

# Well-trained or degenerated?

by Dr. Axel Gottlob

**There have always been physically fit people and there have always been those that are not so fit. There were some that kept fit as a result of their work, as a result of their sporting activities or due to their general level of physical activity. And there were others who were waited upon or who never had any sporting ambitions. Never before however, has the number of people in the unfit category reached such an incredible high as today!**

Allow me to repeat myself! Never before in the history of our planet has there been a situation in which the majority of a species has degenerated as much as the populations of the industrialized countries today. Rather than the beginning of a moral sermon on the subject, the following is intended as a review of the situation along with some reflections on future prospects.

It's a well known fact that all forms of life require energy for their continued existence. Energy for movement, growth, protection, repair and reproduction. Like all other types of animal early man was dependent upon activities such as hunting, gathering, fighting, taking refuge, carrying, running, climbing and many more, on a daily basis. When man took up a sedentary existence some of these activity patterns changed even though the amount of work required every day actually grew. Through the invention of equipment and machines, particularly with the onset of industrialization, heavy work was made easier and was in some cases even made possible for the first time. The continuing economic growth at the time still required full physical exertion however.

At the beginning of the second half of the twentieth century technological development took on a new dimension. For the first time it became possible to reduce the daily energy requirement and this occurred bit by bit. Through the systematic expansion of the transport infrastructure such as trains, buses, airplanes, escalators, elevators and particularly that mass-produced product, the car, the distance that people walked every day was considerably reduced. A hundred years ago people were still used to walking 10 to 20km each day. Nowadays the average city dweller only walks around 500m a day! Modern, almost purely mechanized warehouse and supply chain systems mean that goods are now hardly ever moved by hand. The physical consequences are of course tremendous! At the end of the 1950s truck drivers that visited my father's gym were still able to easily deadlift 200kg. These were not athletes! Just drivers that could still load and unload their trucks by hand. Today's truck drivers are much more likely to suffer from backache after their daily marathons in their cabs.

Sectors such as manufacturing, agriculture, plant engineering and construction, energy and raw materials production have become increasingly automated. Machines have been introduced particularly for heavy duty applications. But our everyday lives are also dominated by a plethora of mechanical, electrical, electronic and chemical assistants. Our Information Age has thrown us into a speed craze. Up to date information anywhere, anytime – with absolutely no physical activity required but with an ultra-fast visual and audio transmission of stimuli. This oversupply of stimuli is accompanied by deadline pressure, aggressive competition for customers and jobs, the permanent availability phenomenon and highly animated leisure time. The build-up of stress hormones is most probably pre-programmed.

This dangerous spiral of inactivity has further deepened over the past 10 years in the developed countries. It's not just the physical demands on the population that have continuously receded over the past decades, but the leisuretime pursuits of large sections of the population have also become increasingly dominated by passive "activities". In addition to such leisuretime pursuits as going to the cinema, restaurant, theatre or bars and pubs, time must be added to account for a daily diet of 3 hours (and more) of TV, surfing the Internet, playing video games, downloading music, a mobile phone culture complete with pictures, SMS and ring tones plus time for learning how to use these gadgets and for actually purchasing all of these new technologies.

Of course, with mobile phones, the Internet and TV we can be in many places at the same time without even lifting a finger. The flow of information is guaranteed 24 hours a day, with volume and speed practically user-definable. Non-stop action – anytime and with little effort. Fantastic! Modern day man is mobile in all respects. But those who solely base their mobility upon technology and machines will also be the first to become immobile! Only the few that have to work hard physically in their job, athletes who train regularly and those who are more active in their leisure time will provide their bodies with a regime that challenges and creates a physically resilient body. But this does not apply to the others! All non-athletes, those who live in their offices and cars, the cyberspace freaks, the TV and video couch potatoes, the willy-nillys (who want everything but do nothing to get it), these people make no effort at all to get fit.

All of those New Year resolutions, such as participating in the New Year run followed by a diet of carrots, or the September rush to the gym to lose weight after that indulgent summer holiday, will be of little help if the "chair diet" is practiced for the remaining 50 weeks of the year. The breakfast chair – car seat – office chair – restaurant chair – car seat – television chair, and sometimes the barstool. Sure, these chairs can all be orthopedically optimized! Sounds good at least! There's nothing to say against ergonomics but what's missing is the balance, a physical challenge.

The general way in which the body reacts is well known. Over 8 million people in Germany alone are afflicted with osteoporosis, over 6 million have type II diabetes. 20 million people suffer the consequences of high blood pressure, lipometabolic disorders and the early stages of diabetes. Various forms of arthritis are happily anticipating a bright future and millions of back pain patients are searching for relief. Such figures provide real food for thought. If we expand our coverage to include the health of our children then the situation becomes far more dramatic. It's not just the reduced physical ability (that has anyway declined decade by decade) combined with a simultaneous increase in bodyweight that is frightening. The associated increased health risk profiles, with isolated cases of age-related diseases occurring in children, for example adult onset diabetes or even gallstones, presents a quite gloomy picture. One wants to shout, "People – Quo Vadis?"

The pharmaceuticals industry should be pleased. It's surely possible to find the right pill – at least for the symptoms? Perhaps our long-term financial portfolio ought to include some shares in the pharmaceuticals sector! Even health professionals, despite past prophecies of doom and healthcare reforms, appear to be well placed to profit from this problem that is reaching epidemic proportions. Sustained business appears to be guaranteed!

Continuously improved machines and procedures will also become available to medical science to combat these diseases. If we're patient enough, science is bound to come up with the perfect answer to the problem. Replacement organs grown from stem cells? Perhaps best of all a fully functioning clone ready and waiting (assuming all of the ethical questions have been answered)? Nano-robots that are able to clean and repair our blood vessels from the inside? And one day the piece de resistance – custom gene optimization?

The questions that remain are, "who's going to pay for all of this?" and "is this really what we want?" It will certainly become increasingly difficult to make a convincing case for social health insurance plans that are then supposed to pay for diseases that are clearly the result of unhealthy lifestyles. Simply because the number of people afflicted with these modern day diseases is already so immense it is clear that the contributions paid into such plans today will in no way be sufficient in future.

On the other hand, a physically active life where one is aware of one's body, is far more desirable than letting life pass by with more and more visits to the doctor and to the hospital, being desperately pumped full of medicines or waiting for a bypass operation, the next organ transplant or hip replacement.

Sure, none of us want to regress to such physically difficult working conditions as in centuries past. But we will have to do something in concentrated form to stimulate the health and performance capabilities of our bodies and maintain our mobility and physical resilience. We have to exercise! An hour of intensive sport every day is just what our bodies want! It doesn't matter what! The main thing is that it's active and intensive. We cannot allow ourselves to become distracted by those attractive sounding advertising slogans for "passive training methods". Unfortunately however, it's all too easy to gain the attention of physically inactive people with those kinds of promises.

I'm always amazed to see how such methods often employ sucking, rubbing, electrical stimulation, cosmetic correction, vibration, shaking (not stirring!) – what little common sense there may have been seems to have flown out of the window. Why should we sweat if we can get by without? But mark my words – you'll get no results without working up a sweat! How does the old saying go, "no sweat without sweat!?" If we mean the sort of sweat that comes from physical activity and not from the sauna or the "sweaty palm" variety, then we've hit the nail squarely on the head! Of course some people sweat more than others, some don't sweat at all, but what counts is the effect it has on our body. The pumping action of our heart muscle, the work performed by our skeletal muscles. Our muscles are the key to our entire organism. Let's face it, at more than 40% of our overall body mass they really are qualified candidates to perform such a key function. If you employ sufficient muscle work in order to complete a certain activity, for example lifting a weight, accelerating your body etc., your metabolism will be stimulated, sugar will be transported into the muscle cells (rather than into the fat cells), there will be a gradual, long-term build up of stable bone mass, tendons and ligaments, joints will be stabilized, the body will produce its own growth hormones that will optimize neural regulation of muscle activation, body fat will be burned, the immune system will be strengthened, the brain stimulated, our well-being improved, etc, etc. Our muscles are the key to all of the body's organs, for all conduction pathways, for repair and protection, for looks and well-being. You already know the answer: Use it or lose it!

It's clear that hard physical activity is no longer required for securing our existence, social acceptance or our position at work. What's needed here is a clever mind. However, a clever mind can't live happily by itself without a strong and healthy body to support it. That's why a really clever mind will ensure that preventive measures are taken in the form of a regular training program.

You can begin with your everyday life. Carry out physically demanding domestic chores yourself. Mow your lawn with an unpowered lawnmower; your body will benefit – and so will the climate. Park your car a distance away from your destination and complete the rest of your journey on foot. If possible, avoid using escalators or lifts – climbing stairs is an excellent form of training. Perhaps you will even feel like participating in a "skyscraper race"; the stairway of the Empire State Building has by the way, been conquered in 10 minutes. Start your mornings with an abdominal training exercise and a few press-ups. When watching television it's easy to fill the commercial breaks with 3 – 4 exercises – children are

excellent training partners. Play and romp about with your children whenever possible. Discover nature together and turn every playground into an adventure trail.

When it comes to providing a wide range of concentrated movement and stimulation through exercise, the gym is of course your top address. At any time of day and in all weathers, here you can provide your muscles and heart with excellent stimulation. Optimum cardiovascular training together with varied strength training can make every region of the body strong, secure, toned and resilient.

Training in this context really does mean training. Above the threshold, sufficiently challenging, sufficiently long. The physical condition of non-athletes can really be termed desolate. The objective here is to systematically build up good physical performance. Once any risk factors have been eliminated and the correct training technique has been learned, exercise intensity and duration should be methodically increased. The body must be activated. Performance must be improved. A one hour training session at the gym should be completed three times a week.

It's difficult to define physical fitness in figures and absolute values should certainly be treated with caution. Despite this we should still consider a few basic points. Everyone should be able to complete several press-ups and sit-ups properly for example. Everyone should be able to run for 20 minutes without having to slow down and walk or to stop and rest. A woman can be considered to have sufficient strength in her legs if she can complete a squat whilst lifting her own weight or if she can lift the barbell off the floor. This means that a woman weighing 60 kg should be able to repeat a squat with a 60 kg barbell or she should be able to lift a 60 kg barbell from the floor as in a deadlift. A man should be able to repeat the squat exercise at least 5 times (lifting his bodyweight). Some people are horrified to discover that a chin-up is considered to be a basic exercise that everyone should be capable of completing. Should we put this theory to the test at a gym then the results would be correspondingly sobering. Many fitness instructors would even fail this simple test. Around 80-90% of all female instructors are unable to complete a chin-up! This is a bitterly disappointing statistic. We are entitled to expect a certain level of performance, particularly from our instructors. At the German Sport University in Cologne sports students are expected to demonstrate at least 5 complete chin-ups as part of their acceptance test for the course. This should also be made a mandatory requirement for fitness instructors!

It would certainly be desirable and a definite advantage in helping to advance our fitness cause if instructors could at least demonstrate this capability. It would also lend credibility and stature to the image of fitness instructors as a whole. If we compare these levels with those of the past we will find that, whilst they confirm an acceptable level of fitness, the overall fitness standard is not very high. For older people the above levels should of course be reduced correspondingly.

Let's summarize the above: There is no longer a place in modern life for sufficient physical exercise. If you or your clients want to make up for this deficit and avoid the lifestyle diseases that arise therefrom, you will have no other option than to compensate for this lack of physical activity through a rigorous and demanding training regime. All your life long! The associated improvement in physical wellness and a better figure are but pleasant side-effects.

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Workshop info can be found at <http://www.dr-gottlob-institut.de/>



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Since 1982, Gottlob has been involved in the research and development of professional training machines (he has four patents in his name and is the inventor of multi-motion technology) and differentiated exercise kinematics. Until the sale of his family business Galaxy Sport in 1992, Gottlob was one of the market leaders in the field of professional training equipment in Europe and Japan. Since 1997 he has been holding the position of associate professor at the Institute of Sports Sciences of the University of Heidelberg and at the Institute of Sports and Exercise Science of the University of Stuttgart, Germany.

He developed the new "Differentiated strength training" – a highly sophisticated system of integrating biomechanics, histological and physiological science into strength training and exercise design. He is a Textbook author, columnist for trade magazines and tester of professional training equipment, he writes regular highly regarded articles for the fitness industry and for the therapy sector. With his specialist knowledge, critical questioning and new approaches he is now considered one of the leading strength training and back experts in Europe.



Since 1993 he has been educating over 4.000 trainers and therapists on the highest level at his Dr. Gottlob INSTITUT. He acts as consultant to companies, fitness centres, clinics and therapeutic establishments. Furthermore, he advises elite athletes, managers, physical therapy groups and patients with back and other joint problems. For over 20 years he has become known at both national and international conventions as a highly motivating speaker and recognized expert in his field.

Holder of the internationally recognized Strenflex GOLD fitness test badge