

RE 70 FLEX

THE KIESER TRAINING MAGAZINE



Sergio Ermotti, Group CEO of UBS

“We all know precisely why we come here”

Sergio Ermotti, Group CEO of UBS and a Kieser Training customer talks about stress management, mental strength and training routine.

INTERVIEW BY ADRIAN SCHRÄDER

Good morning, Mr Ermotti! It is Tuesday, just past seven o'clock in the morning and you have already completed your training session. Is that a normal start to a working day?

Yes, whenever I can, I train mornings, twice a week. I also go running. I would find it hard to fit in training at lunch time or in the evenings. Last minute appointments get in the way; I am tired or find another excuse.

You are the CEO of one of the largest banks in the world and are responsible for a global workforce of more than 60,000. A stressful job?

Yes, that is certainly the case. However, I would not want to place too much emphasis on that. We are all under pressure from time to time – whatever our profession, activity or role. You simply have to learn how to cope with it. I do have more responsibility and so I also have to learn how to deal with more stress.

Does your work take it out of you?

I don't think so – or do I look unhealthy? (laughs)

Does Kieser Training help you cope with stress?

As I get older, I have noticed that it is not enough just to do one sport, e.g. running. You need to do something about those muscle groups that you don't like training. This is where Kieser Training helps. We all know precisely why we come here: for effective training.

Do you have specific health problems?

No, for me it is really about holistic training, keeping the entire musculoskeletal system in good shape.

What do you associate with Kieser Training?

Focus and consistency. I first joined Kieser Training in the mid-1980s, when I took up my first job in Zurich. I started again some two years ago and today was my 115th session. Fortunately, I have been able to maintain a certain degree of consistency.

Has physical exercise always been important to you?

Very much so! As a child and teenager, I devoted most of my time to sport and was a very keen footballer but was not quite good enough to take it up professionally. From my mid-twenties, I played significantly less sport ...

... because of your career.

Correct: I stopped training regularly.

You have an office job. Does sitting at your desk all day bother you?

That is definitely a problem. There are, however, certain things that you can do to minimise the risk and modern office equipment also helps. We have desks with an adjustable height and I also read most emails stood up. Wherever possible, I use the stairs rather than the lift. And of course, I come here rather than sleep longer.

What does strength mean for you?

The first thing that comes to mind is mental strength. Without mental strength, you won't get very far. In addition, physical strength and well-being are, of course, prerequisites for mental strength. If you do nothing for any length of time, this has a negative impact on your mental strength.

Do you have a favourite exercise at Kieser Training?

(laughs) No, I cannot say that I really enjoy training. That is not the point. I want to feel an effect and I do. For example, when I ski, I find that the leg muscle exercises have helped and thanks to the training I can ski for longer.

At the end of 2018, you opened the newly refurbished UBS head office building. I read that it has an exclusive fitness room. Is that true?

Yes, there were reports to that effect, e.g. that we had installed a spa. Of course, that is untrue. What is true is that our management staff are often away travelling and have to keep themselves fit. We have a few machines and showers – nothing more.

Do you use the facility?

Occasionally, but I stick to Kieser Training as they look after me so well.

Getting older is ok. But getting weaker is not.



This is the message behind our current campaign to explain age-related muscle loss. Read on and find out what lies behind sarcopenia and what you can do to counter it.

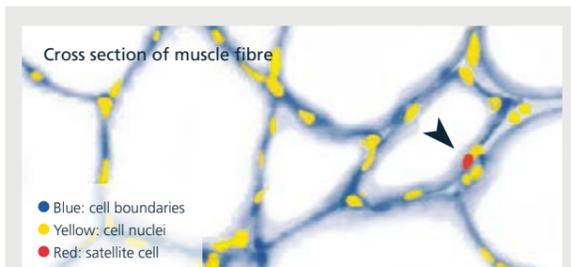
DR SC ETH DAVID AGUAYO

The medical term for the age-related reduction in the mass and function of muscles is sarcopenia. The term comes from the Greek words “sarco” meaning flesh and “penia” meaning deficiency. Sarcopenia is particularly evident in people over 70 years of age. It increases susceptibility to muscle injuries, serious falls, obesity and diabetes. In addition, it results in muscles being used less or not at all and this in turns exacerbates the sarcopenia.

What lies behind sarcopenia

The mechanisms resulting in the loss of muscle mass in older age are not fully understood. There are probably several contributory factors, including:

- reduction in protein synthesis,
- decline in neural function,
- hormone deficiencies,
- chronic inflammation,
- oxidative stress,
- loss of mitochondrial function,
- inappropriate signalling in the muscles, caused at least in part by inadequate nutrition,
- death of cell nuclei and a
- reduction in the functioning of satellite cells.



Satellite cells are so called because they are located in the orbit of muscle fibres between the sarcolemma and the basement membrane. They are primarily responsible for the regeneration and growth of muscle fibres.

Satellite cells and the regenerative capacity of muscles

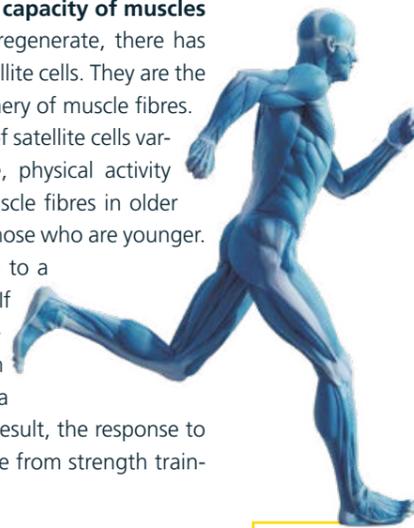
In terms of the ability of muscles to regenerate, there has been a particular focus recently on satellite cells. They are the muscle stem cells located at the periphery of muscle fibres. Research has shown that the number of satellite cells varies significantly depending upon age, physical activity and level of fitness. For example, muscle fibres in older people have fewer satellite cells than those who are younger. Studies have shown that this is linked to a reduction in regeneration potential. If the decline in muscle mass is well advanced, the satellite cells switch from the quiescent (reversible) state to a senescent (non-reversible) state. As a result, the response to so-called anabolic stimuli – for example from strength training – is less.

Activating satellite cells

Provided there is an adequate mechanical load, e.g. if you do strength training, you can activate those quiescent satellite cells. Micro injuries, such as those that produce sore muscles, cause these cells to divide and so multiply. A proportion of the new cells serve to fill up the pool but others will mature. On completion of a complex cell cycle, the stem cell coalesces with the muscle fibre, so ensuring adequate blueprints for the building of new muscle protein.

Strength training – an effective way to combat muscle loss

Mechanical loads such as strength training can partly stave off the reduction in the number and functioning of satellite cells as we get older. Nevertheless, the increase in muscle volume is not as great in older people as in younger people even if both groups are subject to the same level of training stimulus. Despite this, strength training has found to be a valuable way of reversing sarcopenia. It is effective at increasing the size and function of skeletal muscles, including amongst older and frail adults. In addition it also helps, at least in part, to reverse age-related reductions in performance. This is the best possible way to protect yourself against injuries, falls, obesity, diabetes and lifestyle diseases.



What to do

Train regularly, progressively, intensively.

Don't give sarcopenia a chance.
Your body will thank you.

Better performance

Less back pain

Higher energy consumption at rest

Better fat metabolism

Better sugar metabolism

Lower resting blood pressure

Less arthritic pain

Prevents falls

“I feel in good shape”



Ageing is something that we all go through – some sooner than others. And whilst some view it as a Sword of Damocles that will reduce their health and independence, others, like Charlotte Schmitz, face the future with vigour.

Charlotte Schmitz has white hair, cut in a neat page boy style; she has rosy cheeks and the gaze from her dark eyes is self-confident and alert: Charlotte has just returned from an island cruise around the Greater and Lesser Antilles in the Caribbean. “We had an excursion every day followed by three days at sea to relax. It was fantastic.” Charlotte Schmitz loves travelling and is making up for lost time. “My partner was not allowed to fly,” she explains. After her

death six years ago, it took Charlotte, a fun-loving Cologne native, quite some time to regain her joie de vivre. “However, gradually I began to feel freer and can now really enjoy my trips.” She travels with her sister-in-law. “Admittedly, she is somewhat younger than I am but that does not matter,” she says and laughs mischievously.

Charlotte Schmitz has never worried about getting older. “When a friend had her 40th birthday she burst out crying. I asked her what was wrong. She said, ‘It’s awful I am 40.’ To which I replied ‘Don’t be so silly.’ I could never understand why people were afraid of getting old”. Schmitz herself is 93 years of age. “Is that young or old? I cannot tell. I feel in good shape!”

Charlotte Schmitz is slim; she looks strong and full of energy. “Of course, you have to look after your health. For example, I am very careful what I eat.” She does not like meat and prefers fruit and vegetables. In addition, exercise is an important part of her life. Three times per week, she does a brisk walk for two hours with her daughter’s dog. “When the dog is not around, I go grocery shopping twice a day – once in the morning and once in the afternoon. I force myself to walk even if I don’t have the dog.”

What Charlotte likes most, however, is sport. She has been a member of a tennis club for more than 60 years. “I am lucky that I have no painful ailments.” Admittedly, she does regret that her pool of tennis partners – pre-

viously 15 – is now down to just three ladies. She consoles herself, however, with the fact that this is enough for a game of doubles. “Playing singles would be amusing for on-lookers,” she quips with a smile. Charlotte may be the oldest but she is not even thinking about retiring. “My mother used to ask whether I wanted to take my bed onto the tennis court because I rarely came home before 10 pm”.

When the indoor winter training was discontinued three years ago, Charlotte took up strength training as an alternative – after all, it is never too late to do that. She moves quickly and with ease from machine to machine and consistently completes the programme prepared by her doctor. “Strength is essential,” she says. “I need it for tennis.” In addition, her two great-grandsons keep their “busy grandma” on her toes. She glances at her watch, taps her fingers impatiently on the table and says goodbye. And a second later, Charlotte Schmitz is gone.

“There is no better anti-ageing measure than strength training. It can make us years younger.”

Gabriela Kieser, MD

Strength training improves type 2 diabetes



FINGER ON THE PULSE OF SCIENCE

It is estimated that by 2034, there will be some 600 million people in the world with type 2 diabetes. Regular, systematic training combined with the right medication has found to be effective for both prevention and treatment.

Type 2 diabetes is a chronic metabolic disorder that elevates blood sugar levels. It is caused by an impaired insulin secretion and insulin resistance. It is thought that lifestyle changes as we get older, e.g. less physical activity and more abdominal fat, are major contributory factors in the development of insulin resistance.

Dyslipidaemia, high blood pressure and cardiovascular diseases are amongst other associated disorders. It has also been found that adults with type 2 diabetes often have

an impaired bodily function, a greater loss of muscle mass and strength and are at a much greater risk of falling and fracturing bones. A particular problem is the loss of skeletal muscles as they play an important role in absorbing glucose from the blood and storing it. In other words, a reduction in muscle mass can contribute to a deterioration in insulin resistance. Together with increasing frailty, the loss of muscle mass can restrict the independence of older diabetics.

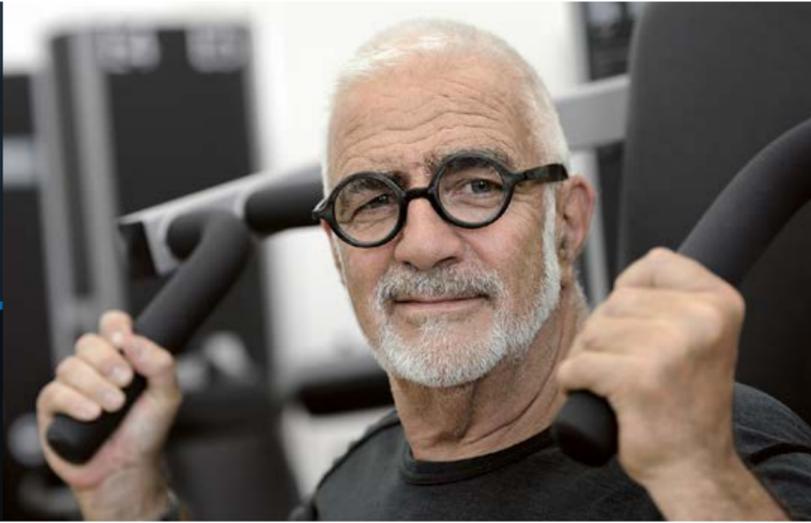
Strength training is beneficial at various levels. Firstly, it produces metabolic and structural adaptations that significantly improve the insulin resistance of muscles – particularly in the early stages. If we look at what brings about this improvement in glycaemic metabolism, it seems that it has less to do with the increase in muscle mass and rather

more with the improvement in the transport of glucose into the muscle cell. Research has shown that strength training for 16 weeks improves laboratory parameters such as the so-called HbA1c level. Similar improvements in insulin sensitivity were reported after four to six weeks of strength training at moderate intensity. In addition, there was an increase in both muscle mass and strength – the be-all and end-all if you want to prevent frailty and maintain activity levels.

Strength training helps with both prevention and rehabilitation. It increases muscle contractility by working the muscle at maximum intensity until you can no longer complete a full repetition. In so doing, you are boosting your glucose metabolism.

WERNER KIESER'S CORNER

TRAINING PRINCIPLES ARE ESSENTIAL



Training Principle 6: Avoid rapid, jerky movements: they are dangerous and counterproductive.

1. Rapid, jerky movements are dangerous.

The reason: during both the initial and deceleration phases, peak loads are much higher and could exceed the maximum tensile strength of tendons or the bone/tendon junctions. This increases the risk of injury and can result in tears or strains to muscles and tendons.

2. Rapid, jerky movements are counterproductive.

The reasons: the primary training stimulus for muscle growth is complete muscle recruitment over a specific period of time (TUT=Time under Tension). It must be maintained for this period in order to activate neuromuscular adaptation processes. If the rate of force development is too fast, complete tension is only partial and short-lived. In that case, the effective duration of complete muscle recruitment tends to be lower.

Speed prevents an isolated training of the target muscle. Imagine you are sitting at the B1 (knee extension). If you get momentum here, this relieves the quadriceps muscles of the thigh. There is a power boost and the load "flies away", so to speak. Your effort is reduced, and the desired training effect is not achieved.

The fact remains that muscles need resistance to grow. Try, therefore, to avoid swinging movements as they provide relief – even if this means that you initially have to reduce the training load. When doing an exercise, keep to the 4-2-4-2-second rhythm and maintain resistance throughout the entire movement. Do not shy away from really exhausting the muscle within 90 to 120 seconds. Your muscles will thank you with volume and strength.

Werner Kieser

"The fact remains that muscles need resistance to grow."

Calling all start-ups!

Are you convinced by the Kieser Training concept? Do you have a strong entrepreneurial spirit? Would you like to start your own business? Then why not become a Kieser Training franchisee!

Since 1984, Kieser Training has been using franchising to expand. We currently have 160 centres in Australia, Austria, Germany, Luxembourg, and Switzerland. Until now, our centres have been located primarily in cities with a population of more than 100,000. In order to establish Kieser Training in smaller towns as well, we have now developed a new business model: Kieser Training Compact.

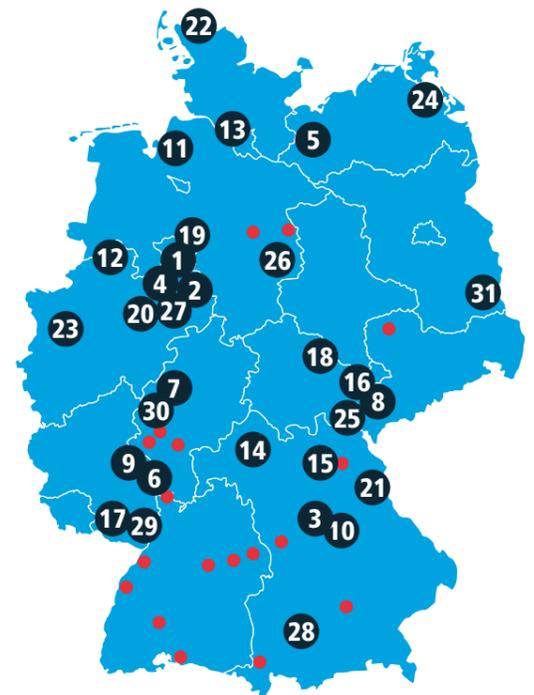
"This compact version of our existing business model is designed for towns with populations in excess of 40,000," explains Jens Rußkowski, the franchising manager responsible for the new concept. "Although, for example, the training area, equipment and staff requirements are different, the visual image and the training concept remain the same. Irre-

spective of size and location, all centres offer effective, health-focused training in order to strengthen the entire body, particularly the back."

Start-ups benefit not just from the general advantages of the franchising system but also from a concept that has proved its worth for more than 50 years, including 35 years of experience as a franchiser. "We are looking for strong personalities who are prepared, with our support, to take that step towards independence and who are prepared to show commitment to the brand and ensure that our customers achieve their training goals."

How do you benefit as a franchisee? What can you contribute? What can we offer? What locations are available? Click on the following link to find out more.

kieser-training.com/en/franchising



Locations in Germany. Those marked with a red dot are already reserved. For more information see: kieser-training.com/en/franchising/free-locations/

Imprint

Reflex is published four times a year, including online. Stay informed! To subscribe to Reflex visit kieser-training.com

PUBLISHER / COPYRIGHT

Kieser Training AG
Hardstrasse 223
CH-8005 Zürich

CEO

Michael Antonopoulos

EDITOR

Tania Schneider, reflex@kieser-training.com

TRANSLATIONS

Sue Coles

PROOFREADING

Dr. Philippa Söldenwagner-Koch
lektoratbilingual.de



facebook.com/
KieserTrainingGlobal

LAYOUT

Alexander Frischhut
frischhut-design.com

PRINT

Mephisto Werbung
mephisto-chemnitz.de

PICTURE CREDITS

P. 1: 13 Photo AG, Florian Kalotay
P. 2: Aguayo et al. (2016) Exp Physiol 101.2 pp 295–307
P. 3: Verena Meier Fotografie

KIESER TRAINING