well as the feeling of wellbeing brought about by being outdoors involved in an active sport as well as socialisation.
- However, if the participant lacks head control or is negatively affected by the carriage movements groundwork might be a better activity.
- Hippotherapy will be of benefit if the rider is unable to maintain an upright position and is struggling with leg tightness / pain/ poor coordination, and balance which may affect their position and ability to absorb the equine's movement.
- Vaulting allows plenty of time for participants to plan and carry out moves

A useful resource is here [Its okay to play \(cpsport.org\)](https://www.cpsport.org/)

More general information may be obtained from: <https://www.scope.org.uk/>

### **3. Dementia**

#### **Condition**

This is a neurological condition with onset in adulthood. There are several types of dementia of which one is Alzheimer's. There is a gradual loss of skills, both mental and physical.

#### **Symptoms**

- Memory loss – memories from a long time ago may be recalled more easily than recent events.
- Difficulty concentrating.
- Struggling to follow a conversation and recalling words.
- Becoming confused about times and places
- Finding it increasingly difficult to carry out everyday tasks, that had been easy.
- Mood swings.
- Increasing difficulty moving around is associated with Cerebrovascular Dementia.
- Repeatedly asking questions is associated with Alzheimer's.

#### **How RDA activities can help**

- Opportunities to socialise. ('Tea with a pony')
- Opportunities to take part in gentle exercise, mounted or groundwork.
- Interacting with the horse can bring back memories especially if the participant had ridden before.
- Maintain communication skills.

More general information can be obtained from: [https://www.alz.org/alzheimers-dementia/10\\_signs](https://www.alz.org/alzheimers-dementia/10_signs)

<https://www.dementiauk.org/>

### **4. Epilepsy (See RDA's policy on Epilepsy):**

#### **Condition**

A neurological disorder that causes seizures due to a disturbance in the electrical activity in the brain. It can occur at any time in life. Once diagnosed often this is controlled by medication. Seizures are divided into groups depending on where they start in the brain and the symptoms experienced.

#### **Symptoms**

- Symptoms range from short absences and mild jerking of a limb/s to severe generalised jerking throughout the whole body with a loss of consciousness. There is usually a period of confusion and drowsiness following a seizure.
- Some participants will get a warning that they will have a seizure such as sounds, tingling or smells.
- Uncontrolled epilepsy is a contraindication. Participants whose epilepsy is well controlled may still have a seizure during a session so a risk assessment, staff training, and set procedures need to be in place.

## How RDA activities can help

This depends on whether there are any other medical conditions associated with epilepsy. However, sessions will help improve the mental and physical well-being of the participant, improve self-confidence, and learn new skills.

More general information can be obtained from: <https://epilepsysociety.org.uk/>

## 5. Multiple Sclerosis

### Condition

This is one of the most common progressive acquired neurological conditions and usually starts in early adulthood. The pattern of the disease is often a series of acute episodes (relapses) where damage occurs to areas of the nervous system, followed by a period of remission. This is called as relapsing-remitting M.S. This leads to increasing disability due to problems with signals being unable to travel down the nerves. There are other types of M.S such as primary progressive, where there are no periods of remission, or secondary progressive, where people who started with relapsing/remitting disease stop having periods of remission as the disease progresses.

### Symptoms

- Participants with Multiple Sclerosis may have Spasticity and loss of coordination of movement affecting function.
- Speech may be slurred, vision may be impaired, and sensation is often affected.
- Fatigue should be avoided but activity during periods of remission is particularly important.
- Participants may experience brain fog and may find following instructions or retaining information difficult.

## How RDA activities can help

- Exercise Improves balance and coordination and helps to maintain muscle power.
- Improves or maintains breathing capacity.
- Social interaction is particularly important.
- Driving can help with physical and mental wellbeing if preferred, especially if riding is not possible.

### Precaution

- Check for pressure areas and consider extra padding or a seat saver if the sensation is affected.

More general information can be found on the pages of various charities such as

[MS Society UK | Information, research and support | MS Society](#)

## 6. Muscular Dystrophy

### Condition

A progressive neuromuscular disease. There are many distinct types caused by a genetic mutation which interferes with the production of proteins needed to form healthy muscles. They all cause progressive muscle wasting. The most common type is Duchene Muscular Dystrophy which predominantly occurs in

boys. Muscles of the lower limb tend to be affected first, with difficulty noticed in running, jumping, climbing stairs, and getting up off the floor. People with the condition will usually only live into their 20s or 30s.

### **Symptoms**

- Difficulty with running and walking in the initial stages, but as the disease progresses standing and sitting unaided will become difficult.
- Those who are wheelchair users are at risk of developing scoliosis (curvature of the spine) and joint contractures.
- They may also have respiratory problems.
- One subgroup also has ASD and ADHD

### **How RDA activities can help.**

- Shorter sessions or frequent rests will be beneficial. Riding may help in that the riders enjoy the feeling of the movement, exercising in a non-clinical environment and the social benefits.
- As with most neurological conditions if poor head control or the movement of the carriage cause pain or increased muscle tightness groundwork might be more appropriate.
- In the later stages driving may be more appropriate as mounting may become too challenging. Any exercise is beneficial to help maintain muscle strength and length, but care should be taken not to fatigue these participants.

More general information can be obtained from: <https://www.muscular dystrophyuk.org/>

## **7. Spina Bifida**

### **Condition**

Spina bifida is when a baby's spine and spinal cord do not develop properly in the womb, causing a gap in the spine. Failure of the vertebral bodies in the spine to fuse over the spinal cord in utero (the womb) leads to damage to the spinal cord. This usually occurs in the lower spine. The severity of symptoms and impact on the body depends on the size and location of the lesion. This means the lower limbs and trunk are affected and the upper limbs and trunk may have good movement and strength.

### **Symptoms**

- may have incontinence, loss of sensation below the lesion (possibly the saddle area), muscle paralysis and spinal deformity.
- It is often accompanied by Hydrocephalus, where there is an accumulation of cerebral spinal fluid in the brain, which causes brain damage. A shunt is often inserted into the skull to allow the fluid to drain into the abdominal cavity. Hat fitting may be difficult when participants have a shunt behind the ear. A shunt is a hollow tube surgically placed in the brain (or occasionally in the spine) to help drain cerebrospinal fluid and redirect it to another location in the body where it can be reabsorbed.

### **How RDA activities can help**

- Riding can help with well-being.
- Develop the person's ability to plan and learn routines.
- Promote good breathing.
- Develop social interaction skills.

## Precautions

- If there is a shunt avoid having the head lower than the waist.
- Ensure hydration on warm days.
- Inform carers if the participant says they have headaches or are feeling uncomfortable. (shunts can get blocked)

More general information can be obtained from: <https://www.shinecharity.org.uk/>

Or <https://www.sbhscotland.org.uk/> (in Scotland)

## 8. Spinal cord injuries

### Condition

Spinal cord injuries may occur due to an accident, such as a fracture or dislocation of the spine, or illness such as a tumour.

### Symptoms

- There may be complete or partial paralysis and loss of sensation below the site of the injury. The participant may suffer from incontinence.
- Quadriplegia results when there is an injury to the neck. The upper and lower limbs and most of the trunk are affected. There may be spasticity in the lower limbs and weakness in the upper limbs. Paraplegia is an injury to the thoracic or lumbar spine involving the lower limbs and lower trunk muscles.

### How RDA activities can help

- Participants with paraplegia may ride and drive well as their balance is typically good, but they may have spasticity in their lower limbs.
- Mounting can be difficult, and a hoist may be necessary.
- Care must be taken of the skin to prevent pressure or friction as they will have little or no sensation.
- For those with quadriplegia, driving is more appropriate, and they can experience the benefits of being in the outdoors and of feeling in control of the carriage.
- Those who can ride may enjoy being able to take part in a sport as well as learning a new skill.
- Their physical and mental wellbeing should also improve.
- A short course of hippotherapy may help if skills are lost following a period of remission.

More general information can be obtained from: <https://www.spinal.co.uk/>

## 9. Spinal Muscle Atrophy

### Condition

A genetic condition which affects the nervous system and movement. There is a gradual loss of nerve cells in the spinal cord resulting in a weakness of voluntary muscle.

### Symptoms

- There are 4 types, type 1 is early onset usually detected in infancy and has the most severe disability. These children are often more suitable to be seen by a chartered physiotherapist for hippotherapy



as they often present with poor head control which can compromise their airway if not handled correctly.

- Later onset types 2 and 3 are less severe with type 4 seen in adults. The muscles affected are mainly those closest to the centre of the body.
- Scoliosis and respiratory problems may develop as the disease progresses.
- The coach should seek advice from a physiotherapist if further advice is required.

#### **How RDA activities can help**

- Riding/driving will help maintain the physical and mental well-being of the participants.
- Posture and balance may benefit from riding/driving.
- Care should be taken not to fatigue the participant. Shorter sessions or frequent rests will be beneficial.

More general information can be obtained from: <https://smauk.org.uk/>

### **10. Stroke (cerebral vascular accident)**

#### **Condition**

A stroke is a serious life-threatening medical condition that occurs when the blood supply to part of the brain is cut off, either because of a clot or a bleed in an artery in the brain. This causes damage to the neurological system. The sooner a person receives treatment for a stroke, the less damage is likely to happen.

#### **Symptoms**

- Participants with a Stroke may have Increased muscle tone in one arm and leg on the same side of the body. The leg may be stiffly extended, and the arm flexed (bent) into the body. The bleed on the brain will have occurred on the opposite side to the affected limbs.
- Asymmetrical posture and loss of normal movement will produce problems with balance and functional activities.
- Where paralysis is on the right side in a person with the most common (right hand) dominance, there will often be problems with speech and language.
- They may also have difficulty with scanning the visual field to one side and seeing objects approaching from that side.
- Stroke patients can have painful subluxed shoulders and therefore good handling and appropriate special tack may be required if only one arm is functional.

#### **How RDA activities can help**

- The symmetrical movement when mounted on a horse encouraging a centred seat, combined with performing bilateral activities (using both sides of the body) helps to regain symmetry.
- The movement of the equine when riding or vaulting will help to normalise the muscle tone on the affected side. Active exercises will help strengthen muscles.
- Driving can help with improving strength and symmetry in the upper limbs.
- Groundwork may be a better option if there is reduced head control or the movement of the carriage cause negative effects such as pain or increased tightness in the muscle.

- It is important that participants have a stable blood pressure, when undertaking any form of exercise.

### **Precautions**

Balance, spatial orientation, and sensation may be affected. Poor balance and coordination mean an increased likelihood of falls. Be especially careful when entering/exiting the carriage or mounting/dismounting. Participants with a neurological disorder may have difficulty regulating body temperature. This should be considered during extremes of weather.

More general information can be obtained from: [Stroke Association | Home](#)

## **ORTHOPAEDIC CONDITIONS**

### **1. Arthritis**

#### **Condition**

- (1) **Rheumatoid Arthritis** – a degenerative and progressive systemic disease that may affect any or all joint, particularly those of the hands and feet. Acute flare ups may occur.
- (2) **Osteo-Arthritis** – A degenerative disease of joints, often related to previous injury or wear and tear on weight bearing joints, often unilaterally.

#### **Symptoms**

- (1) **Rheumatoid Arthritis** – can occur in children (STILL'S DISEASE) or adults and will produce acute inflammation of the joints, deformity and muscle wasting. Pain may often be present.
- (2) **Osteo-Arthritis** – Pain and loss of movement.

#### **How RDA activities can help**

- Pain is the limiting factor in both rheumatoid and osteo-arthritis. Riding or carriage driving should be avoided when any joint is acutely inflamed.
- Gentle rhythmic movement may help to reduce pain and aid relaxation.
- If the participant has had surgery, approval should be sought from the surgeon before riding is restarted.

More general information can be obtained from: <https://www.versusarthritis.org/>

### **2. Amputations/limb length differences**

#### **Condition**

- This may exist from birth or due to trauma or disease. A prosthesis may be worn.

#### **Symptoms**

- Balance will be affected due to asymmetry of weight distribution and lack of proprioception in the missing limb.
- They may suffer from “phantom” limb pain.
- The participant may have associated emotional problems which may not initially be obvious to the team.

## How RDA activities can help

- It can help retrain balance.
- boost confidence
- enable the participants to excel at a skill/sport.

### 3. Musculo-skeletal conditions

#### Condition

- Acquired conditions of joints and muscles of the entire body. Structures affected may include ligaments, tendons and joint capsules.

It is strongly recommended that the advice of a Chartered Physiotherapist is sought as riding may be contra-indicated in some conditions.

## NEURODIVERSITY

### 1. ADHD (attention deficit hyperactivity disorder)

#### Condition

ADHD is a neurodevelopmental condition affecting the brain and its way to process information and control behaviours, attention, impulse control, and hyperactivity. ADHD can also appear with other developmental or psychiatric conditions such as childhood trauma.

ADD (attention deficit disorder) is a similar neurodevelopmental condition to ADHD, without hyperactivity.

#### Common Characteristics

- Impulsivity: fidgeting, excessive talking/interrupting, not able to wait their turn, reduced sense of danger.
- short attention span and varying levels of distractibility, difficulty organising self, flitting between tasks.

## How RDA activities can help

- By giving structure, routine, and realistic expectations with clear goal setting. This provides an environment that enables increased opportunities to focus and therefore learn.
- The movement opportunities from mounted activities and groundwork activities can be calming and grounding, this can help towards reducing sensory seeking behaviours and impulsivity.
- The natural environment and connection can provide a calming experience, can improve self-esteem, confidence, communication, trust, and empathy.
- Participants can learn to regulate their body energy and notice non-verbal cues to build a relationship with a horse. This is the kind of thing that many people with ADHD struggle with. The horse provides immediate feedback to the participant's actions as other humans cannot or will not do. They learn to control the chaos in themselves, then to control the chaos around them.

More general information can be obtained from: <https://adhduk.co.uk/>

## **2. Autism (sometimes called Autistic spectrum condition/disorder)**

### **Condition**

Autism is a lifelong condition that affects the way a person communicates, interacts, and processes information.

The autism spectrum refers to the range of ways the condition can present in the individual, which can vary from person to person and throughout their life.

The behaviours and challenges associated with autism are often a result of differences in thinking and processing information. It is through a deep understanding of the impacts of these different thinking styles that we can develop approaches and strategies which allow autistic people to understand and contribute to the world around them. While some people will have more subtle challenges, while interacting in society, others will have complex needs requiring more intensive support.

### **Common Characteristics**

- Show a desire for routine.
- Be socially isolated, have limited social language and social imagination.
- Limited or unusual eye contact.
- Difficulty copying motor movements.
- Many have dyspraxia.
- Autism and Anxiety are commonly seen together.
- They may benefit from mounted work and groundwork to develop social skills and nonverbal communication.
- The autistic individual often has sensory differences, some may have physically based challenges.
- Those with a PDA - not a recognised diagnosis profile will not want to fail, and will often refuse rather than make an error, this group of participants need instructions to be wrapped up in choices, and reasons given.

### **How RDA activities can help**

- The rhythmic movement of the equine during mounted work may have a calming effect which helps to regulate emotions and help participants focus on instructions.
- Riding and driving sessions should be predictable and repetitive, with care taken not to overstimulate the participant if they are hypersensitive to external stimuli (sound, too many people in the arena etc.)
- Stimulation can be increased to gain a response if under-activated.
- Physical contact and interaction with the equine may help to develop other social relationships.
- Being in the equine environment may have a beneficial effect on the mental health of the participant.
- A relationship with a horse offers challenges to overcome fears, build up trust, respect, and compassion, develop communication skills, problem-solving and coping techniques, self-confidence, and self-esteem. These skills are transferable to many other areas of ordinary life.
- Use activities that follow routines such as dressage, vaulting and groundwork.

More general information can be obtained from: [National Autistic Society \(autism.org.uk\)](https://autism.org.uk)

### **3. Developmental Delay**

#### **Condition**

This is a general term / diagnosis that is given when children under 5 years old do not meet their normal milestones. They may be delayed in one or many aspects of their development e.g., acquiring speech, gross and or fine motor skills and cognitive ability. After 5yrs of age the person will be referred to as having a learning difficulty.

#### **Symptoms**

- Late to reach the motor milestones.
- Late to develop language.
- Slow to process information or limited ability to process information.
- They are often clumsy, and fine motor skills maybe restricted.
- They can be very social.
- Learning of all skills is at a slower rate.

#### **How RDA activities can help**

- The feedback from the horse's movement at walk will help the child establish a better walking pattern and improve balance and posture.
- Activities on horseback will help develop motor skills, therefore riding and vaulting are more appropriate than driving.
- They may also improve strength and coordination.

### **4. Learning Disability**

#### **Condition**

A learning disability is a reduced intellectual ability and difficulty with everyday activities – for example, household tasks, socialising or managing money – which affects someone for their whole life.

People with learning disabilities may take longer to learn and may need support to develop new skills, understand information, and interact with other people. It is important to remember that with the right support, most people with a learning disability in the UK can lead independent lives. The level of support someone needs depends on the individual. For example, someone with a mild learning disability may only need support with things like getting a job. Someone with a severe or profound learning disability may need fulltime care and support in every aspect of their life. They may also have physical impairments.

People with certain specific conditions can have a learning disability too. For example, most people with Down's syndrome have a learning disability, as well as some people with autism and Cerebral palsy.

#### **Common Characteristics**

- Participants with learning disabilities may have poor speech (or no speech at all),
- poor short-term memory,
- short attention span,
- sensory issues
- difficulty planning activities and following more than one instruction at a time.
- They may show unusual/stressed behaviour if their communication and sensory needs are not met.

## How RDA activities can help

- Sessions provide a safe environment with a routine and trained helpers who can support the participant in learning new skills.
- Communication skills can develop by being aware of the correct way of giving instructions to suit the individual rider e.g., short sentences, no ambiguity, and using clear concise vocabulary.
- By learning new skills, the participant can improve motor planning and self-esteem, and feel a sense of achievement.
- People with learning disabilities often find it difficult to exercise, so riding and driving will help improve strength and stamina.
- It is important to assess whether behavioural issues allow these activities to take place safely. This applies to autism and ADHD.

Information from [What Is A Learning Disability? See Our Definition | Mencap](#)

## 5. Down's syndrome

### Condition

The most common chromosomal cause of learning disability. People who have Down's syndrome will have some level of learning disability. Some people will be more independent and do things like get a job. Other people might need more regular care.

### Common Characteristics

- Participants with Down's syndrome may have characteristic physical features, low muscle tone, shorter stature and may have an associated heart defect and there is a high incidence of hearing impairment.
- People with Down's syndrome may have communication challenges through hearing, speech and language difficulties.
- Musculoskeletal issues are quite common in people who have Downs syndrome. There are varied reasons for this including low muscle tone, lax ligaments, and hypermobile joints.

## How RDA activities can help

- Riding can help by increasing muscle tone enabling better postural control and improved sitting ability.
- Improved core strength may help with the independent use of arms and legs for rein control and leg aids.
- Both riding, vaulting, and driving will help improve strength and stamina as well as general physical and mental wellbeing

### Precautions

Underlying neck instability is more common in people who have Down's syndrome than in the general population. This causes concern because although severe damage caused by neck instability is rare and most people have mild early warning signs, it can be devastating and result in paralysis and in extreme cases death.

Parents, carers, and practitioners should be constantly aware of the warning signs (symptoms) which might indicate that a person who has Down's syndrome is at risk of neck instability. If parents, carers, or people who have Down's syndrome suspect any of the signs or symptoms listed here (a), (b), the person may have a problem with neck instability and should be seen by a doctor.

A) Warning symptoms:

- Pain anywhere along the neck.
- A stiff neck which does not get better quickly.
- Unusual head posture ('wry neck' or torticollis).
- Alteration in the way a person walks so they may appear unsteady.
- Deterioration in a person's ability to manipulate things with his/her hands.
- Altered sensation e.g numbness or tingling.

B) Poor neck control

- Difficulty Holding neck up.
- Holding the head at an unusual angle.
- Difficulty nodding or looking up and down and/or difficulty turning the head in certain directions.

More general Information can be obtained from: [Home - Downs Syndrome Association \(downs-syndrome.org.uk\)](http://Home - Downs Syndrome Association (downs-syndrome.org.uk))

## 6. Dyspraxia/Developmental Co-ordination Disorder

### Condition

This is a neurodevelopmental condition which leads to challenges in organising and planning movements.

### Common Characteristics

- Movements may appear awkward; participants may have poor spatial awareness and may find it difficult to learn new skills.
- They may have poor balance and tire more easily than others.
- It frequently takes them longer to learn new skills so participants may need more repetition and practice.
- They may find concepts of "under, over, round, in between" difficult to understand.
- They will often have sensory differences.

### How RDA activities can help

- Gives opportunities to practice following instructions and planning the response. It can help improve balance and strength. As with ADHD, it can improve self-esteem.
- It can help them develop planning skills.

More general information can be obtained from: <https://dyspraxiafoundation.org.uk/>

## 7. Developmental Language Disorder

### Condition

A specific difficulty with using and understanding spoken or written language.

### Symptoms. The following characteristics may be seen.

- Have poorly developed speech and understanding of speech sounds.
- Have a reduced vocabulary and/or difficulty retrieving words they know (extreme tip of the tongue).
- Tend to live in the present and have little understanding of time.
- Have reduced attention span and working memory.
- Have poor recognition of sequencing.
- Have difficulty putting words in the correct order to form sentences.
- Have difficulty following instructions that are long/complex.
- Have difficulty following grammatical features such as the negative.

### How RDA activities can help

- The rhythmic movement of the horse may help breathing for speech.
- Vocabulary of space can be learnt in the 'here and now'.
- Communication and empathy may be increased by interaction with the horse.
- Can be assisted to learn how to retain instructions.

More general information can be found here: <https://www.icancharity.org.uk/>

## SENSORY IMPAIRMENT

### 1. People who are deaf or hard of hearing

#### Condition

12 million people in the UK are deaf or have hearing loss. It is important to ask people what you can do to make communication easier. Sometimes participants may also experience a loss of balance or spatial awareness. **Deaf blindness** is a combination of sight and hearing loss that affects a person's ability to communicate, access information and get around. It can also be known as a dual sensory loss or multi-sensory impairment. Most will use an on body signing system to help them understand and communicate. They can be very anxious when they do not know what is going to happen next.

#### Symptoms

- People who are deaf or hard of hearing have a major hidden impairment.
- Most participants who are deaf or experience hearing loss wear hearing aids, which amplify all sounds near them, (including the wind) they may also lip read.
- Some riders/drivers with profound hearing loss have a cochlear implant which amplifies all sound near them and may affect hat fitting. No modification should be made to hats. Consider a thin band under the hat to cover the processor. Seek advice if you are unsure.
- Other Deaf people may use British Sign Language to communicate. They may come with an interpreter, or a family member/ supporter may be able to interpret for you but do not assume this.



- Always talk to the Deaf person themselves, not to the interpreter and keep your voice a normal level and do not shout. Gain their attention before attempting to communicate. Learning basic signs yourself would really benefit too.
- Remember to be creative – pencil and paper, whiteboard, and typing on a mobile phone can all be used as methods to communicate. When driving, you may need to stop to give instructions where it is safe to do so.
- Many people with hearing impairments have balance difficulties.

### **How RDA activities can help**

- Deafness can be present with many different conditions which can be helped by RDA activities.
- Develop balance and proprioceptive feedback.
- Develop language and vocabulary skills.
- Develop social interaction.
- Develop planning and sequencing skills.
- Groundwork sessions can be highly sensory and provide a wealth of alternative sensory input, the silent communication between the horse and participant can be enormously powerful.

More general information and resources on communication etc.

[Help & Resources - British Deaf Association \(bda.org.uk\)](http://bda.org.uk)

[How to be accessible - UK Deaf Sport](http://www.ndcs.org.uk/)

<https://www.ndcs.org.uk/>

## **2. Sensory Differences**

### **Condition**

Participants have difficulties filtering out unimportant sensory information which may cause them to feel overwhelmed and over-stimulated in certain environments (hypersensitivity) or under-stimulated (hyposensitivity).

### **Common Characteristics**

- Refuse to wear clothing because it feels scratchy.
- Be fearful of surprise touch, avoid hugs and cuddling even with familiar adults.
- Be overly fearful of swings and playground equipment.
- Often have trouble understanding where their body is in relation to other objects or people.
- Seek touch and deep pressure.
- General hyper/hypo sensitivity.
- Increased anxiety.
- Stimming.

### **How RDA activities can help**

- RDA activities can help the participant to develop a tolerance of textures, smells, and noises.
- The rhythmical walk can help them develop their balance and grounding and can have a calming effect on the participant.

- Or if needed, having a choppy walk can stimulate the hyposensitive child and raise their awareness. Give them opportunities to socialise.
- Groundwork can help the participant to develop eye hand control, weight bearing, and awareness of where their bodies are in space.
- Groundwork can help them learn how to problems solve.
- Being around horses may reduce their anxiety.

General information can be obtained from: <https://www.autismspeaks.org/sensory-issues>

<https://www.thirdspace.scot/wp-content/uploads/2021/09/Language-Matters-NAIT-Terminology-for-Neurodevelopmental-Pathways.pdf>

<https://www.thirdspace.scot/wp-content/uploads/2022/12/NAIT-Neurodiversity-Paradigm-Book-Chapter-2022.pdf>

<https://www.thirdspace.scot/wp-content/uploads/2022/03/NAIT-Guide-to-ICD-11.pdf>

### 3. Visual Impairment

#### Condition

Defined as a limitation of one or more functions of the eye or visual system. This may happen at birth, be a gradual loss, or a sudden event. It may be partial or complete.

Participants with a visual impairment can be affected by: The sharpness, colour, or clarity of vision and the normal range of what can be seen. Depth perception and balance may be affected.

**Symptoms.** Visual impairment can be partial (PVI) or complete (TVI). Where it is partial it may be restricted:

- To a short distance
- By blurring
- By loss of vision in one or other eye
- By loss of peripheral vision, or tunnel vision, where only objects straight ahead may be seen.
- By gaps in the visual field so a scattered picture is observed.
- By shakiness as in nystagmus.
- By fatigue common in Cerebral Palsy
- By impaired processing – cortical blindness, where the eye is ok, but the nerve or cortex is impaired.

#### How RDA activities can help

- Sensory feedback from the horse's movement will help stimulate the proprioceptive system which can improve balance.
- RDA activities may help to improve self-esteem and social interaction with others in the group.
- Touch and sound are of vital importance in communication. Describe the surroundings and allow participants to explore for themselves. The coach should keep communicating with participants when moving about so participants know where you are.

A useful resource is here [Equestrian-Resource.pdf \(britishblindsport.org.uk\)](https://www.britishblindsport.org.uk/Equestrian-Resource.pdf)

## **Mental Health Conditions**

Good mental health means being able to think, feel and react in the ways that you need and want to live your life. But if you go through a period of poor mental health, you might find the ways you are frequently thinking, feeling, or reacting become difficult, or even impossible, to cope with. This can feel just as bad as a physical illness, or even worse.

Mental health problems affect around one in four people in any given year. They range from common problems, such as depression and anxiety, to rarer problems such as schizophrenia and bipolar disorder. It is likely that many of your volunteers will experience poor mental health as well as your participants.

This may be a primary diagnosis or secondary to another condition. It is important that the coach/ activity leader knows their limitations and signposts to the appropriate medical support when needed.

[types of mental health problems - Mind](#)

<https://wecantalk.online/>

### **1. Anxiety**

#### **Condition**

A feeling of unease, such as worry or fear that can be mild, moderate, or severe.

#### **Symptoms**

- Feeling nervous, restless or tense
- Having a sense of impending danger, panic or doom
- Having an increased heart rate
- Breathing rapidly (hyperventilation)
- Sweating, trembling and feeling weak or tired
- Trouble concentrating or thinking about anything other than the present worry.
- Having trouble sleeping
- Experiencing gastrointestinal (GI) problems

#### **How RDA activities can help**

- Sessions can provide a safe, secure environment with a regular routine and familiar faces. Unmounted activities may also be helpful.
- Small, well-planned goals can help to improve self-esteem, and the social nature of RDA may be of benefit.
- The bond developed with the horse can be rewarding and provide a calming experience.

### **2. Depression**

#### **Condition**

This is a common and serious medical illness that negatively affects how someone feels, the way they think and how they act. Depression may cause sadness or numbness and loss of interest in activities once enjoyed.

It can lead to a variety of emotional and physical problems and can decrease a person's ability to function at work or home. There may be an identifiable trigger, such as a bereavement, or no obvious reason.

**Symptoms** vary from mild to severe and can include

- lack of motivation
- changes in appetite
- weight loss or gain
- trouble sleeping or sleeping too much,
- fatigue, feeling worthless or guilty,
- difficulty concentrating or making decisions, and thoughts of death or suicide.

**How RDA activities can help**

- Attending regular sessions gives a sense of purpose and an aim for the week.
- The equine environment has a positive effect on the limbic system (the part of the brain involved in our behavioural and emotional responses) and may help lift mood.
- Small, well-planned goals can help to improve self-esteem, and the social nature of RDA may be of benefit.
- The bond developed with the horse can be rewarding and provide a calming experience.

**Less frequently seen conditions**

(Seek advice from an ACPEA physiotherapist if further information is required.)

### **1. Long Covid/Post viral syndromes**

**Condition**

Participants with long Covid may still be experiencing Covid-like symptoms, especially shortness of breath. Those experiencing problems following a prolonged illness may request sessions at RDA.

**Symptoms**

- Will vary from person to person, therefore a good assessment before attending is important. In general, they will be deconditioned, and complain of poor strength and exercise tolerance.
- They may be experiencing pain in joints and muscles and be suffering from a general feeling of fatigue.
- Other symptoms include difficulty in concentrating, sleep disorders, memory loss and mood swings.
- Changes may occur in the heart, lungs, muscles and brain. The participant may feel tired and weak and note a decrease their ability to be active. It is important that they do not get fatigued.

**How RDA activities help**

- Any physical activity in an outdoor environment is likely to be of benefit.
- Activities to strengthen the body and improve stamina, combined with social interaction, should have a positive effect on the participant.
- The session should allow for frequent rests and care taken to build up their fitness level slowly.
- The coach should be aware that some participants may get out of breath quickly and need time to recover following some more strenuous activities.

**Rare Syndromes:** there are many different syndromes, as with all our participants, it is important to do a full assessment before attending sessions. The coach should seek further information regarding the syndrome, for example by doing a search on the Internet or asking for advice from a medical professional. areas. Their mental health is likely to be affected by a lack of motivation and reluctance to socialise. Riding can help improve balance and upper trunk control. It may be possible to strengthen the lower limbs and lower trunk.

As with all conditions, being in the equine environment improves mental well-being and learning new skills when riding or driving improves self-esteem. Care should be taken if the participants have a loss of sensation in the saddle area.

## **2. Guillain-Barré (pronounced ghee-yan bar-ray) syndrome**

### **Condition**

A rare and serious condition that affects the nerves. It affects people of all ages, but it is more common in adults and males.

### **Symptoms**

- It mainly affects the feet, hands, and limbs, causing problems such as numbness, weakness, and pain.
- In severe cases, you may have difficulty moving, walking, breathing, and/or swallowing.
- It can be treated, and most people will eventually make a full recovery, although it can occasionally be life-threatening, and some people are left with long-term problems.

### **How RDA activities can help**

- Depends on the rider's abilities and disabilities plus the goals they set themselves.

## **3. Parkinson's Disease**

### **Condition**

Parkinson's disease is a disorder of the nervous system due to a lack of dopamine. This is a chemical in the body that helps in the transmission of messages to the part of the brain that coordinates movement.

### **Symptoms**

- tremors (shaking) slow movements and stiffness. Parts of the brain become progressively damaged over many years.
- Balance is affected, with people experiencing frequent falls.
- They may also suffer from loss of memory, difficulty sleeping, depression, and anxiety.
- Most people with Parkinson's are diagnosed over the age of 50. Treatments are available to reduce the main symptoms and maintain quality of life.

### **How RDA activities can help**

- Exercise helps to maintain muscle strength and joint mobility.
- Challenging the core muscles may help improve balance and posture.
- Mental health and well-being can be improved.

## **Precautions**

With any progressive condition including those mentioned above it will be necessary to reassess riders and drivers if their abilities change over time.

Please always seek further advice if you are not sure. Not every participant is able to take part in Equestrian activities, you might have to take the hard decision to stop someone from taking part, there is support available so do ask.

See also the Physiotherapy advice video produced during covid which looks at assessing participants  
[Physiotherapy Advice - YouTube](#)

Please also see this webinar, filmed during Covid around the use of language

[Use of Language & Are we Being as Inclusive as we Can? - YouTube](#)

## **GENERAL SAFETY GUIDE**

### **1. Concussion**

[BEF concussion guidance.pdf \(britishequestrian.org.uk\)](#)

### **2. Infection Control**

[NHS England » Standard infection control precautions: national hand hygiene and personal protective equipment policy](#)

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## GLOSSARY

<b>ABDUCTION</b>	Movement away from the mid-line of the body.
<b>ADDUCTION</b>	Movement towards the mid-line of the body.
<b>ANAESTHESIA</b>	Loss of sensation
<b>ANKLE-FOOT ORTHOSIS (AFO)</b>	A brace that controls the range of movement in the foot. Often used with individuals who have cerebral palsy or a Stroke.
<b>APHASIA</b>	Failure in word selection. Inability to use/comprehend the spoken or written word ('Expressive/Receptive Aphasia')
<b>APRAXIA</b>	Inability to initiate voluntary movement
<b>ARTHRITIS</b>	Inflammation of a joint.
<b>ARTHROPLASTY</b>	Surgical replacement or reconstruction of a joint.
<b>ARTHTODESIS</b>	Fixation of a joint.
<b>ATAXIA</b>	Poor co-ordination of muscle control.
<b>ATAXIC GAIT</b>	Wide-based unsteady gait with coarse tremor in upper limbs on attempted movement
<b>ATHETOSIS</b>	Involuntary movements, which disrupt normal functional movement.
<b>ATROPHY</b>	Wasting of any body tissue.
<b>AUGMENTATIVE AND ALTERNATIVE COMMUNICATION</b>	(AAC) the methods used for someone to communicate without talking, e.g. signing, using paper based charts and books or electronic voice output aids.
<b>AUTISM</b>	A difference in neurology which means you experience and respond to the world differently to non-autistic people. Differences include social interaction, communication and sensory differences. Autistic needs are fluid and will change depending on impact of the environment and other people.
<b>BILATERAL</b>	Relating to both sides of the body.
<b>BRITISH SIGN LANGUAGE</b>	(BSL) This is a language in its own right, with its own grammar used by many deaf people. It does not follow the grammar of English.

<b>CENTRE OF GRAVITY</b>	A point at which the downwards force of a mass and gravity is balanced on either side of a fulcrum. In the human body this is normally balanced around the pelvis.
<b>COCHLEAR IMPLANT</b>	A specialist hearing aid that goes directly into the cochlear, without this aid, the individual has no hearing at all, ordinary hearing aids will not help. Extra care is needed in fitting hats.
<b>CNS</b>	Central nervous system – brain and spinal cord.
<b>CVA</b>	Cerebral Vascular Accident. Brain damage as a result of a haemorrhage, clotting or spasm in a cerebral blood vessel (STROKE).
<b>CLONUS</b>	Repeated involuntary contraction of a spastic muscle in response to stimulation such as pressure or stretch. Seen particularly in the calf muscles when pressure is applied to the ball of the foot. May be relieved by applying pressure to the sole of the foot
<b>CONGENITAL</b>	Present at birth.
<b>CONTRACTURE</b>	Fixed position of a joint due to shortening of a tendon, joint capsule or muscle.
<b>CONTRA-LATERAL</b>	Relating to the opposite side of the body.
<b>CYSTIC FIBROSIS</b>	Genetic condition characterised, in addition to other symptoms, by persistent lung infections.
<b>DEVELOPMENTAL LANGUAGE DISORDER</b>	(DLD) A specific difficulty in understanding and using verbal language to communicate.
<b>DIPLEGIA</b>	In Cerebral Palsy, impairment of movement in all four limbs with greater involvement of the lower limbs.
<b>DYSARTHRIA</b>	Difficulty in word production due to muscle or nerve dysfunction.
<b>DYSLEXIA</b>	Difficulty in recognising or using the written word.
<b>DYSPHAGIA</b>	Difficulty in swallowing
<b>DYSPHASIA</b>	Acquired Difficulty in word selection or understanding (see APHASIA)
<b>DYSPRAXIA</b>	Difficulties with balance and coordination. It can also affect planning and processing of motor tasks.
<b>DYSTROPHY</b>	Wasting



<b>EUPHORIA</b>	Unrealistic feeling of well-being or elation.
<b>FLACCID</b>	Decreased, or absence of, muscle tone inhibiting movement.
<b>HEMIANOPIA</b>	Loss of vision in half of one or both visual fields. Inability to scan to one side of the body.
<b>HEMPLEGIA</b>	Paralysis of one side of the body.
<b>HYDROCEPHALUS</b>	'Water on the Brain' (see Spina Bifida Notes)
<b>HYPERTONIA</b>	Increased tone in a muscle or group of muscles.
<b>HYPOTONIA</b>	Decreased tone in a muscle or group of muscles.
<b>KYPHOSIS</b>	Posterior curvature of the spine, normally seen in the thoracic region.
<b>LESION</b>	Physical abnormality in an organ or tissue.
<b>LORDOSIS</b>	Anterior curvature (hollowing) of the spine normally seen in the cervical and lumbar.
<b>MAKATON</b>	A signing vocabulary taught to many with language difficulties to support their learning of spoken language. It follows the grammar of English, but only key words are signed.
<b>MASKING</b>	The act of consciously or unconsciously suppressing authentic autistic identity and needs in an attempt to fit into the social norms of the people around you. Masking is detrimental to mental health over a long period of time.
<b>MICROCEPHALIC</b>	Small head with incomplete development of the brain.
<b>MONOPLEGIA</b>	Paralysis of one limb.
<b>MUSCLE TONE</b>	The normal tension in muscles that is required to support the appropriate part of the body in readiness for action.
<b>NEURODIVERSITY</b>	Refers to the collective diversity of human minds across the whole population. It is a scientific fact, society is neurodiverse
<b>NEURODIVERGENT</b>	Describes a single person who processes thinks and responds to the world in a way that is different (diverges) from the majority. Some people may describe themselves as multiply neurodiverse, e.g., Autistic, ADHD and OCD.
<b>NEURODIVERSITY PARADIGM</b>	A perspective that understands, accepts, and embraces the differences of everyone. Within this theory it is believed there is no single 'right' or 'normal' neurotype, just as there is no single 'right' or 'normal' gender or race. The neurodiversity paradigm

	rejects the medical model and sees what some may describe as deficits as differences. It recognises the same dynamics and inequalities that occur in society with social, cultural, racial and gender inequalities are also seen in those that are neurodivergent, (see Nick Walker's work, 2021 for further info).
<b>NEURODIVERSITY MOVEMENT</b>	A social justice movement driving forward the ethos of the neurodiversity paradigm working for equality and inclusion for everyone
<b>NEUROMAJORITY</b>	Often used to describe people that are not neurodivergent (sometimes referred to as neurotypical -although the idea of there being a 'typical' mind is sometimes debated):
<b>NEURODIVERSITY AFFIRMING</b>	Promoting and valuing the ideas behind the neurodiversity paradigm and embracing inclusivity.
<b>NYSTAGMUS</b>	Shakey movements of the eye, which can make the participant unbalanced, especially when out of walk.
<b>PARAESTHESIA</b>	Disturbed or altered sensation – numbness, tingling.
<b>PARAPLEGIA</b>	Paralysis of the lower limbs. Term generally used to describe paralysis caused by damage to the spinal cord.
<b>PAREISIS</b>	Partial paralysis
<b>PEG</b>	Percutaneous gastrostomy – a tube placed in the stomach that is accessed externally to give nutrition and hydration to the individual. Special care has to be taken when dismounting.
<b>PROGNOSIS</b>	Prediction of the course of a disease.
<b>PROPRIOCEPTION</b>	Awareness of position of body, and parts of the body. Muscle and joint sense.
<b>QUADRAPLEGIA</b>	Paralysis of all four limbs and trunk in Cerebral Palsy.
<b>REFLEX</b>	The automatic response to a stimulus. Normal reflex. Response is controlled by higher centres in the brain. Where there is brain dysfunction unrestrained, reflexes may lead to abnormal muscle tone and/or movement.
<b>SCOLIOSIS</b>	Abnormal lateral curvature of the spine.
<b>SHUNT</b>	Tube with one-way valve to drain cerebro-spinal fluid from the brain where circulation is obstructed.
<b>SPASTICITY</b>	Increase in muscle tone due to loss of control of spinal cord reflexes. Occurs in lesion or injury to the central nervous system.

<b>STIMMING</b>	Refers to sensory seeking behaviours that help to regulate the mind and body.
<b>TENOTOMY</b>	Surgery to a tendon. Generally used to achieve lengthening of a muscle.
<b>TETRAPLEGIA</b>	Paralysis of all 4 limbs following spinal injury.
<b>TRAUMA</b>	Injury, physical damage to tissue. Can also be psychological and is seen in those with PTSD or having suffered abuse.
<b>VISUAL FIELD DEFECT</b>	Where part of the area of sight is impaired due to neurological damage or retinal failure.