The Rider Warm-Up

Heart Rate and Body Temperature

In order to ensure that the transition between exertion and recovery proceeds as smoothly as possible, the pre-workout or pre-riding warm-up is especially important. You want to activate your entire cardiovascular system. During a proper warm-up, temperatures in your body, muscles, and skin begin to rise. As a result, your metabolism changes. After a period of active riding, sweating will increase the loss of fluids. The sweat evaporates, which cools down the body and decreases the rise in skin and core temperature. Normally, our core temperature runs at about 37°C (98.6°F). In arms and legs, temperatures can be lower by up to 5°C (9°F). The perfect body temperature for riding lies between 38.5 and 39°C (101.3 and 102.2°F).

Respiratory System

During warm-up, your respiration rate and the volume of each breath you take will increase because your muscles need more oxygen to operate while metabolic waste (such as lactic acid) is excreted. Your respiration usually only increases during the first few minutes of a workout. During cardiovascular exercise, you will eventually reach a steady state where your energy intake equals the amount of energy you are expending. Warming up ensures that your breathing rate will already be at "performance level" before your body begins the actual exertion phase (in your case, riding) and leaves you well prepared for the work to come. This is important for your endurance as a rider, such as being able to apply aids over a long period of time.

Minimizing Injuries

The increase in body temperature that a warm-up provides decreases muscle viscosity—that is, internal friction. It also improves the elasticity and flexibility of your muscles, as well as the mobility of your joints. This is important with regard to preventing tension, cramps, and injuries in the rider. Especially when it is cold outside, a higher body temperature lowers the risk of injury to the rider. If your horse spooks and jumps to one side, for example, your muscles need to immediately tense or otherwise become active to keep you in the saddle. If, in a situation like this, your muscles are cold, you might end up with a pulled muscle—or worse.

Photo 3 *Heike demonstrates two easy warm-up exercises: skipping...*

Photo 4 *...and kicking your heels up.*

Improved Coordination and Riding Technique

The decrease in internal friction and increase in flexibility and elasticity of the muscles caused by the rise in your body temperature during a warm-up directly improves the interaction between your nervous system and your muscles. Better coordination (interplay of all muscles) lowers your energy consumption, preventing your body from tiring quickly. You will also be better able to relax active muscles, which has a positive effect on movements that require fine motor skills and a quick succession of aids (such as flying changes and lateral movements, for example).

Nerve receptors in muscles, tendons, and ligaments will become extremely sensitive. The result is a shorter response time for a muscle to react to a nerve impulse and a heightened sense of motion, all of which contributes to more precise interaction with the horse. The rider will experience physical sensations much more quickly. All of these things help the rider adapt to the horse's movements in a more sensitive way and communicate better with him.

Photo 5 *Riding lateral movements requires mobility of the pelvis.*

Joint Capsules, Ligaments, Tendons, and Cartilage

Increased body temperature also plays a central role in preparing connective tissue for use. Only at temperatures between 39 and 40°C (102.2 and 104°F) do the fibers of joint capsules, tendons, ligaments, and cartilage reach their full potential of elasticity and plasticity.

Muscles are able to stretch to an extreme degree (up to 240 percent) while tendons (and ligaments) can only be extended to about 5 percent. And, muscles and tendons take different amounts of time to warm up. Therefore, muscle-tendon units are highly prone to injury.

Joint cartilage receives all its nutrients from synovial fluid, which is produced in the synovial membrane and fills the joint

cavity. By preparing for riding with a good warm-up, riders can actually improve the nutritional conditions within their joint cartilage. After a short warm-up, the layer of cartilage becomes denser and after five minutes of moving the joint, the cartilage-nourishing synovial fluid increases. This is especially important to athletic riding performances as the forces produced by the horse are better absorbed, which prevents injuries short- and long-term. Riders stay healthy, longer.

Effects on Your Psyche

Photo 6 *A simple smile or laugh can "loosen" you up, inside and out.*

Besides preparing you for riding on a physical level, warming up has significant effects on your psyche and leads to emotional stability. Warming up counteracts mental states such as anxiety or inhibition that could negatively affect your riding—that is, it works as kind of an on/off valve for your emotions. This function is especially important with regard to competition, as a good warm-up will prevent you from disturbing your own movements, and those of your horse, with tension, trembling, or nervous actions.

Overall, preparing yourself for riding with a proper warm-up puts you in a state of increased awareness so you are mentally, physically, and emotionally alert—ideal conditions for learning, practicing, training, and competing. It also improves your attitude and increases your overall motivation to work. All of this helps you better adjust to the demands of riding.

Controlling Factors in Duration and Intensity of a Warm-Up

Age

Depending on the rider's age, the extent, duration, and intensity of the warm-up phase of their workout—whether on the ground or in the saddle—may vary. The more mature rider has to gently and slowly increase the intensity within her warm-up routines as her body is not as flexible as it once was and is more likely to sustain injuries. In comparison to children and adolescents, the organ functions controlled by the autonomous nervous system in the mature individual adjust to exercise more slowly, which requires the warm-up phase to be longer.

Time of Day

A rider's biorhythm influences the duration of a warm-up. When we sleep, certain body functions slow down or stop altogether, which negatively influences our organs, the elasticity of our muscles, and the mobility of our joints, all of which we feel when we wake up in the morning. It generally takes a while until our performance peaks sometime in the afternoon. Therefore, the time you need to spend warming up decreases during the course of the day since blood circulation and body temperature naturally increase until they reach their maximum at about 3:00 PM.

Outside Temperature

In addition to time of day, climate conditions influence the duration and intensity of your warm-up. High temperatures shorten the duration, rain and cold temperatures extend it. Wearing climate-appropriate clothing helps you cut down on the time you must spend preparing for your workout. Do note, however, that sweating does not substitute for an actual active warm-up.

Attitude

A rider's attitude also plays a role in how long she must warm up prior to working out on the ground or in the saddle. For example, if you consider the riding session ahead to be particularly important, your state of mind will be more alert, and your metabolism will be better prepared to switch from a state of rest to being ready for exercise. A rider's attitude and level of internal "excitement" greatly influence muscle tension and the dilation and constriction of blood vessels.

Physical Fitness

Depending on your current level of physical fitness, you may have to extend or shorten your pre-workout or pre-ride warm-up. As you make a habit of incorporating a warm-up into your daily schedule, you will be able to spend less and less time on it as the overall condition of your nerves, muscles, and joints adapt and improve.

The Basic Structure of the "6-Point Program"

My so-called 6-Point Program was developed upon the request of riding instructors who were looking for a practical series of exercises that would help them help their students quickly change and improve their seat.

The six points of reference in the human body provide a basic structure that your personal training regimen can follow. Their sequence can be changed depending on your specific goals and/or problems. The six points in my program are important connective points or "areas" in your body, which your instructor can focus on in order to improve your seat in no time. (Note: The six points apply to the warm-up and workouts in the saddle in Part Two of this book, too, although they are modified slightly—see p. 121.)

All the individual points are connected to each other in one way or the other. For example, when you massage the atlanto-occipital joint or the base of your skull, you not only experience change in that area of your neck, but you also change the position of your pelvis so that your heels start to absorb your movement, and the horse's, like springs. And, mobilizing the breastbone (sternum) area usually has positive effects on the shoulders so that the subtle rotations riding requires on circles and turns come more naturally to you and you can use the reins more subtly.

Point 1:
The Head and Neck Area

Your head has superior control over the rest of your body—that is, the head leads and the body follows. Unfortunately, most people do not actually move in this natural way because their head and neck are not positioned correctly. It all starts with the masseters—the thick muscles along your mandible. When you work them too hard, they tense up and restrict the lateral rotation of your head, and believe it or not, even the mobility of your pelvis. The result is you will have a hard time adapting to your horse's movements because your seat is inflexible.

The atlanto-occipital joint and the base of the skull have an even greater influence on your ability to smoothly follow your horse's movements and rotate your body. The atlanto-occipital joint needs to move freely and unrestrictedly. It marks the transition from skull to first cervical vertebra (fig. 1).

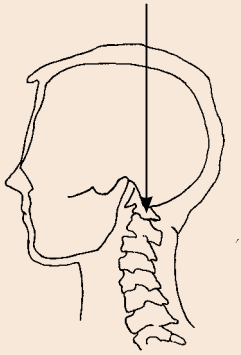

Figure 1
The atlanto-occipital joint.

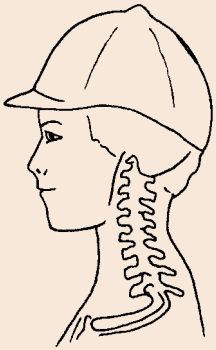

Figure 2 *This illustration shows the rider's neck erect and the focus of the eyes straight ahead and slightly downward. In this position, the atlanto-occipital joint is unrestricted.*

Figure 3 *Several muscle groups originate on the skull.*

If this joint is restricted, all other joints lose their mobility to some degree, and your body will not allow movements to smoothly flow through its entire length. The atlanto-occipital joint can only move freely if your eyes are pointing straight ahead and slightly downward (fig. 2).

In addition, many riders experience negative tension in the muscles around their skull because in their day-to-day existence, they rotate their head in the wrong way (fig. 3). You have to "unlock" the atlanto-occipital joint and reduce the tension around your skull in order to execute rotational movements correctly and completely, and to allow physical sensations and vibrations to pass through your body from head to toe, and vice versa. Taking strain off the atlanto-occipital joint and the muscles that originate at the skull not only relieves your head and neck area, and your upper body, but also allows your pelvis to change position in a way that leads to a more flexible seat and "elastic" ankles.

The basic "seat" of a rider always has to be treated in a holistic manner. Changing your head position can have positive or negative effects on your feet, while in the same way, the position of the stirrups (positioned perpendicular to and under the widest point of your feet) allows your entire body (head to toe) to absorb the horse's movements. If the stirrup is placed too close to the tips of your toes or your heels, all motion transmission within your body is obstructed.

Photo 14 *Mobilizing the atlanto-occipital joint relaxes your body.*

Point 2:

The Breastbone and Rib Cage

When riding a horse, the vibrations of his movements are meant to flow from your pelvis up to your head, but they are often stopped in the area of your thoracic vertebrae (the middle segment of the vertebral column). This part of the human spine is much less flexible than, for example, the cervical or lumbar vertebrae, as the rib cage acts like a relatively stiff "corset" in that section of the body, allowing for little sensitivity to motion vibrations. For this reason, many riders experience pain in this area when they have to ride at a sitting trot. If a rider has a stiff pelvis on top of this, all her movements in the saddle will be bumpy or jerky. Because the ribs restrict the flexibility of the thoracic vertebrae, you need to pay special attention to mobilizing this area.

Point 3:

Muscle and Tendon Reflexes

Stress translates into high levels of negative tension in various muscles and tendons. Stretching does not help in this case. However, if you apply what I liken to a "plucking" or "pinching" massage-like touch to (for example) your trapezius muscle in your shoulders and back, pectoralis in your chest, the adductors in your thighs, and the psoas major in your hip, you can loosen the tension and you will feel the difference afterward, especially in the adductor and psoas muscles, which will allow you to sit deeper in the saddle and your pelvis to follow your horse's motion. At first, this "massage" might feel a bit unpleasant, but that only underlines the significance of the muscle tension problem. If you apply it to these muscle groups every day, you will feel significantly better in a very short period of time.

Point 4:

The Sacroiliac (SI) Joints

Even if all your muscles are evenly developed and work together harmoniously, you will not be able to follow your horse's movements if your sacroiliac (SI) joints (the left and right joints between the sacrum and the ilium in your pelvis) are inhibited or blocked in their movement (fig. 4). Most forms of back problems actually originate in these joints. They are sig-

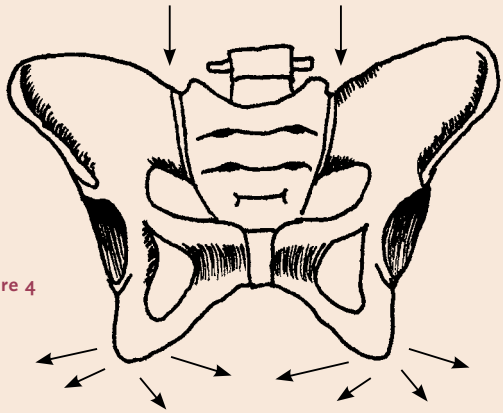

Figure 4

nificant in the human body because they allow for or obstruct our natural motion patterns, which are all three-dimensional (back-forth, left-right, up-down). The sacroiliac joints are indirectly connected to the atlanto-occipital joint.

Point 5:
The Pelvis

According to the Feldenkrais Method®, the pelvis is, so to speak, the "engine" of the human body, which absorbs and emits energy. The rider uses it to communicate with the horse's back.

Most forms of back problems seen in our society today occur because people do not know how to use their pelvis "flexibly" anymore—this is despite the fact that the pelvis, of all body parts, acts as a "transmission device" that passes on all movements from your legs to your head, and vice versa. It needs to be able to execute three-dimensional movements (see Point 4, p. 17). Stiffness in any one direction will disturb the movement of the horse's back and wreak havoc on the communication between horse and rider.

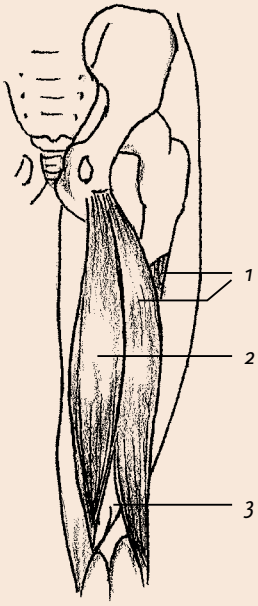

Figure 5

1 *Biceps femoris*

2 *Semitendinosus muscle*

3 *Semimembranosus muscle*

Point 6:
The Forward-Driving Aids

The posterior thigh muscles (fig. 5) are the muscles we need to push our horse forward. The muscles that rotate the thigh bone in the hip joint slightly move the inside of the thigh away from the horse so that—if you imagine a clock face—your left foot points to eleven o'clock and your right to one o'clock, with your horse's head at twelve. Your feet rest in the stirrups

at their widest point, and your legs hang down the horse's sides in a relaxed manner. The posterior thigh muscles flex the knees and bring the lower legs close to the horse. These flexors are also responsible for toning (tensing) the lower leg muscles in a natural way that leaves your heels in a deep and flexible position.

Be Creative

The suggested exercises provided in this book include movements that target many different areas of the body. Depending on your interests and needs, you can combine them in any way you like. It is important, however, that you do not do the exercises in a way that targets the same muscle groups over and over again. You do not want to experience fatigue during your warm-up.

General Warm-Up Exercises

- Jogging, skipping, or heels up (kicking them up to your behind) (photos 3 & 4, p. 7).
- Moving your limbs in all directions (forward/backward, back/forth/sideways) in order to target as many muscles as possible in different ways (photos 7–9, p. 11).