

# Horse Rider's Mechanic Workbook 1: Your Position



Jane Myers  
Equiculture Publishing

# 1: Your feet

Your feet are a *very* important part of your riding anatomy. You might think that you ride on your 'seat', therefore you simply 'sit' on a horse, whereas this is not the case. Riding *well* involves developing the correct *weighting* between your seat *and* your feet. That is not to say that you should be *pressing downwards* through your seat or your feet, not at all, it is simply about *properly distributing* the downwards force of gravity that is acting on your body.

## 1.1: Your feet should...

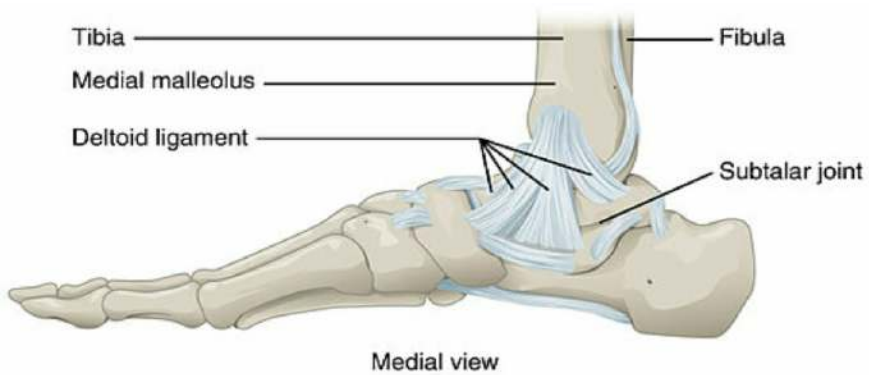
- Rest in the stirrups, *without pressing down on them*. Utilised properly, the weight of your legs is enough to do this.
- Maintain the correct amount of downward pressure to keep the stirrup treads *directly* under the balls of your feet.
- Feel the same. There should not be more pressure on one foot than the other.

*Your feet should be only slightly lower in the heels than the toes (picture a) and should be parallel to the ground from side to side (picture b).*

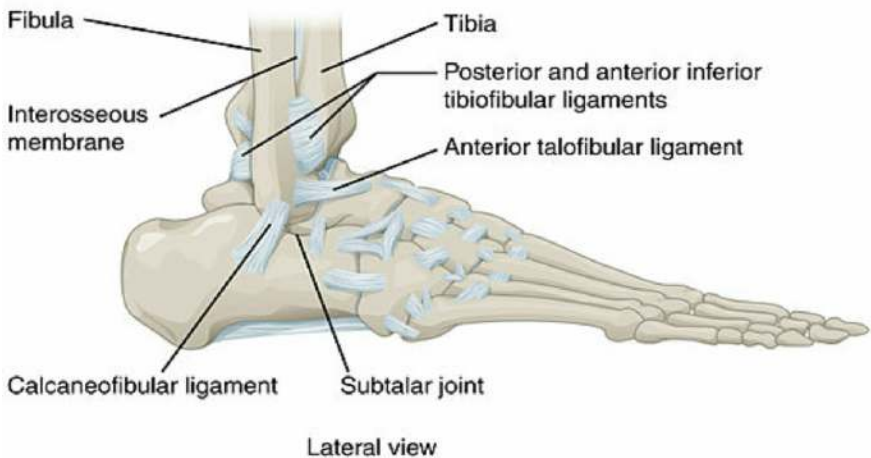


- Be only slightly lower in the heels than the toes. Your heels should not be forced down.
- Be parallel to the ground from side to side, the stirrup leathers *and* the balls of your feet should both be parallel to the ground.
- Have the toes pointing straight or almost straight forward. Again this position should not be forced.
- Give you the feeling of security.

*As you can see your feet have numerous parts to them. There are many bones and many soft tissues (tendons and ligaments).*



Source: [www/commons.wikimedia.org](http://www/commons.wikimedia.org)



## 1.2: But your feet may...

- Be too low in the heels and therefore have reduced shock absorbency potential (this problem is due to 'problem ankles' and will be covered in that section).
- Be unlevel (tilt from side to side).
- Go numb (especially in the 'outside' toes).
- Point outwards too much.
- Be painful (usually through the instep).
- Have uneven weighting (more weight in one foot).
- Keep losing the stirrups. This may involve either one or both stirrups and may be either fully or partially (i.e. the stirrup/s move around and/or twist on your feet).

*If your heels are jammed down you will lose the shock absorbing function of your ankles (because they are already at full stretch). Riding in this way also pushes your feet too far forward (picture left). Your stirrups should stay in the correct position on your feet without you having to think about them. They should not move around or come off your feet while you are riding (picture right).*



## 1.3: What you can do if...

### 1.3.1: ...feet are unlevel (from side to side)

If your feet tilt then this may mean that you are twisting all of the joints in your legs to some degree.

If you have an assistant they should be able to see that your stirrup treads *and* the balls of your feet are parallel to the ground. They could take a photo of your feet from the front so that you can see what they see. Alternatively arena mirrors will help you to check.

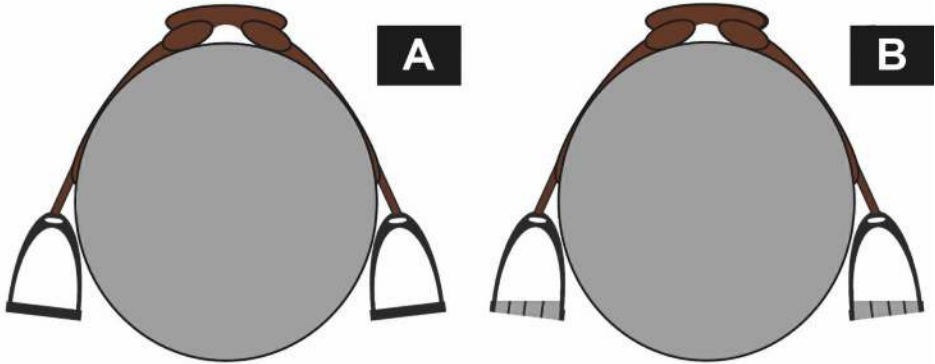
If you are on a round barrelled horse and you have very short legs (this tends to occur in children rather than adults) it may not be achievable to have the stirrup treads parallel to the ground but the idea is that you should not be *forcing* your feet to tilt one way or the other. Be *very* wary about using wedged stirrup treads.

*When a rider tilts their foot a gap can be seen between the stirrup tread and their boot on the inside of the foot (picture left). Instead, all of the ball of their foot should make contact with the stirrup tread. It is not usually a good idea to force your feet to tilt one way or the other. These style of wedges rarely seem to be beneficial and many riders report that they have caused pain (picture right).*



Riders usually benefit from replacing wedges with flat stirrup treads and being shown how to weight their feet correctly instead (a person with a pre-prescribed medical condition could be an exception).

On the other hand, in the case of the earlier scenario (round barrelled horse, short legs, causing the base of the stirrup irons to tilt incorrectly) (picture a), a wedge or small bandage wrapped around the stirrup treads in order to level the stirrup treads (rather than tip them too far the other way) can help (picture b). Experiment with what feels comfortable.



## Solutions

- Once you have ensured that your stirrups treads are parallel to the ground, think about what you can feel under the ball of each foot.
- When you have discovered what you feel, if it is not correct, concentrate on weighting your feet so that you can feel the *entire* stirrup bar under the ball of each foot, not just the outside edge of it.
- If you have been riding with your feet tilted for some time it may feel very strange to level the pressure across your feet. In fact you might have to deliberately weight the *inside* of your feet at first.
- When you think that you have it, work on something else for a while. Return to concentrating on your feet and notice if you have reverted back to weighting just the outside of your feet.
- Keep practising this until it feels 'normal' to weight the *whole* of the ball of each foot and you no longer have to correct them.

*If you have been riding with your feet tilted for some time it may feel very strange to level the pressure across your feet. In fact you might have to deliberately weight the inside of your feet at first.*



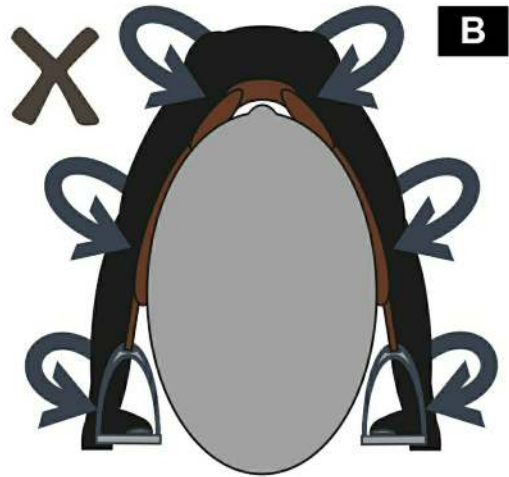
**Remember: when you make any changes to your position the new feeling will probably feel quite strange at first. This is because part of your brain is telling your body to go back to doing 'the wrong thing' (the old 'normal') while another part of your brain is trying to override that instruction to get your body to do 'the right thing' (the new 'normal'). Once your brain 'learns' and accepts this new feeling (and 'files' it) you will no longer have to concentrate to maintain the new position, weighting etc. and it will start to feel fine.**

## 1.3.2: ...feet are numb

Tilting the feet as described in the previous section often leads to 'dead' toes on the 'outside' toes of the feet. This tilting can come about because the rider is trying to 'wrap' their legs around their horse. This is often because they were told to do this when being taught to ride.

A rider may also have been instructed to point their toes *in* while riding. Doing this can also put an unnatural twist on all of joints in their legs. It is usually physically impossible for a rider to actually wrap their legs around a horse but while trying to do this they end up *rolling* their ankles to the outside. This problem is exacerbated further if a rider has loose wobbly ankles. The solution to this problem is dealt with in **2.3.1: ...ankles are wobbly**.

*Riders have often been taught to 'wrap their legs around the horse' (picture a) or to turn their feet in (picture b).*



Some riders *have* equal pressure across the balls of their feet but they press *down* into the stirrups in an attempt to not lose them. It is impossible to have the correct relationship with the stirrups by *pressing down* on them. The weight of a rider's legs resting in the stirrups creates enough downward pressure to keep them on the feet (once the joints of



the legs behave properly) without the rider having to press. As well as causing numbness, riding like this pushes the weight *upwards* and therefore *raises* the centre of gravity (CoG). See the **Horse Rider's Mechanic** website article [Your centre of gravity](#).

This problem tends to be more common in riders with stiff ankles because the stiffness prevents the ankles from dipping and springing back as they should. You will read more about this when you get to the relevant section.

*This rider is (picture left) is pushing down too hard into her stirrups. A clue is in the knee which also looks tense. Her feet are too far forward and she reports that she gets numb feet. Less tension results in the leg being able to come underneath the rider in the proper position (picture right).*



### ***Solutions***

- Think about the pressure in your feet, even if your feet do not tend to become numb.
- With your horse at a standstill lift your legs upwards so that your feet lift slightly in the stirrups.

- Lower them gently and aim to let them slowly *sink* down in to the stirrups. Notice that this is quite a different feeling to *pressing* down.
- Alternatively, if you have an assistant ask them to lift each of your legs in turn by cupping their hands under your foot. They should be able to lift each leg relatively easily.
- Raise and lower each leg (with the help of your assistant) aiming to let your leg *relax* down into the stirrup. Your assistant should start to feel the difference and be able to give you feedback.
- Think about this new lighter feeling in your legs and remember it.
- When you think that you have it, work on something else for a while.
- Return to concentrating on the pressure in your feet again and notice if you have reverted back to pressing down too hard.
- Next, ride in a circle and concentrate on relaxing your legs and allowing them to simply ‘hang’ from your hips.
- If you have an assistant they could take photos to show you the difference in your feet and your knees (your knees will look more ‘defined’ when you are pressing too hard into the stirrups).
- Keep practising this lesson until it feels ‘normal’ to have a lighter feeling in your feet and you no longer have to correct them.
- The information in later sections adds to this lesson so don’t worry if you cannot get it right just yet.

### 1.3.3: ...feet are not angled correctly

Your feet should *not* be forced to face straight forwards. It is a common misconception that your feet should point straight forwards (or even worse, point inwards!). If you try to do this you will put an unnatural twist on the joints in your legs all the way up to your hips.

Pushing (*forcing*) your heels down (rather than allowing them to ‘hang’ naturally) will also tend to push your feet too far forward *and* turn your toes out (see **4.3.3: ...lower legs are sticking forward** and **4.3.4: ...lower legs are sticking out**).

It is actually quite acceptable to ride with your toes pointing *slightly* out (and even more if disability or previous injury dictates this).

*It is a common misconception that your feet should point straight forwards (or even worse, point inwards!). If you try to do this you will put an unnatural twist on the joints in your legs all the way up to your hips (see also picture b in 1.3.2: ...feet are numb).*



Some people are unable, for one reason or another, to point their toes forward. Trying to force your feet inwards into an unnatural position only causes pain and prevents you from riding well (pain distracts as well as being a sign that something is wrong).

### **Solutions**

- See what happens after you have made adjustments to your leg position resulting in your legs hanging directly underneath you from your hips.

### 1.3.4: ...feet are painful

Some people actually curl their toes when riding, usually because they feel tense and insecure and innately they are trying to grip with their feet (a natural human behaviour that occurs due to anxiety).

Just as a stiff, locked jaw results in stiffness far beyond the jaw, tense stiff feet results in stiffness far beyond the feet.

#### **Solutions**

- Firstly, if you think your problem is due to confidence you need to address why you feel tense and insecure (see the **Horse Rider's Mechanic** website article [Your confidence](#)).
- Turn your attention to your feet and deliberately tense them up even more.
- Then concentrate on relaxing your toes fully and spreading them out in your boots.
- Make sure your footwear allows you to do this comfortably (if not aim to replace your footwear with something more suitable).
- Notice what it feels like when you release the tension and remember the feeling.
- When you think that you have it, work on something else for a while before returning to thinking about how tense your feet are.
- Practice this until the new feeling becomes 'normal'.

For some riders the reason that their feet are painful is because they wear orthotics (foot supports) for walking and their riding boots do not give them the same level of support (even though you are not walking in your boots while riding your feet may still need more support).

#### **Solutions**

- *Experiment* with wearing your orthotics for riding if this is the case. Keep in mind though that some riding boots already have arch support built in so this may not be necessary and may even be detrimental.

A further reason for one or both feet aching is that a rider may have injured their foot or feet in the past. Injuries to the feet are *very* common in horse people due to the delicacy of the human foot compared to the sheer weight of a horse! Most people have had their feet stood by a horse on at some point when first learning where to stand, or not to stand, when around horses.

## **Solutions**

- *Experiment* with different footwear and/or stirrups. Broader stirrup treads, such as those common in the sport of endurance riding give much more support to your feet. You may also find that strapping your foot (or both feet) helps. More about this in the next section: **Your Ankles.**

*Try experimenting with broader based stirrups if your feet need more support. The stirrups that endurance riders wear are designed to spread the pressure across more of the foot.*



### **1.3.5: ...feet are weighted unevenly**

This commonly occurs when a rider has had an injury to one leg which results in an increased stiffness in that leg. For example, a previous injury to an ankle, such as a break, will often result in this particular problem.

It may be that you have not noticed the feeling of uneven pressure in your feet until now but you *have* noticed that you tend to feel better going one way on a circle and unbalanced when going in the other

direction. You may also have a tendency to lose one stirrup but not the other.

### **Solutions**

- Think about the ‘history’ of your feet and your leg joints and soft tissues (tendons, ligaments). This will give you clues as to where the unevenness might be coming from.
- Address that area of your body when you reach the relevant section of this book.
- Injuries to the feet are mentioned in **1.3.4: ...feet are painful**, but this problem can also occur when there has been a previous injury to any part of the body.

*This rider has an ankle that was injured many years ago and it causes her feet to be weighted unevenly, you can see how one heel drops more than the other. You may need to address a ‘problem’ area in order to improve the weighting in your feet.*



### **1.3.6: ...feet are losing the stirrups**

If a rider’s stirrups move around on their feet or they lose them altogether it can be because they are gripping with their knees (or sometimes the whole length of their legs) in the erroneous belief that this will keep them on their horse.

This problem is a very common self-perpetuating habit that is hard to give up. The gripping may occur because you have stiff joints (and therefore you are not 'engaging' your lower leg properly). Or it could be because you were actually taught to grip (very common). It may also be that you are nervous and you are innately trying to assume the 'foetal position'.

*Gripping with the knees results in 'disengaged' lower legs and insecure stirrups (picture left). The problem can originate in various areas of the body or may be due to a lack of confidence. Also it does not help that the myth is still prevalent that you are supposed to grip when riding. See how a more relaxed knee results in a more engaged lower leg and a better position in general (picture right).*



The 'foetal position' is what your brain tells your body to do when it perceives that you are in danger. It results in you drawing your knees upwards and drawing your hands into your chest. This position curls you into a ball shape and among other things, protects your vital organs when you are in danger. Many riders do this to some degree when they feel insecure without realising they are doing it.

A further problem with this tendency is that it makes a sensitive horse more tense as they feel the gripping pressure from your legs. Also it is the *opposite* of what you need to do to stay on a horse.

In fact, you could say that learning to ride is about learning to do the *opposite* of what your brain tells you to do when you are on a moving object.

Inexperienced riders tend to resort to the 'foetal position' whenever they feel insecure, think about how a beginner will tend to lift their hands and their knees at first, whereas *experienced* riders have usually learned to distribute their weight correctly and keep their centre of gravity (CoG) as *low as possible* in order to ride well. See the **Horse Rider's Mechanic** website article **Your centre of gravity.**

Even so, experienced riders who lose confidence, despite knowing that they are supposed to 'sit tall', may still revert to this position due to fear (albeit less obviously) if and when it arises.

*Developing as a rider involves learning to do the opposite of what your brain is telling you to do (picture a) and instead distribute your weight correctly (picture b).*





An experienced rider has also learned that while they should fight the urge to adopt the 'foetal position' whenever mounted on a horse, if they actually fall off then the priority changes. A falling rider should curl themselves up into a ball and attempt to hit the ground rolling. This is preferable to hitting the ground like a spear which is more likely to result in injuries.

## **Solutions**

- If you tend to grip, lose your stirrups etc. and you think it may be due to stiff leg joints and 'disengaged' lower legs you will find your solutions when these areas of the body are covered in later sections.
- Make sure you address any confidence issues (see the **Horse Rider's Mechanic** website article **Your confidence**).
- Work through the rest of this book to improve your position.
- If you are gripping simply because you think you are meant to – you aren't. Allow your legs to simply hang from your hips and 'drape' (more about this in **8: Your lower body**).

The exercises in **Horse Rider's Mechanic Workbook 2: Your Balance** are designed to improve your balance and therefore your security. When you have improved your position and balance you will then begin to experience an upward spiral of events rather than the downwards spiral that you may currently be experiencing.

### **1.3.7: ...feet are letting the stirrup/s twist**

In this case the stirrups end up diagonally across the foot or feet. This may be a habit that has come about from the way a rider was taught and they put the stirrups under their feet in this way thinking that this is how they are meant to be.

Sometimes a rider rides with the stirrups under their toes only rather than the balls of their feet. In both cases the feet are not getting enough support.

*The stirrup is not meant to be diagonally across the foot or feet (picture a). This may be a habit that has come about from the way a rider was taught. Sometimes a rider rides with the stirrups under their toes only (picture b) rather than the balls of their feet. In both cases the feet are not getting enough support.*



## **Solutions**

- Practice putting the treads of the stirrup irons directly across your feet (you may also need to concentrate on weighting the inside of your feet more, see **1.3.1: ...feet are unlevel (from side to side)** and practice riding with the stirrups in this new position until it feels 'normal' (it may feel very strange at first).
- Eventually even pressure should be felt right across the balls of your feet and the stirrups should stay in place as you ride, without you having to think about them.
- This problem could also be occurring because you are not weighting your stirrups correctly as described in the previous section.

**By addressing your feet in such detail you may have identified a particular problem that relates to you. You should now have an idea about why it is happening and how to fix it.**

**Don't worry though if you are not able to fix it yet. You may (in fact it is very likely) need to investigate other areas of your body before you can fully solve a problem because a 'problem' body part rarely only affects its immediate area.**

**Remember: aim to work through this book at least twice. Initially in order to identify and start to rectify any problems that you might have. Subsequently, to readdress your issues in light of adjustments that you will have made to other areas of your body.**

**For some riders it will take several sequences of reading, followed by working on a particular problem. Don't worry though because eventually, if you persevere, you will improve your position.**

**Remember: if there is anything you do not understand or need help with after reading this book (or the others in this series) post a question on the Horse Rider's Mechanic Facebook page:**

**[www.facebook.com/horseridersmechanic](http://www.facebook.com/horseridersmechanic)**

**Help is at hand!**

# Contents of Horse Rider's Mechanic

## Workbook 1: Your Position

By reading this book you will...

A rider's responsibilities

How to get the most from this book

### 1: Your feet

1.1: Your feet should...

1.2: But your feet may...

1.3: What you can do if...

1.3.1: ...feet are unlevel (from side to side)

1.3.2: ...feet are numb

1.3.3: ...feet are not angled correctly

1.3.4: ...feet are painful

1.3.5: ...feet are weighted unevenly

1.3.6: ...feet are losing the stirrups

1.3.7: ...feet are letting the stirrup/s twist

### 2: Your ankles

2.1: Your ankles should...

2.2: But your ankles may...

2.3: What you can do if...

2.3.1: ...ankles are wobbly

2.3.2: ...ankles are too loose

2.3.3: ...ankles are painful

2.3.4: ...ankles are stiff

2.3.5: ...ankles are behaving differently to each other

### 3: Your calves

3.1: Your calves should...

3.2: But your calves may...

3.3: What you can do if...

3.3.1: ...calves are too loose

3.3.2: ...calves are too tight

3.3.3: ...calves are painful

### 4: Your lower legs

4.1: Your lower legs should...

4.2: But your lower legs may...

4.3: What you can do if...

4.3.1: ...lower legs are 'disengaged'

4.3.2: ...lower legs are flapping

4.3.3: ...lower legs are sticking forward

- 4.3.4: ...lower legs are sticking out
- 4.3.5: ...lower legs are tilting too far back
- 4.3.6: ...lower legs are ineffective

#### 4.4: Your lower legs - a recap

#### 5: Your knees

##### 5.1: Your knees should...

##### 5.2: But your knees may...

##### 5.3: What you can do if...

- 5.3.1: ...knees are gripping
- 5.3.2: ...knees are flapping
- 5.3.3: ...knees are painful, weak or stiff

#### 6: Your thighs

##### 6.1: Your thighs should...

##### 6.2: But your thighs may...

##### 6.3: What you can do if...

- 6.3.1: ...thighs are gripping
- 6.3.2: ...thighs are flapping
- 6.3.3: ...thighs are painful or are weak

#### 7: Your hips

##### 7.1: Your hips should...

##### 7.2: But your hips may...

##### 7.3: What you can do if...

- 7.3.1: ...hips are painful or are stiff
- 7.3.2: ...hips are crooked

#### 8: Your lower body

##### 8.1: Your lower body should...

##### 8.2: But your lower body may...

##### 8.3: What you can do if...

- 8.3.1: ...lower body is unable to follow and absorb the movement
- 8.3.2: ...lower body is unable to maintain position

##### 8.4: Your lower body – a recap

#### 9: Your torso

##### 9.1: Your torso should...

##### 9.2: But your torso may...

##### 9.3: What you can do if...

- 9.3.1: ...torso is moving excessively
- 9.3.2: ...torso is crooked
- 9.3.3: ...torso is slouching
- 9.3.4: ...torso is tipping forward
- 9.3.5: ...torso is leaning back
- 9.3.6: ...too arched in the lower back
- 9.3.7: ...lower back is painful

## 10: Your head and neck

### 10.1: Your head should...

### 10.2: But your head may...

### 10.3: What you can do if...

10.3.1: ...head is incorrectly positioned

10.3.2: ...head is wobbly

## 11: Your arms

### 11.1: Your arms should...

### 11.2: But your arms may...

### 11.3: What you can do if...

11.3.1: ...arms are hanging incorrectly

11.3.2: ...arms are stiff and unyielding

11.3.3: ...arms are flapping

## 12: Your hands

### 12.1: Your hands should...

### 12.2: But your hands may...

### 12.3: What you can do if...

12.3.1: ...hands are unable to maintain position

12.3.2: ...hands are moving incorrectly

12.3.3: ...hands are hard and heavy

## 13: Your upper body

### 13.1: Your upper body should...

### 13.2: But your upper body may...

### 13.3: What you can do if...

13.3.1: ...upper body is unable to follow and absorb the movement

13.3.2: ...upper body is unable to maintain position

### 13.4: Your upper body – a recap

## 14: Your whole body

### 14.1: Your whole body should...

### 14.2: But your whole body may...

### 14.3: What you can do if...

14.3.1: ...whole body is unable to follow and absorb the movement

14.3.2: ...whole body is unable to maintain position

### 14.4: Your whole body – a recap

## Further reading - A list of our books

Recommended websites and books

Bibliography of scientific papers

Final thoughts