

REFLEX

THE KIESER TRAINING MAGAZINE

54



THE CORE – OUR TRUMP CARD

STRENGTH FOR CORE STABILITY

IN ADDITION TO ENDURANCE, SPEED, COORDINATION AND AGILITY, SNOWBOARDERS NEED STRENGTH – IN PARTICULAR THEY NEED A STRONG CORE

“The core is the snowboarder’s trump card,” says the Austrian sports scientist Harald Graf. He started skiing when just three years old and from the age of ten he attended specialist ski schools. During that period, Harald was out on the slopes and glaciers almost every day.

Having qualified as a state-certified ski trainer and snowboard and ski instructor, he went on to teach many skiers how to ski properly. Now 37 years of age, Harald manages the Kieser Training Studio in Linz. According to the former top athlete, the core, i.e. the torso is crucial to maintaining stability and balance on the snowboard. Your

legs are fixed to the board and so the chest has to absorb the entire force: in particular the high rotational forces that require a dynamic control of core stability. In addition, the core is where the impulses from the arms and legs meet. “This makes strong, rock-solid core muscles absolutely essential.”

However, strong core muscles are exactly what many snowboarders lack. In particular the muscles of novice boarders fatigue after just 30 minutes to such an extent that they can no

longer control the transfer of weight from one edge of the board to the other – not forgetting of course the risk of injury associated with untrained muscles.

If you want to have fun and not be held back by a lack of strength, your training should extend beyond the ankle, thigh and hip muscles, recommends Harald: “The benefits are huge if you focus on the muscles that stabilize the spine and keep it straight, e.g. the deep muscles of the back and neck, the muscles of the head/neck together with the front, side and rear abdominal wall muscles.” In addition, snowboarders should pay particular attention to strengthening the shoulder muscles as the arms have to work continuously to maintain balance. For those occasions when you do fall, it helps to have strong wrist muscles.

Nowadays, Harald does little teaching although he is still the honorary trainer for his ski club. Most of all, however, the likeable Austrian enjoys darting through the snow with his four-year-old son – on skis of course. After all, the lad is pretty talented. ■



Snow sport instructor Harald Graf is currently doing the following exercises as preparation for the snowboard season: A3, B6, F1, F2, F3, C1, D6, E2, B8, H6 and G5

A HINT OF A NEW BEGINNING

Do you sense it as well? 2015 stretching out ahead of you like a blank sheet that you can fill as the fancy takes you. Try something new. Have the courage to take that next step. Realize your personal dreams. Overcome challenges. Achieve your goals or simply enjoy life.

We firmly believe that a strong body is the basis of a healthy, active and fulfilled life. You already have within you all that you need to achieve that.

Listen to our new Kieser training song: http://goodurl.de/kieser_en

Quality and efficiency, passion and determination, team spirit and fellowship: For us, Kieser Training is a promise and it is this promise that motivates us. Our goal is for you to achieve your training goal. To that end we deploy our knowledge and skills. Following the recent introduction of the pelvic floor machine and the two foot machines, we are introducing four new models in 2015: a new F1 for the oblique abdominal muscles, a new F2 for the straight abdominal muscles, a new F3 for the back extensors and the new C2 exercise for the latissimus dorsi muscle.

We look forward to helping you with your training in 2015!

Your Kieser Training Team

HIT THE SLOPES

CARVING: HOW TO PREPARE



FOR FUN-FILLED PLEASURE ON THE SLOPES

Muscle training from head to toe

IF YOU HAVE NOT ALREADY STARTED, IT'S TIME TO GET YOUR MUSCLES TONED FOR THE SLOPES WITH A SPECIAL SKI PROGRAMME. OUR EXPERT DR SASCHA SAJER HAS SOME TIPS ON HOW TO PREPARE FOR CARVING.

For downhill skiing, you need strong muscles and resilient ligaments and tendons – and that is even more the case if you want to master carving. With this technique you descend at high speed with the ski on its edge as if you were on rails. This puts extreme pressure on the hip, knee and ankle joints. It probably generates a maximum force several times higher than with traditional skiing: generally speaking the smaller the radius of the curved edge the greater the load.

This combined with high speed quickly puts a massive strain on the muscles and increases the risk of falls and injury. Most

accidents occur in the afternoon when the muscles are overtired. With carving, the most common injury is to the ligaments in the knee: the anterior cruciate ligament, the medial collateral ligament and the medial meniscus. Such injuries often require surgery but one thing is for sure: they always take a long time to heal fully.

Because carving increases the maximum peak force, your muscles must be stronger than for traditional skiing, making the right preparation even more important. It's essential to train not just the leg muscles but every muscle group from the feet, through the core to the head. Downhill skiing is a genuine all-body sport that uses the entire muscle system either for the purpose of acceleration or deceleration.

Don't forget that control starts off with your feet; strong feet increase the

level of control at your disposal and overall strength improves coordination.

Our ski programmes allow you to train the main muscles and muscle groups. In addition to the leg machines and the F2 and F3 machines, I recommend training on the A5. After all, you need to transfer the forces from the foot to the head through the core. If you use your pelvic floor muscles correctly, you can control your core muscles. This provides the required core stability and muscle tone.

Local staff will be pleased to give advice on how best to prepare. ■

*Text: Sascha Sajer, Prim. Doctor of Medicine
Kieser Training sports physician, Vienna, Austria
Specialist in physical medicine and rehabilitation*

HIGH SATISFACTION RATING ...

... for Kieser Training in a survey by the German magazine "FIT FOR FUN" of 310 people, who tried our training concept for four weeks. How did we do?

86 %

of participants recommended us.

More than 50 % responded to the survey following their training. We are proud of the following results:

87 %

found the training concept of Kieser Training effective.

87 %

rated the usability of Kieser Training machines as (very) good.

83 %

found Kieser Training (very) good for beginners.

81 %

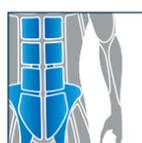
felt better after doing Kieser Training.



And this rating won 1st place in our "FIT FOR FUN friends" prize competition:

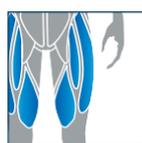
What Kieser Training means for me ...
"... I have rediscovered an old friend – my body. For a long time we had a difference of opinion – particularly when it came to training on machines. However, head and body now share the same goal." ■

PROGRAMME FOR SKIERS*



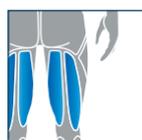
A2 HIP

As antagonists to the back muscles, strong abdominal and hip muscles are essential for effective core stability when you turn or do other ski manoeuvres.



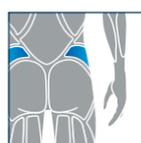
B1 FRONT THIGHS

The front thigh muscles are working continuously; they help to absorb the bumps, provide stability in the crouched downhill position and during carving turns.



B7 REAR THIGHS

The importance of the rear thigh muscles is often underestimated. They too have to work continuously in order to stabilize the knees.



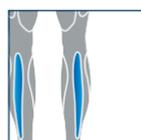
A3 BUTTOCKS

The lateral gluteal muscles stabilize the hips when the bodyweight is not evenly distributed on the skis, e.g. when doing turns or on uneven ground.



A4 INNER THIGHS

The adductor muscles keep the skis on track.



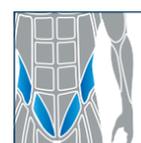
B8 SHINS

The shin muscles help to keep the body in the forward position.



F3 LOWER BACK

The downhill position and carving turns put an enormous load on the lower back. To maintain the correct position over the skis, you need strong core muscles in order to counteract the high centrifugal forces.



F1 TORSO

You use the full range of core muscles when you do a compensatory movement or turn. The back and abdominal muscles work together.



C1 UPPER BACK

A strong latissimus dorsal muscle allows an effective use of the poles when traversing terrain with a shallow or uphill gradient.

*Selection

WHAT TO EXPECT IN 2015

FULL SPEED AHEAD WITH OUR NEW MODELS

KIESER TRAINING WILL START THE NEW YEAR WITH FOUR NEW MACHINE MODELS THAT WILL MAKE YOUR TRAINING EVEN MORE EFFECTIVE. BY THE END OF 2015 WE HOPE TO HAVE ALL FOUR MACHINES IN EVERY KIESER TRAINING STUDIO. SO WHAT CAN YOU EXPECT?

F3.1 Back extension

A strong back knows no pain. Our F3 strengthens the deep back extensor muscles and is one of the classic Kieser Training machines. To strengthen these muscles you need to immobilize the pelvis so that the auxiliary muscles cannot help out. If that is done, it “forces” the back extensors close to the spine to work. However, complete muscle isolation is only possible on its larger “sister machine”, the Lumbar Extension-Machine or LE for short. We use this machine for the intensive treatment of back problems. To train on this machine, you must be accompanied by a specially trained member of staff who secures you in the machine and does the other adjustments.

The new F3.1 is mechanically somewhat closer to the LE. It allows almost total immobilization of the pelvis and at the same time is kinder on the knees. In addition, customers can do the necessary machine adjustments themselves. Unlike the current F3, the new model does not have a small pad mainly applying to the front of the shins but has a larger pad that applies more fully to the shins. We have also added two pads near the knees and they apply to the thighs. This means that you are fixed more securely and more comfortably in the machine. In addition, a fully adjustable crank handle makes it easier to adjust the level of fixing when seated in the machine. You can also adjust the start position more precisely and adjust the machine so that it suits your physical shape and can cope with any restricted mobility. Last but not least, we have reduced the resistance in the first 20° of the movement. This facilitates both the start of the exercise and the initial return movement from the forward position. It also makes the exercise safer because it prevents swinging movements, i.e. “cheating”. However, don't be frustrated if you have to reduce the weight on the F3.1.



It's nothing to do with you but is the result of the new design.

For those with back pain, we still recommend accompanied sessions on the Lumbar Extension-Machine.

There are several reasons: With the LE machine you can do a precise analysis of the strength of the deep back extensor muscles. In addition, the LE has a counterweight to offset the weight of the upper body. This means that the load on the muscles accords with your physiological strength curve. It also allows a precise adjustment of the fixing mechanism, the training weight and the range of motion – all particularly important if your symptoms are severe. In addition – and this is very important – you are accom-

panied by an experienced, qualified member of staff who controls your training, supports and motivates you and also helps you overcome any anxiety you may have about training with back pain. Finally, most private

health insurers cover the cost of these services.

plate. Unlike the previous model where you had to reach above the head to move the machine into the start position, the new model has a lever on the side, which is much easier to use. All in all, the machine is more comfortable, the training is more controlled and in the final analysis more effective.

F2.1 Abdominal flexion

If you were to do a poll to discover the most hated machine at Kieser Training, it's pretty likely that the F2 would come out top. The good news is that the F2.1 is now even more effective: we have inclined the seat slightly backwards and your legs are now slightly elevated. The advantage of this design is that it almost fully immobilizes the iliopsoas muscle so forcing the main work to be done by the straight muscle of the abdomen.

Another advantage of the F2.1 is that it provides a better fixing for those of us who are shorter. In addition, many people – particularly women – find the new elbow supports more comfortable than the chest pad on the F2. Finally, when you switch from the F2 to the F2.1 you can immediately increase the weight. This is because we have modified the transfer of strength making it easier for newcomers as well as for those who are short or very petite to start training the abdominal muscles. Reason enough, for continuing that love/hate relationship – don't you agree?



F1.1 Rotary torso

We have redesigned the pelvic fixing on the new F1.1 making it more secure. This is the main reason why the efficacy of the training for the internal and external abdominal oblique muscles has been improved. In addition, the new model has fully adjustable shin and thigh pads (new), which can be adjusted whilst seated in the machine. The new diagonal pads behind the pelvis are particularly effective: They stabilize the hips and prevent side-to-side movements. This prevents evasive action during the exercise. In addition, the foot platform is shaped to prevent the foot from sliding on the

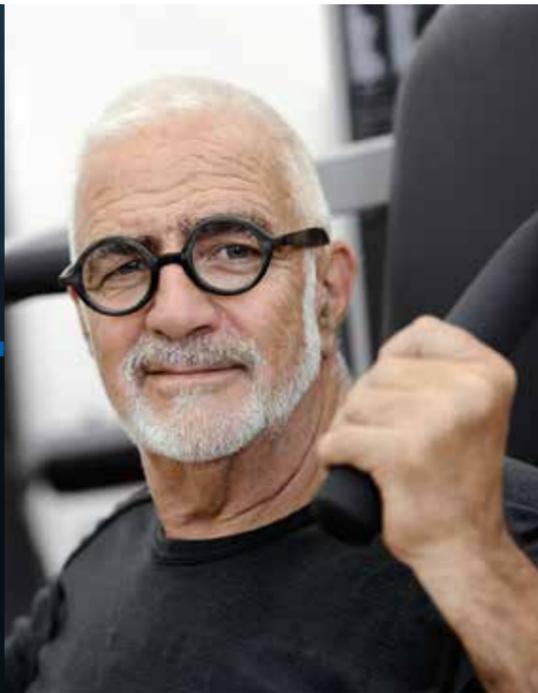
C2 Arm pull

We have also modified the C3 machine, which trains the biceps, the lower section of the trapezius muscle and the latissimus dorsi. It now has adjustable handholds. With the C3 exercise, you hold the handholds with the ends pointing forwards and pull the elbows outwards and downwards. This is good preparation for the side-to-side pull-ups on the K3 or J3. With the new C2 exercise, the handholds are turned inwards and using an underhand grip you pull your elbows down in front of the body. This exercise is perfect if you want to prepare for front chins on the K2 or J2. ■



KIESER'S CORNER

GERMAN DSSV TRAINING REGISTER – MAKING QUALITY VISIBLE



I am often asked why our customers are so enthusiastic. It's very simple. They achieve their goals.

According to a recent study, 74% of those questioned achieved their training goals within six months.

Why? To succeed, you need – in addition to personal motivation – an effective method, high-quality training machines and above all, superbly trained staff to provide professional guidance. That is the key to your success.

THE KEY TO YOUR SUCCESS:

Superbly trained staff

In 1987, I established the Kieser Training Academy, the Kieser Staff Training and Documentation Centre in Zurich.

It provided staff with the required theoretical and practical knowledge. The principle I adopted at the time remains true to this day: every single member of staff must complete the specified theoretical and practical training. Only those who have completed the required courses and have passed all the exams are licensed to work in our studios.

Following our expansion in Germany, we moved the Kieser Training Academy to Cologne in 1998. We standard-

ized the requirements for individual roles – from machine mechanic to doctor. In 2013 and working with the BSA Academy, a German institute of prevention, fitness and health, we revised the basic training for those seeking to qualify as a "Kieser Training Instructor". Since then, this course has been open to anyone who is interested and is officially recognized by ZFU, the national body in Germany that regulates distance learning.

That is remarkable. I know of no other fitness company that has its own state-approved training course.

We are now celebrating a further accolade. The Kieser Training Academy has been approved by DSSV, the employer association of German fitness and health facilities and it is now listed in their training register as a training institution. This means that all courses and with them the qualifications of our staff comply with the training requirements of the DIN Standard for fitness studios (DIN 33961-1) that came into effect in Germany in March 2013 with the aim of guaranteeing safety and quality. The DSSV Training Register lists our studios, training courses and staff together with their qualifications.

The figures speak for themselves. In Germany alone, our ongoing customer survey is recording an 87% satisfaction rating for the professional skills of our staff. We are working to improve that further.

Wishing you all strength in 2015!

Werner Kieser

BEEF SALAD WITH AVOCADO AND BEANS

4 tbsp. lemon juice
4 tsp. mustard
1 tbsp. honey
4 tsp. soy sauce
4 tbsp. olive oil
Black pepper
240 g tin of kidney beans
800 g runner beans
1 avocado
A little lemon juice
8 cherry tomatoes
600 g of roast beef (sliced)

For the dressing mix together the lemon juice, mustard, honey, soy sauce and pepper and then add the oil. Wash and clean the runner beans and boil in salted water for 8–10 minutes until al dente. Drain. Rinse the kidney beans and drain. Slice the avocado and drizzle with a little lemon juice. Wash tomatoes. Remove the green ring around the stem and finely dice the tomatoes. Mix with the beans and dressing. Add the avocado. Roll up the slices of beef and serve with the salad.

Protein:	47 %
Fat:	40 %
Carbohydrate:	13 %
Kcal:	99 kcal per 100 g

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CARNITINE – A PROTEIN FOR BETTER HEALTH THE RIGHT DIET FOR MUSCLE BUILD-UP

For a long time, carnitine (or to use its correct chemical name L-carnitine) was touted as a "slimming agent". Although this theory has been disproved, carnitine is now enjoying a revival, particularly in the light of vegetarian and even vegan diets – this time with justification!

As the name suggests, the body absorbs carnitine from the consumption of meat. The meat from sheep, goats and cows is particularly high in carnitine as is crab meat. It is unsurprising, therefore that vegetarians often lack carnitine. In principle, the body can make its own from the amino acids methionine and lysine although our ability to synthesize carnitine decreases with age.

The body uses carnitine to transport long-chained fatty acids to the mitochondria, the powerhouse of our cells, including muscle cells, where they are converted into energy. Without carnitine, the body cannot burn fat – it was this fact that was the origin of the slimming theory. Recent studies have shown that although healthy levels of carnitine do not pro-

mote weight loss, carnitine probably does have certain health benefits. For example, a high intake of carnitine regulates the metabolism and this increases the amount of fat burned in the muscle and liver. This reduces

type 2 diabetes. The most persuasive data available to date comes from the



the risk of non-physiological fat deposits, e.g. in the liver. In addition, the muscles remain more sensitive to insulin signals.

Carnitine can, therefore, help prevent fatty liver disease, a new but increasingly common disease. It is a major risk factor in the development of

treatment of diabetes. A meta-analysis of high-quality research has shown that carnitine, taken as a medicine, had a positive effect on important blood lipid and blood sugar levels. ■