

SCIENCE . TECHNOLOGY

## OUR BODY & MIND

14 × 30' (GER, 5 Eps ENGsubs)

**Today's patient is more informed than ever, he knows his needs and takes responsibility for his body.**

From diagnoses of severe diseases or disabilities, to support for mental disorders. In this series we deal with our body and what to do when something goes wrong. We give advice and information on medicine, diseases and therapies.

Year: 2016 - 2018

Produced by: NZZ



### 1. Diagnosis Down Syndrome

Disabled kid, or suppressed kid? Massive advances in prenatal diagnostics make it easier than ever to detect embryo malformations or disabilities at an early stage. But with the diagnosis comes the need for a decision. This situation is very stressful for parents. Either they have to decide actively for the death of their desired child, or they have to shoulder the responsibility of a disability. In most cases, the diagnosis Down syndrome is the death sentence for the affected baby. Are we eradicating trisomy 21?

### 2. Social Egg Freezing: Motherhood on Ice

Over 40 and expecting your first child? What used to be the exception is slowly becoming the rule. Nevertheless, geriatric pregnancies almost always bring with them very high risk of deformities because the ovules of older women are less fertile than those of younger women. With "Social Egg Freezing", the medical field has found a way to reduce the dangers that normally accompany geriatric pregnancies. Young women are encouraged to have their ovules removed and frozen until later in life when they determine themselves ready to have children. Does this method offer women a long-desired freedom? Does it not only harbour risk of misuse in the name of science and economy? And should it be possible to plan human life from A – Z?

### 3. Diagnosis Paraplegia

For years, the young Swiss native Stephan Gmür has been afflicted with a wheelchair as his ever present companion. The 32 year old ruptured his back after a crash while Speed flying and has since then been paralyzed. Still, his search for an adrenaline kick continues. Gmür has been prepping to qualify for the Paralympic Ski World Cup. The main dream of most paraplegic persons is to one day be able to once again walk on their own. Research and technological engineering are working tirelessly on aids and therapies to help make this dream a reality. Exoskeleton helps them to walk upright and electronic stimulation of the spinal cord should cause the nerves to regrow.

### 4. Fight Against Cancer: New Weapons, New Hope

Cancer is still the second leading cause of death in Europe. In the fight against the disease, research seems to be rethinking. Instead of fighting cancer from the outside, modern medicine is now increasingly relying on the body's own defences. An example of this is the so-called immunotherapy, which was celebrated as "Discovery of the Year" by the scientific magazine Science in 2013. Since oncologists only speak of success after 5 years without relapse, it is only now possible to assess whether the therapy is actually so promising. In the meantime, researchers are already working on modulating their own body cells: They remove cells from the immune system, genetically modify them and return them to the patient.

### 5. Life with Dementia

The cause of dementia is still not known, but memory clinics can now diagnose the disease accurately. How do you live with the diagnosis? Should one tell people one has Alzheimer's, the most common form of dementia? Is it possible to slow the progression of the disease? Is it still possible to live a satisfying, full life with the disease? What's it like when you no longer recognise your life partner? Four sufferers and their families give insight into their lives with the disease.

## 6. Prenatal Findings

To what extent do the environment, behaviour and "sins" of expectant mothers shape their children? A study of 1,000 women and their babies is investigating the effects of stress, nutrition or drug use during pregnancy on the physical and mental health of the child. The danger of alcohol to the unborn child is still frequently underestimated: with more than 280,000 people affected - estimates go up to 1.5 million - in Germany alone, so-called fetal alcohol spectrum disorders, FASD for short, are more common than Down's syndrome. Often undetected at birth, however, the number of unreported cases is likely to be much higher. What does it mean when the course of an adolescent life is set by alcohol?

## 7. The Myth of Pregnancy and Birth

The first cry.... Finally, the baby is here! But the adventure of getting there is a phenomenon. The pregnant woman has become a self-staged, public event, a social special case. The birth becomes a high-security act, with medical all-round care for mother and child. The traditional home birth usually pulls the short end of the stick against the impressive medical repertoire. The Netherlands is an exceptional case in the world, where home births are still relatively common, accounting for around 20% of all births. What role does the midwife play and how does she deal with difficult situations during childbirth? How and where do women give birth today?

## 8. Spirit in Motion: Does Walking Make us Smart?

In the course of evolution, our brain has proved to be our strongest weapon. Because we are more intelligent than animals, we have conquered the world by walking upright. Researchers agree that it was the upright gait that made it possible for our brain to grow above average. But could one conclude that we are only so intelligent because we move upright through the world? What then happens in the reverse conclusion when motion sequences degenerate through digitalization and automation and we become homo sedens, sitting humans? Thanks to scientific studies and brain scans, we are beginning to suspect that the spiritual consequences are also serious.

## 9. Deafness: A Way out of the Silence

It has crept into Ida, for years and almost imperceptibly, the feeling of being excluded. Even the most powerful hearing aid hardly conveys more than hearing impressions; understanding speech becomes a frustrating act of concentration. The baking tray crashing to the ground does not trigger any reaction. Clara is 6 months old and all the clarifications indicate that she has been deaf since birth. Every year, around 50,000 people worldwide are implanted with a device designed to give them access to the world of hearing. Maja has been living with such a cochlear implant for decades. Research has been carried out at the University Hospital of Zurich since its inception and a highly topical project is particularly forward-looking.

## 10. Loneliness: Underestimated Danger

Since the beginning of 2018 there has been a government post in England that takes action against loneliness. In the past years it has become the focus of international politics and science. Because subjectively perceived isolation is not only an unpleasant feeling, but also an alarming condition that makes people ill in the long term. Those who feel lonely are 50% more likely to die earlier. For those who feel exclusion negatively are exposed to acute stress, say scientists. If it lasts for months or years, it weakens the immune system and promotes cardiovascular diseases or even cancer.

## 11. The Back: Strong and Sensitive

The back is a masterly development of evolution. Our backs say a lot about us. For example, the slouch indicates sloth and the upright walk signifies an inner attitude. But the most significant feature of the back in the miraculous spine that keeps us extremely stable and mobile. The back can be seen as a mirror of the soul. There are many questions involving the back. Cervical disc prolapse: Why does it happen to one and not the other? Mattress research: Which is the right one? Are high heels really harmful to the back? Find the causes of back pain on the trail.

## **12. Healing with Plants - Phytotherapy**

There's an herb for everything. Hawthorn for heart complaints, St. John's wort for depression, black cohosh for menopause - healing with plants is an alternative for many people. Allergy sufferers benefit from gentle herbal medicines, and phytotherapy is also a good supplement to antidepressants for burnouts. Women have always used herbs. In the Herbadonna group, female doctors and pharmacists exchange their knowledge. Older people still know a lot, and children learn it again, in a cross-generational project. Medicinal plants have always been used as teas and tinctures, but more and more also as standardised medicines. History, application, effect and success of medicinal plants, from monastery gardens to high-tech medicine.

## **13. The Patient - Manager of his Illness**

Today's patient is more informed than ever, he knows his needs and takes responsibility for his illness. But this also makes them more critical and demanding. Digitalisation gives him access to the mastery of the medical profession. Because patients want to take the treatment of their illness into their own hands, they expect holistic support from the doctor. Sometimes the boundaries between medicine and esotericism can become blurred. Studies show, however, that the self-responsibility of patients has a positive effect on the course of the disease and healing. About loss of authority, eye level and self-healing powers: doctors, patients and experts discuss strategies in dealing with diseases.

## **14. Allergies - Immune System Out of Order**

More and more people are suffering from allergies. The immune system runs amok when one is stung by a bee, or if pollen dust is in the air, or when eating a harmless apple. Genetic factors, environmental influences, lifestyle choices and also the fact that the immune system is understated in our modern hygienic world play an important role. Many allergy sufferers not only have atopic dermatitis and hay fever but at the same time also have a food allergy and allergic asthma. Allergies often affect the quality of life considerably and can in extreme cases cause a life-threatening allergic shock. Experts warn against trivialization and urgently advise early treatment.

