

Reflex 75

The Kieser Training Magazine
June 2022

New layout

new sections with
advice, recipes and
back exercises

Dr Wimmer
in conversation with
Kieser Training

KIESER
TRAINING

61

61 per cent of the participants in a survey suffered from back pain within one year. Women were affected more often than men. Older respondents reported significantly more pain attacks per month than younger ones. About one sixth of the respondents suffered from chronic back pain. (von der Lippe et al., 2021, Journal of Health Monitoring)

46

46 per cent of the respondents had experienced neck pain within one year. (von der Lippe et al., 2021, Journal of Health Monitoring)

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At 53 per cent, pain in the lower back occurs about twice as often as pain in the upper back (27 percent). (von der Lippe et al., 2021, Journal of Health Monitoring)

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Dear readers,

How is your back? Do you also feel the "absences" from one of our studios in the last two years? Are you one of the roughly two-thirds of the population who suffer from back pain? Fortunately, you are in the right hands with us. Whether in everyday life or for your favourite sport – the back forms the foundation. We explain how to strengthen the lower back with the "Machine of the Month" – the "LE Lumbar Extension" on page 8. Dr Wimmer also recently trained on this machine. He is an enthusiastic customer and I am particularly pleased that we were able to attract him, the likeable and eloquent physician, as an ambassador for us. Get to know Dr Wimmer better in our conversation, ask your questions and benefit as a customer from his expertise.

Always a bit stronger – through the summer together.

Cordially,

Heiko Krink
CSO

A strong back carries us through life. Specific training for the deep muscles? Makes sense!

Text: Tania Schneider

A trained back can take a lot. However, lockdown, home office, quarantine or infection have taken their toll. Due to a lack of training, many of our clients have reported renewed back and neck problems. This makes it all the more important to get your back fit and perhaps even to start medical training.

Antonia N. suffered from severe back pain for years. She took various measures to try to get it under control. Without success. Until she started – albeit sceptically – with

Kieser Training. After only three weeks of training, her complaints had disappeared. But then came Covid and with it the lockdown. The centres were closed for almost six months. The effect: Antonia's pain soon returned.

"Many of our clients reported similar things to Antonia," says Matthias Dahl. The doctor has been providing medical training advice at the Kieser Training centres in Berlin Charlottenburg and Reinickendorf for 20 years. "When we were able to reopen the centres after the lockdown,



[Continues on p. 6](#)

Our back training:

- ✓ increases the strength of your deep back extensors, which improve your posture and give your spine the stability it needs,
- ✓ can help prevent disc surgery,
- ✓ aims to increase the mobility of your spine,
- ✓ alleviates or eliminates 80 percent of chronic back and neck pain,
- ✓ increases well-being and quality of life.

our clients were just happy to be able to train again." The Berlin doctor explains how most of his clients felt rusty, weak and flabby after the long training break or had tension, back or neck pain again. For him, a logical and tragic consequence of the pandemic: "If you don't exercise for a longer period of time, you lose muscle, i.e. also the deep back muscles and thus the natural, supporting and protective back corset." Studies confirm: lockdown, social distancing measures, quarantine or infection have led to a reduction in physical activity, an increase in sitting time and a poorer diet, and this in turn has led to loss of muscle mass, loss of function and a deteriorated body composition. And this is associated with numerous lifestyle diseases such as cardiovascular diseases, diabetes, osteoporosis or, unsurprisingly, back pain.

"Due to long periods of sitting and especially due to a lack of strength

training or muscular resistance, the muscles are permanently underused," says Dahl. "This weakens the pelvic floor, hip, abdominal, leg and buttock muscles, but also the deep back muscles that support our spine. As the muscular stabilisation

"Sitting time has increased by about 3 hours a day during the pandemic, according to research – that's a problem for the back."

Matthias Dahl, Doctor

fades, the vertebral bodies, intervertebral discs and vertebral joints come under pressure." But what exactly happens in the system?

Vertebral body

The vertebral bodies are the supporting part of our spine. If the muscular corset

weakens, the mobile segment consisting of vertebral bodies and discs becomes unstable and the neighbouring vertebral bodies can move against each other. "Due to the instability, there can be increased vertebral joint blockages or entrapments at the intervertebral joints," explains Dahl. "Both of these can be very painful."

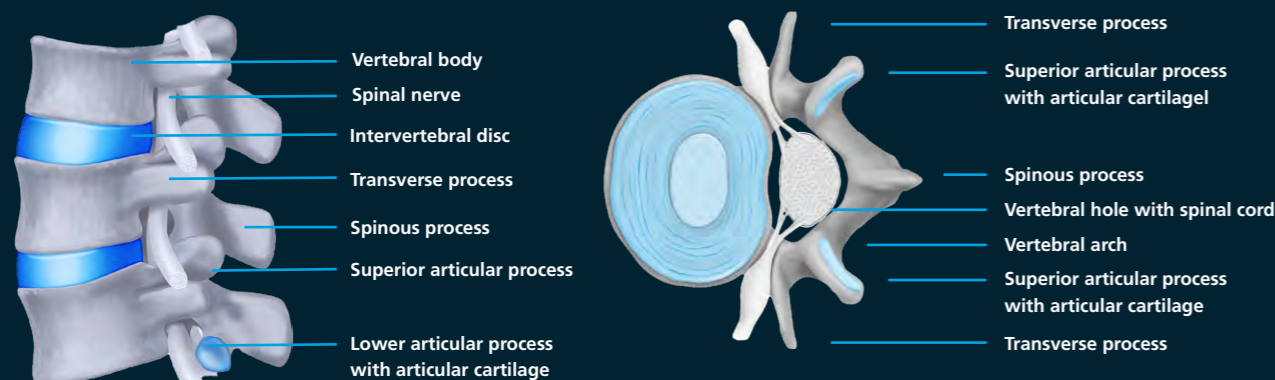
Another consequence of prolonged physical inactivity: like all bones, the vertebrae also regularly need sufficiently intensive tensile, compressive and bending loads. The reason: when such loads are transferred to the bones via ligaments and tendons, it stimulates both the bone-building cells and bone formation, and leads to the storage of mineral salts. "But if there is a permanent lack of adequate load, the bone becomes porous," says Dahl. "This is disastrous because bone loss (osteoporosis) can lead to vertebral fractures."

Intervertebral disc

Lack of load also has an effect on the

Spine and vertebral bodies

Each vertebra consists of a vertebral body and a vertebral arch, which encloses the spinal cord. The vertebral arches have two transverse processes and a central spinous process to which muscles and ligaments attach, as well as two lower and upper articular processes. On each side, the lower articular process forms the vertebral joint (facet joint) with the upper process of the next vertebral arch. Between them sits the thin articular cartilage, which prevents bone from rubbing against bone. They are surrounded by a joint capsule. Between the vertebrae, intervertebral discs buffer the loads.



intervertebral discs, which lie between the vertebral bodies. They each consist of an outer fibrous ring and a gelatinous, fluid-rich core, which serves as a buffer and pushes the adjacent vertebral bodies apart. "The intervertebral discs require the permanent alternation of loading and unloading for fluid exchange and nutrition," explains Dahl. Like a sponge, the intervertebral disc is "squeezed out" when it is under pressure, while it absorbs oxygen- and nutrient-rich fluid when it is unloaded.

"If this dynamic alternation is missing, for example due to sitting for a long time, the nutritional situation in the intervertebral disc worsens. It degenerates prematurely, loses elasticity and height." But this also means that the ligamentous apparatus of the spine loses its tension. And that can also cause the vertebral bodies to shift against each other, which often becomes a problem for the small vertebral joints.



Vertebral joints

The neighbouring vertebrae are connected to each other via the small vertebral joints (facet joints). If degenerative processes reduce the height of the intervertebral discs, the distance between the vertebral bodies decreases, which increases the load on the facet joints. These are then compressed. "This often causes arthrosis," says Dahl. "This is called vertebral joint arthrosis or spondylarthrosis. This damages the cartilage surfaces that ensure that the joint can move smoothly and without

pain." According to Dahl, this does not necessarily have to be accompanied by complaints at the beginning. "But often it goes hand in hand with dysfunctions of the vertebral joints. And that, in turn, can be the cause of pain, restricted movement and low resilience." The same applies to the joints: healthy joints depend on movement. "Movement stimulates the synovial membrane to produce the synovial fluid that nourishes the cartilage. If movement is missing, the lubricant is missing. As a result, arthrosis develops gradually. Sitting worsens the metabolic state in the joints."

What helps

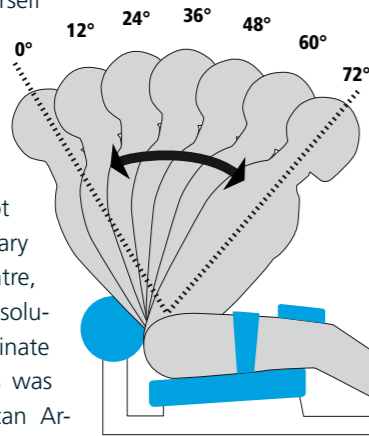
The fact is: muscles, bones, joints and intervertebral discs need to be looked after. A good option is targeted, 1:1 supervised strength training on the computer-assisted Lumbar and Cervical Extension Machine. In most cases, the machine will allow you to build up the weakened back extensor muscles effectively and quickly. "The better the spine is muscularly stabilised, the better it is," says Dahl. "A strong musculature works like a natural corset. It keeps the vertebral bodies in position, relieves and protects our intervertebral discs and the small vertebral joints. In this way you prevent disc degeneration and arthrosis of the small vertebral joints. However, for muscle building to work, it's important that you make sure to exercise once or twice a week." Dahl also recommends regularly seeking medical training advice and not waiting until something no longer works or hurts.



LE Lumbar Extension

Our solution in the fight against back pain: the Lumbar Extension Machine – or LE for short.

If you want to protect yourself from back pain or get rid of it, you should strengthen your deep back muscles. One effective way is to train this muscle part in isolation. Since it is not possible to leave our auxiliary muscles outside the centre, our LE offers a technical solution to functionally eliminate the auxiliary muscles. This was discovered by the American Arthur Jones, Werner Kieser's close mentor. 35 years ago, based on a



large-scale research project, Jones brought his computer-assisted LE to the market. With this technology, Jones was able to measure, analyse and effectively increase the mobility of the spine and the strength of the back extensors in isolation. This machine has been used successfully by Kieser Training to combat back pain for almost as long – in its own, redesigned version.

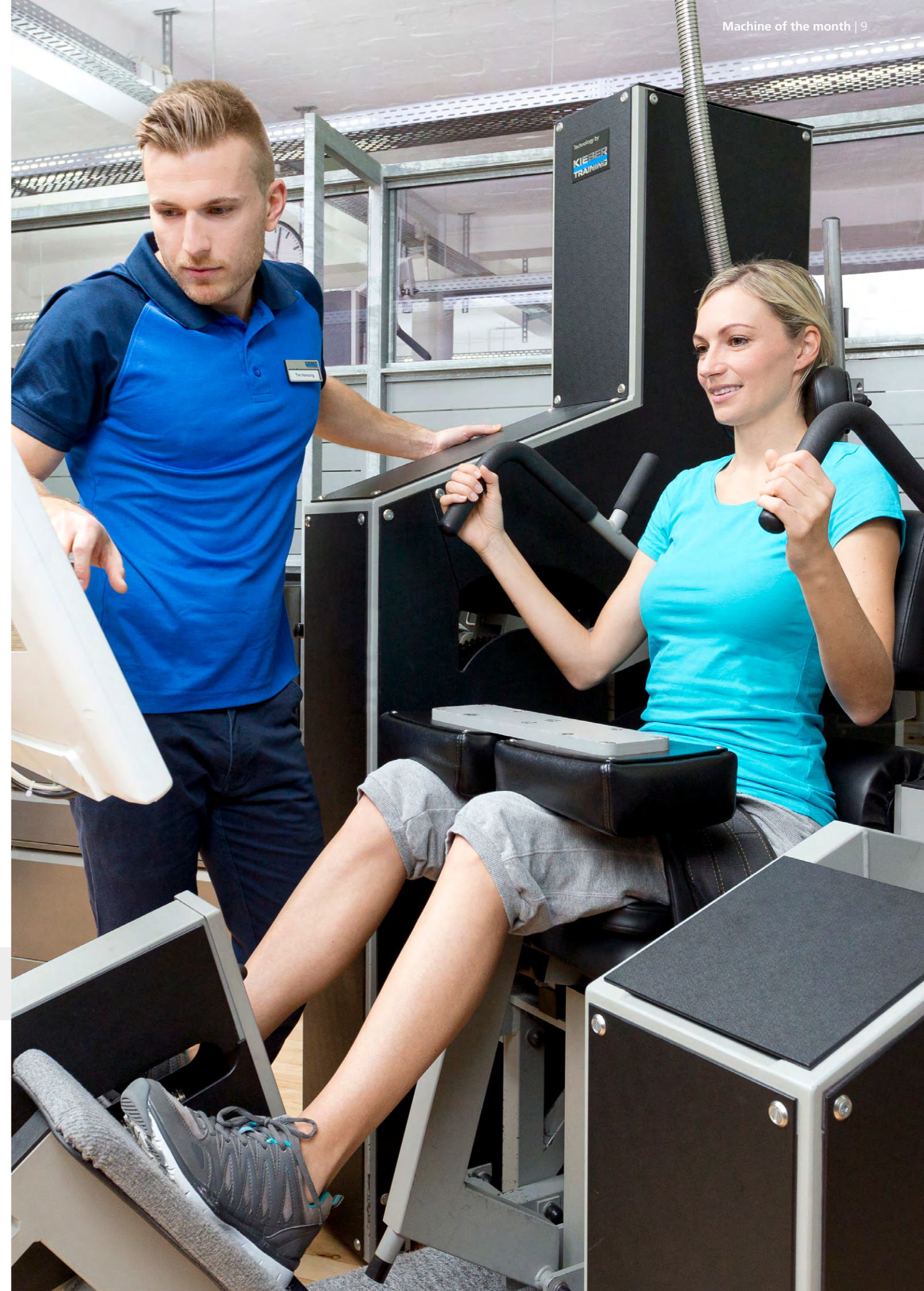
- ✓ individually adapted, safe training
- ✓ highly effective
- ✓ good results

In fact, the key feature of this technology lies in the fixation of the pelvis: pelvic roller, knee pad, foot plate and thigh belt demote the gluteal and leg muscles to the reserve bench and enable isolated training of the back extensors. Another advantage is the finely adjustable resistance. In addition, the weight of the upper body is balanced by a counterweight. Variable resistance ensures the adapted load over the entire range of motion. In addition, the individual settings and guided movements enable safe training – even with coordination problems and pain. The digital training protocol as well as the visual and acoustic signals on the monitor are also advantageous and contribute to the training quality and success. Additional safety is provided by our specially trained instructors who supervise your training on this machine.

- ✓ 80 % of pain-ridden clients become pain-free or almost pain-free.
- ✓ Strength training can help to avoid disc surgery.

Want to learn more about the LE and the right training?

Find out more online:
kieser.com.au/training/strength-training-for/back-pain/



K

knowledge creates power.

In conversation with Dr Wimmer



Interview: Adrian Schraeder

Dr Johannes Wimmer has made a name for himself far beyond Germany's borders with his medical advice formats. He conveys burning health issues in an entertaining and insightful way – and is a new addition to Kieser Training.

Dr Wimmer, almost everyone in Germany knows you by now. You have several successful television programmes, you produce YouTube videos, you write books. Nevertheless: who are you?

I like to reach out to people and help them take a few steps forward in their own well-being. I want to take away their loneliness and help them in their self-efficacy.

What is meant by this?

The conviction of being able to carry out actions on the basis of one's own competences. This includes good physical awareness and a stable muscular system. The muscles also reward you, the body releases endorphins through training. That feels good!

You worked as a doctor – in accident and emergency, in radiology, in the treatment of trauma patients in the armed forces. Now you are a partner of Kieser Training and host TV formats – what happened?

Quite simply: I decided I really wanted to make a difference. The medical profession provides a challenge for me because it is so functional and focused on the technical solution to a problem. Simply because of the lack of time, it is difficult to respond to what the patient actually wants. I see myself more as a life companion. As a partner. I do not look at the person as a doctor, but I stand next to them, side by side, and together we look at the road ahead of them.

What is the reason why people don't live healthy lives?

The application. They often know how they should live. Lose weight, exercise more, watch your diet, reduce stress, actually take your medication, sleep more – but they don't do it. That's where I come in, I ask: why don't you do it? How can you package this in such a palatable way that people realise: ah, maybe this is the right thing after all and feels good.

How do you do that?

By taking your time. By being present. What I show in my videos are not secrets. You can read all about it. But strangely enough, people do watch my videos. Because I really get into the subject and break down barriers through the screen.

How did you end up at Kieser Training?

I have been aware of Kieser for a long time. Kieser has had a presence in my hometown of Hamburg for as long as I



can remember. It was clear to everyone what it was all about. The positioning has always been strong, the focus precise: "A strong back knows no pain." I thought to myself for a long time: That is certainly valuable, but it also seems very complicated.

And is it?

No – my fears were not realised. I find the training totally rewarding. You really notice that you have achieved something. And I like the efficiency aspect. You notice how the individual muscle groups are exhausted and yet you don't have to train forever and shower immediately afterwards.

What amazed you during the first training session?

A few things. The aesthetics, for example. And the quality of the machines. You receive proper guidance there. And this is much better than in the standard gyms. The range of action is really amazing. I wouldn't have thought that.

Do you need these complex machines from a medical point of view?

It's a question of where you want to go. When you face a particular challenge or have a specific problem, you want to address it specifically and not go to physiotherapy forever. Here you can build up individual muscle groups in a controlled way under professional supervision. The other thing: if you do a particular sport, you will reach a limit at some point. At some point you don't get any better. Thanks to Kieser, I can attain the next level for myself. I'm sure I'll soon be able to play better tennis and do yoga better thanks to the targeted muscle building.

With Kieser Training you train at high intensity. The formula is called HIT. Does that make sense?

Absolutely, of course. But that's nothing new. Even the ancient Greeks trained like this. It was always clear: you only get better if you push yourself to the limit. Otherwise you can at best maintain your level.

Profile

Dr Johannes Wimmer (38)

is a medical doctor and is known in the German-speaking media as a TV and Internet doctor. He speaks at international congresses on doctor-patient communication and the digital transformation in the health sector.

Dr Wimmer regularly appears on various television and radio programmes. He has published several bestsellers on the subject of medicine. His latest book "Stark durch die Krise" (Strong through the crisis) was published in 2021. In his TV show "Dr. Wimmer – Wissen ist die beste Medizin" (Dr Wimmer – knowledge is the best medicine), on his own web portal [doktorwimmer.de](https://www.doktorwimmer.de) and on social media, he provides assistance on medical self-efficacy and increasing well-being.

Dr Wimmer completed his medical studies at the Philipps University of Marburg and the University of Lübeck. He has worked in the USA, China and South Africa and has passed the US medical exams (Step 1, 2CK and 2CS). During his time as a practising doctor in Vienna and Hamburg, the online physician started his own business with the video portal Dr. Johannes. He became known on YouTube under the brand name "Dr. Johannes".



Gabriel Chrysostomides

Gabriel works as a waiter in a traditional brewery in Cologne's Südstadt district. After a fractured vertebra, he got back on his feet with Kieser Training. Since then, he no longer has need for his stabilising orthosis.

"I never give up!" Gabriel Chrysostomides

A sledging trip in January. A fall. A broken vertebra. And a 50 per cent chance of being able to walk again. Read how Gabriel Chrysostomides got back on his feet with Kieser Training.

Text: Tania Schneider

It was a Sunday in January 2021. "Deep inside me I heard a crunch. I knew immediately something bad had happened." Gabriel Chrysostomides was lying on his back on snowy, frozen ground and was in terrible pain. Early in the morning he had set off with his son to go tobogganing in the Eifel, but the last run ended with a serious fall. The sled somersaulted. Despite the pain, Chrysostomides summoned up all his strength, picked him-



self up, grabbed his son and drove back in the car towards Cologne, heading for the university hospital. But on the way he lost feeling in his arms and legs and only just made it to the hospital in Euskirchen. Gabriel Chrysostomides has a strong will. As a result, he sometimes forgets to seek help in time.

An MRI the next morning spells it out: he has a broken vertebra. It is the 12th vertebra of the thoracic spine at the transition to the lumbar spine. Chrysostomides had to be operated on. The surgeon placed two plates on the left and right of the spine, which were screwed into the vertebrae above and below. They were intended to give stability to the spine

and relieve the injured vertebra. When Chrysostomides woke up after several hours of surgery, he was still in severe pain. His first thought: "Something must have gone wrong." He was happy to be able to move his toes. The doctors told him during the ward round that there were complications during the operation. There was a 50 per cent chance that he would be able to walk again.

Chrysostomides was shocked. But he did not give in. "I never give up. I immediately thought about how I could serve the guests with a motorised wheelchair." Chrysostomides is a waiter in one of Cologne's oldest restaurants in the Südstadt district of Cologne.

"Thanks to Kieser I feel alive once again. I am thankful for that."

Gabriel Chrysostomides

In total, Chrysostomides spent three months in bed after the fall. I could hardly move, I was lying down 23 hours a day. I lost eight kilos of body weight and didn't have a single muscle left. Everything was just hanging limp."

The orthopaedist had prescribed an orthosis with titanium inserts to stabilise his torso and spine. "After I was able to get

up again, I wanted to get fit again. I rode my bike a lot, but it didn't do anything for my muscles." After five months, he went back to work. He was taking several doses of ibuprofen a day for the pain. He wore the brace under his shirt so that no one could see it. Chrysostomides did not want pity.

A guest asked him what was wrong with him. Chrysostomides told his story in concise words and received the advice: "Go to Kieser Training for medical training advice." The doctor there examined him and first eliminated a pelvic obliquity with manual therapy. "I have worn insoles since I was 40 because my orthopaedist told me I had one leg shorter than the other."

Chrysostomides started Kieser Training in June 2021. "After two to three weeks, I was able to stop taking my medication. I noticed how I was getting stronger from session to session. On the job I could lift 20-litre barrels again. And I didn't need the orthosis any more either." Chrysostomides grins. Today, he is 95 per cent back to his old self. And where he belongs. In his beloved job in the brewery "Em Veedel".



Recipe for muscle building: crunchy salad with falafel

This fresh salad is quick to prepare. Falafel and soya yoghurt provide protein for the muscles after strength training.

Ingredients (2 servings)

100 g mixed lettuce (baby spinach, chard, rocket)	10 g sesame
100 g cherry tomatoes	2 tbsp pomegranate seeds
100 g cucumber	1 lime
160 g Romano peppers	2 tbsp white wine vinegar
200 g falafel	2 tbsp Omega-3 oil
100 g soya yoghurt	1 tbsp olive oil for frying
	fresh mint, salt, pepper

Preparation

Wash and drain the lettuce and vegetables. Peel the cucumber, remove the seeds from the pepper and cut both into cubes. Quarter the cherry tomatoes.

Leave the falafel mixture to soak in a bowl of 200 ml cold water for 10 minutes. Then form small balls from the mixture and fry in a coated pan with 1 tbsp olive oil until golden brown.

For the dressing, whisk together 2 tbsp white wine vinegar, 2 tbsp Omega-3 oil and the juice of half the lime. Season to taste with salt and pepper.

For the yoghurt dip, chop the mint, stir into the yoghurt and season with salt, pepper and the remaining lime juice.

Arrange the salad, vegetables, falafel balls and yoghurt dip on 2 plates, sprinkle with sesame and pomegranate seeds and drizzle with the dressing.

Per serving 557 kcal, 20 g protein, 23 g fat, 58 g carbohydrates

Tip

- ✓ Consume 1.5 to 2.2 grams of protein per kilogram of body mass daily.
- ✓ Spread the total daily requirement over several portions.
- ✓ Consume 1 portion of approx. 20 to 30 grams every 3 to 5 hours.
- ✓ For older people, it may be a little more: about 30 to 40 grams of protein each time.
- ✓ It is best to consume 1 serving immediately after strength training.

Myth: abdominal training reduces belly fat

Want to get rid of unpopular fat pads on certain parts of your body before the summer? A myth that stubbornly persists.

Fat loss in certain parts of the body does not work because it varies genetically and hormonally. In other words: abdominal training does not help against belly fat. If you want to lose weight, you have to expend more energy than you take in. But be careful:

solely dieting kills your weight loss goal. The reason: your body would rely more on muscle mass instead of fat mass for energy. And that means you not only lose weight-bearing substance. No, you also weaken a big driver of your fat burning. If your muscle mass dwindles, your basal metabolic rate drops. Roughly speaking, this is the energy your body uses at rest. The good news: with Kieser Training you reduce muscle loss during a diet and instead promote muscle building. A protein-rich diet provides your muscles with the necessary building blocks for this. By building muscle and increasing muscle mass, you can sustainably increase your basal metabolic rate. The fact is: the more muscle mass you have and the more fully and intensively you use it in physical activities, the higher your total daily energy expenditure. And that's exactly what it takes to lose weight successfully. Speaking of which: anyone with a Body Mass Index (BMI) of over 25 is considered overweight. Do not let this mislead you: BMI is an insufficient measure to determine whether someone is overweight. This value does not indicate whether you have a lot or little muscle or fat mass.

Our BIA (bioelectrical impedance analysis), on the other hand, tells you in 24 seconds how fat and muscle mass are distributed in your body. **Just get in touch with us!**



**Kieser expert
Nina advises:**

1 Reduce your energy intake

If you want to lose weight, you have to ensure a negative energy balance. To do this, you have to lower your energy intake a little so that the body gains the necessary energy from its own stores. But be sure to incorporate strength training. After all, your body should break down the fat and not the muscle stores.

2 Increase energy consumption

With each workout you increase your muscle building rate for up to 72 hours. And that consumes energy. Due to this effect and more muscle mass, your basal metabolic rate increases. The daily energy consumption can be further increased if you use your muscles daily during physical activity.

3 Protein-rich diet

To ensure that the body has sufficient building blocks for muscle building after strength training, it is important that you pay attention to a protein-rich diet.



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