

share_{for}care

RECIPE

Protein-rich dish combines
grilled shrimps with curd
cheese & dill dressing

A PATIENT'S STORY

How opting for home
dialysis transformed
one patient's life

TRAVEL STORY

South Africa's historic
Simonstown offers beaches,
wildlife, and wilderness

SPECIAL TOPIC

KIDNEY TRANSPLANTATION

This 70-year-old success story now offers more options than you might think

share for care

Dear readers,

Are you needing a breath of fresh air in your life? Then you've come to the right place – welcome to the new issue of

share for care! This issue is in many ways all about new

opportunities, surprising developments, and novel alternatives that are worth thinking about.

New developments in research and technology can make everyday life much easier for people with kidney failure – for example, using the smartphone apps that are now available everywhere. You can find out more about them in our Tips section. Home dialysis is another important option to think about. In this issue's Patient Story, Jens from Thuringia reports on the pros and cons of home dialysis, so you can see for yourself what it's like.

There are also new potential choices in the field of kidney transplantation, which the Special Topic focuses on this time. You can read about the current options in this field, ranging from living donation to blood group-incompatible donation to crossover transplantation – as well as other exciting developments that may emerge in the future.

It's a good idea to be well rested after a good night's sleep in the morning, so you're ready to cope with all the changes life brings every day. But in fact lots of people suffer from sleeping problems. The best idea is to find out what it is that's causing them. In this issue, we've put together a list of what you personally can do to improve your sleep and what modern methods are available to help – from sleep labs to sleep trackers.

A trip to the Cape of Good Hope in South Africa is also sure to bring you a breath of fresh air. This issue presents the attractive little settlement of Simonstown, not far from the legendary Cape, which combines the best of both worlds: relaxation plus a bit of adventure.

We hope you enjoy browsing through this issue.

As always, if you have any questions, comments, or suggestions about the magazine, please feel free to write to us at our e-mail address: dialyse@bbraun.de.

Your B. Braun editorial team,



Christopher Boeffel



Martin Kuhl

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HEALTHY LIFESTYLE

Wish you could sleep better? Learn some basic tips to help you get a good night's sleep

IS STRENGTH TRAINING OR ENDURANCE TRAINING BETTER?

Regular endurance exercise such as running or cycling not only improves physical performance, it is also recommended for people with type 2 diabetes in particular, as it helps improve blood glucose levels. According to current research, however, strength training is also beneficial – and it can even be more effective than endurance training. Both types of exercise have comparable effects on long-term blood glucose levels (HbA1c) in patients with type 2 diabetes, and strength exercises are actually even better than endurance training in relation to blood glucose levels immediately after exercise. In addition, moderate strength training may be easier for some people to practice than endurance training – for example, if they have limited mobility. Ask your physician which type of workout is best for you.



HOPE FOR HEART ATTACK TREATMENT

Drugs used in cancer therapy, known as MEK inhibitors, may improve treatment for heart attack patients in the future. Injecting these drugs shortly after a heart attack may prevent cells from dying due to lack of oxygen and restore a good blood supply to damaged areas of the heart. Heart attacks are among the most frequent causes of death worldwide, and effective therapy for cardiac failure could mean better chances of survival for many thousands of people each year.

MEK inhibitors stimulate certain cells that are attached to the outer walls of blood vessels to turn into endothelial cells, which are responsible for the development of healthy new blood vessels. To date, however, these drugs have only been tested in trials with mice and in isolated cells. Clinical trials with heart attack patients are expected to begin in 2023.

COUGH INTO YOUR SMARTPHONE – AND DETECT COVID

Australian scientists have succeeded in developing an app that is presumed to identify COVID-19 infection from the sound of coughing. When someone who is ill coughs into the smartphone's microphone several times, the computer analyzes the sound to identify the specific characteristics of coughing in COVID-19, according to the development team. A test with 741 volunteers, half of whom were infected, showed that

the ResApp had 92 percent correspondence with the results of the PCR tests that were available. More research and safety measures are still needed, but in the future, this type of computer-aided acoustic diagnostic method could become an important element in telemedicine.

DRINKING AND EXERCISE ALONE DON'T SOLVE CHRONIC CONSTIPATION

For otherwise healthy people with chronic constipation, the first measure often recommended is to increase the amount of liquid drunk daily, to take exercise, and to switch from a low-fiber to a higher-fiber diet. This can be tried if there are no other warning symptoms. However, the current German guideline on the topic of chronic constipation emphasizes that a causal connection between increased fluid intake and exercise with relief of constipation has not so far been proved. Instead, because confirmed risk factors include certain medicines and diseases, a precise medical history needs to be taken in patients with chronic constipation. In addition to the recommended dietary fiber intake (30 grams or 1 ounce per day) – which can be achieved with two portions of fiber-rich fruits such as pears or apples per day, as well as vegetables such as cucumber, zucchini, or green peppers – laxative agents can be considered if necessary. Among these, macrogols, sodium picosulfate, and bisacodyl are particularly suitable. According to experts, habituation effects or declining effects of these over time only occur in exceptional cases. If you have digestive problems, it's best to seek medical advice, as some measures and preparations can also have a negative effect on your treatment and health. The treatment of constipation in patients with kidney disease is very different from treatment in the general population. Patients with kidney disease therefore need to adjust their therapy in consultation with their nephrologist.





KIDNEY TRANSPLANTATION

MORE OPTIONS THAN YOU THINK

The first kidney transplant took place in Boston (USA) in 1953. The procedure is now a safe, routine operation, with high success rates. On average, kidney transplants are performed on about 90,000 people worldwide each year.

Many patients who need dialysis think about kidney transplantation. The main advantages of living with a donor organ are undeniable: in addition to freedom from dialysis appointments, transplantation may also be associated with a generally improved quality of life and longer life expectancy.

The long-term results of kidney transplantation have improved steadily in recent years. Today, 70–80% of all transplanted kidneys are still functioning after five years. On average, patients live active lives for 12–15 years, content with their donated organ, and in some cases for up to 20 years and more. This success story is due not only to improved surgical methods but also to highly effective drugs that are designed to prevent the immune system from rejecting the

donor kidney. Scientists all over the world are investigating further improvements.

Patients have to take the immunosuppressants every day exactly as prescribed in order to prevent transplant rejection. That means that although transplanted patients are living with a healthy kidney, they are not simply "healthy" again. Part of everyday life with a foreign organ involves having a permanently impaired immune system and certain risks that are associated with that, especially from infections. Transplant recipients therefore have to protect themselves particularly well against bacteria and viruses.

Important to know:

If the transplant stops functioning over time, then it's possible to go back to dialysis. It's possible to go another transplantation later if the patient's health status is suitable and another donor organ becomes available. Transplants usually don't stop functioning suddenly but run down very gradually, allowing enough time to prepare for other renal replacement therapy options.

WHAT TYPES OF KIDNEY DONATION ARE CURRENTLY AVAILABLE?

Basically, there are two types of kidney donation: the healthy kidney can come either from a deceased donor or from a living donor. Living donation is possible because everyone has two kidneys but can live a normal life even with just one healthy organ.

DECEASED DONORS

If the organ donation is from someone who has died, the kidney is usually matched to a suitable recipient by a specialist national transplantation organization. The allocation is carried out for example using various matching factors such as blood group matching, tissue typing, health status, age, transport times, and – last but not least – wait times.

Eurotransplant's European Senior program is a successful approach to finding a donor kidney for older recipients.

Unfortunately, waiting lists for transplantation can be long, as the demand for an anonymous donor kidney is greater than the supply. Eurotransplant's European Senior program is a successful approach to finding a donor kidney for older recipients. In this pro-

gram, recipients aged over 65 receive organs from donors who had also reached the age of 65 before death. In recent years, waiting times for an organ for patients in this program have been only about two years, instead of six to eight years.

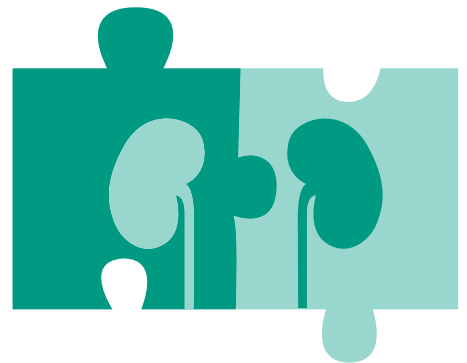
LIVING DONATION

If a kidney is not available from post-mortem organ donation, living donation is an increasingly common option. Major advantages of living donation are that there is no necessity to preserve and transport kidneys across the country, and if the donor is a relative there will be a high degree of tissue compatibility. Family members or friends can be considered as donors if they are willing to donate a kidney – and if they have two healthy kidneys and are in good general condition. The legal requirements here vary internationally. It's best to ask your doctor about what options there are and discuss calmly with your family whether living donation is an option for you. Many countries have specialist transplant coordinators who will be able to discuss options with you and your family.

DIFFERENT BLOOD GROUPS – IT CAN STILL WORK OUT

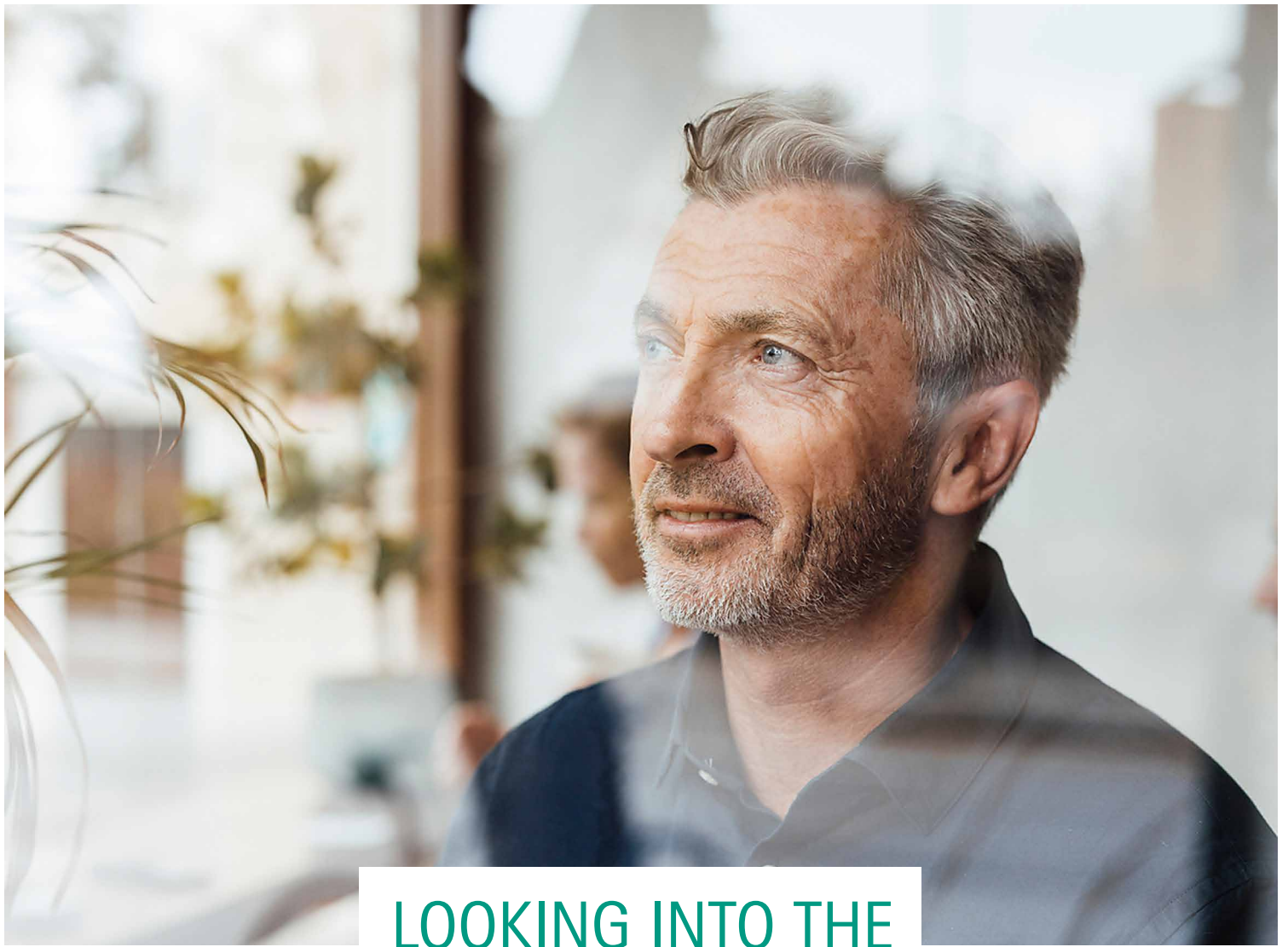
For some potential living donors (about 20–30%), there was previously a risk of transplantation not being possible because the donor and recipient had different blood groups. Their blood groups had to be compatible so that the recipient's blood group antibodies would not trigger rejection of the donor kidney. Nowadays, however, blood group-incompatible living donation

(ABO-incompatible living donation) is also possible, in principle. To do this, the recipient's blood group antibodies are removed prior to transplantation by means of a special blood purification process, and new production of them is prevented with medication.



Another innovative option is what is known as crossover transplantation. This also offers a solution if a direct living donation – e.g., by a spouse – is not possible for immunological reasons. Special software is used to find a suitable exchange couple for an incompatible donor-recipient couple, in order to transplant two kidneys on a "crossover" basis.

This variant of living donation, which is practiced for example in Switzerland, requires a detailed database of exchange couples to be maintained regionally that records blood groups, tissue types, and other parameters in pairs and is therefore able to match potential donor-recipient couples with each other.



LOOKING INTO THE FUTURE

Beyond that, there are also hopeful signs from medical research on the subject of kidney transplantation. Several approaches are already being actively developed, such as ways of further reducing immunological barriers – for example, by training the recipient’s immune system to develop what is known as tolerance to foreign tissues. Other ideas are still rather futuristic – for example, the technique called xenotransplantation. In 2021, a team of researchers successfully transplanted the kidneys of a specially bred pig into a brain-dead patient. However, using animals as organ donors is unacceptable in many societies for cultural reasons. More promising approaches, which have also already been successful in animal experiments, include the “artificial kidney” developed by Professor Shuvo Roy in San Francisco – an energy-self-sufficient synthetic organ replacement the size of an iPhone, which remains in the body and does not cause any rejection reactions.

If you are also interested in the topic of kidney transplantation, ask the physician treating you for advice. He or she will know the local medical and legal conditions and also your own health status best.

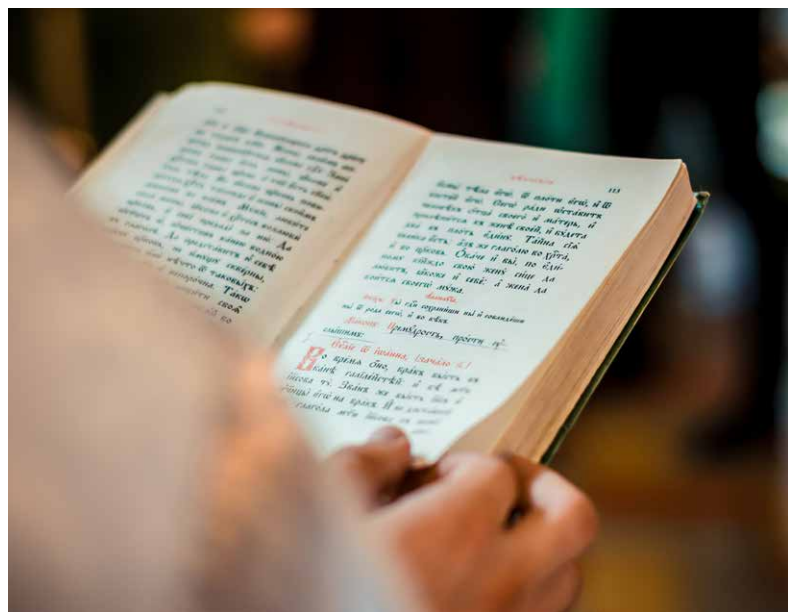
My life



Jens is in his late 40s and lives in the state of Thuringia, Germany.

He has been dialysis-dependent for about five years now, and for the first two years he used to go to his preferred dialysis center. When he heard it was possible to carry out hemodialysis at home, he was enthusiastic about it right away. He has now been dialyzing at home since mid-2020 and enjoying the benefits. He describes here how his life was transformed by the decision and how his family feels about the change.

WITH HOME DIALYSIS



JENS: MY LIFE WITH HOME DIALYSIS

I've been needing dialysis for a good five years now. So I had time enough to get used to the long hours spent at the dialysis center. I always got along well with the doctors and nurses there and was very pleased with the care I was getting. It was a pity I didn't have any contact with the other dialysis patients and was never able to get into any conversations. I don't know whether that was because of age differences, which were sometimes quite big, or if there were other reasons. But my dialysis times there were definitely quite lonely.

I WANTED AN "ALMOST" NORMAL LIFE BACK

When I found out that home dialysis was an option, I was really enthusiastic about it. I asked to speak to my doctor about it right away and got everything explained to me by B. Braun. I was sure very quickly that from then on, I wanted dialysis at home! The prospect of better health, more flexibility, and a chance to get almost my normal life back were big motivations for me at the time. But it's important not to underestimate what's involved. The decision to start home dialysis on its own isn't the end of it. Organizing and putting in place alterations to your home, training, readjusting – all of that can be challenging. But to get straight to the point – it's worth it! And the B. Braun team is just super and takes care of almost everything. I also really enjoyed the training process at the center, because I learned a lot of new things about the disease and my body.

At last I can do what I want. At home, I have my own dialysis room. So I'm on my own and I can watch TV, listen to music, sleep, or read a book without having to worry about anyone else.

Now I've been at home for quite a while in my new rhythm, and I love it. The home dialysis works well, and I'm also physically much better; my blood values are better than they've been for a long time. It probably goes without saying that this means I'm generally happier. It's also only now that I've realized how stressful having dialysis at the center was for me. Getting ready, driving there, waiting, hooking up, dialysis, back home again.

The dialysis takes longer at home, including preparation and documentation, but I don't have that inner pressure any more.

A PATIENT'S STORY

AT LAST I CAN DO WHAT I WANT

What do I appreciate most about home dialysis? At last I can do what I want. At home, I have my own dialysis room, so I'm not "in the way" as I would be in the living room, for example. So I'm on my own and I can watch TV, listen to music, sleep, or read a book without having to worry about anyone else. Of course, friends and family members also visit me from time to time during the home dialysis and spend time with me. With friends by my side and good conversations, the four or five hours of treatment time fly by.



THE BEST DECISION I'VE MADE SINCE I FIRST NEEDED DIALYSIS

Tremendous praise is also due to my wife! That shouldn't be forgotten here. Home dialysis is something you can do on your own if you really have to, but she gives me support whenever she can – whether it's during preparation for dialysis or afterwards, or providing food and drink during the dialysis, it's really great to see how helpful and understanding she is. That's another important prerequisite: everyone in the house has to make at least minor sacrifices, and everyone has to be aware of that. That's why my wife and family were skeptical to start with – that shouldn't be overlooked. But in the meantime they can all see how well I'm doing and they support me completely.

Home dialysis also has lots of advantages for my work life. My job is in a workshop, so before I started home dialysis I had to finish work on the dot



every Monday, Wednesday, and Friday and rush home to get ready for the trip and dialysis. Now I'm much more flexible and I can adjust my work hours spontaneously. Especially in the workshop, where work hours are heavily dependent on the volume of orders, that's worth its weight in gold. All in all, I can say that opting for home dialysis was the best decision I've made since I started needing dialysis. Anyone who feels physically fit and has options at home should definitely consider home dialysis, after consulting their doctor.

Challenges with doing dialysis at home really only came up at the beginning. I had a needle perforation twice during dialysis. The first time, the B. Braun team helped me over the phone; the second time, my wife and I managed it ourselves. We stopped the dialysis, cooled the spot, and started again the next day. So it just goes to show once again that flexibility is key!

I'm active in several social networking forums and I've posted there again and again that this was the best decision I've made since I started needing dialysis. Better blood values, an increased sense of well-being, more free time, and less stress – and if you've maybe been a bit naughty at the weekend, you can very quickly make adjustments that are good for your body. I would highly recommend it to anyone who has the option.



CONTACT DETAILS

If you're also interested in experiencing this, get in touch with us – via either a contact form, phone, or e-mail. We can provide you with advice and support on request and will discuss your options for home hemodialysis together with you and your center. Find out in advance about the requirements for home dialysis.

We look forward to hearing from you!

E-mail: daheim-service@bbraun.com

Phone: +49 5661 714611

Please note that we are not yet offering home hemodialysis in all countries. Feel free to contact us to find out what the situation is in your own country.

"With friends by my side and good conversations, the four or five hours of treatment time fly by."



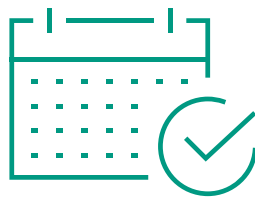
THE WORLD OF DIGITAL ASSISTANTS

From managing blood pressure to dialysis planning, health apps can make everyday life easier for dialysis patients and provide support for their treatment

Lots of people are nowadays using their smartphones, tablets, or PCs as aids in everyday life. There are now digital assistant apps for lots of health problems – from diabetes to depression, from tinnitus to snoring. We're also quite accustomed now to using "wearables" – smart wristwatches equipped with sensors – to continuously monitor health data such as step counts, breathing, blood pressure, and ECG, and to document

the length and quality of sleep. But which of these apps are useful, and which do you need to know about as a dialysis patient? The main deciding factors here are your own personal preferences and health needs. Generally, however, health apps can be divided into four types of function: calendar, diary/data collection, contacts, and advice.

Calendar functions are useful for keeping track of things, so that you don't forget treatment appointments and always take medication on time.



PATIENT DIARIES AND HEALTH DATA APPS

These are used to record your data, via your own input or through a tracker. Some devices, such as blood pressure cuffs and bathroom scales, can be connected to health data apps and allow automatic data input into the app. The data analyzed can help identify causes of symptoms and support your doctor in optimizing your dialysis, for example. Special apps make it possible to record the most important parameters, such as weight and blood pressure, and include a nutrition diary to keep track of protein, potassium, and phosphate values, as well as liquid intake. There are also emergency apps that let you store your most important medical data so that the emergency services, for example, can access it if necessary.

The main thing to remember with all these apps is that when you enter your values into them, you may also be sharing large amounts of data with the company that supplies the app.

In addition, documenting data always means that the may be subject to theft or accidental data loss. So, it's best to find out in advance which apps are really trustworthy.

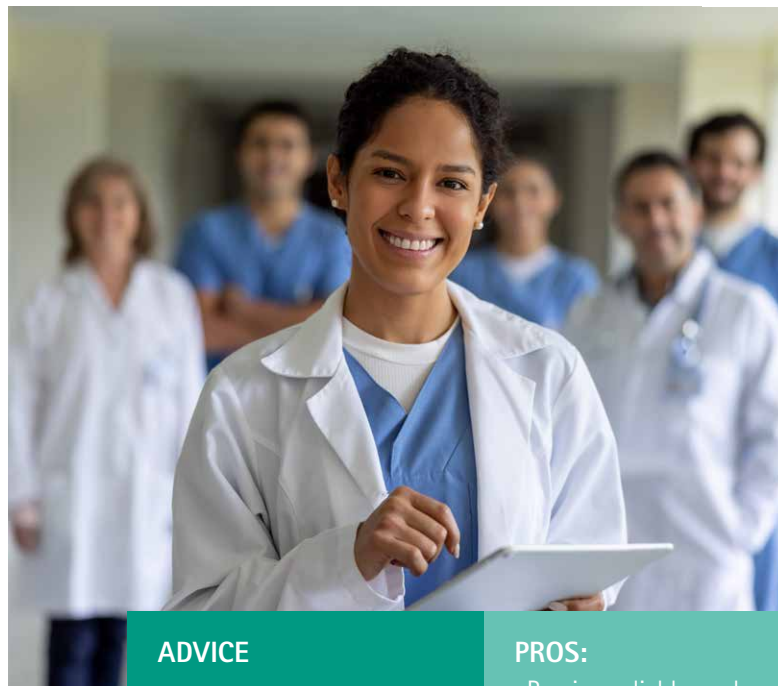


CONTACTS

This category includes tools that make an online consultation with your doctor possible or provide a messaging function that lets you communicate with your treatment team. The common factor for all the tools in this category is that they are subject to very strict regulations all over the world because the health data that are exchanged are regarded as highly sensitive. There are also apps that enable you to automatically notify a pharmacy whose address you have saved when medications need to be reordered, provided the app is certified and you have agreed to automatic notification.



CONCLUSION



In principle, digital tools are useful for organizing the challenges of everyday life for patients receiving dialysis and for helping them understand the complex treatment better. Continuous measurement values also often provide more meaningful examination results than in the doctor's office – for blood pressure, for example – and can therefore provide real treatment benefits. However, personal contact with a medical team still cannot be replaced by digital tools. So, it's best to ask your dialysis team for personal advice about which apps can be specially recommended for your purposes and which services are available in your region.

ADVICE

Apps in this area may contain prescription databases, data on nutritional values, articles providing information, and motivational tools for managing the disease, as well as addresses for vacation dialysis.

PROS:

- Precise, reliable, and more comprehensive data capture
- Precise and reliable information transfer
- Rapid information exchange
- Improved data analysis due to multiple data inputs and computer-driven analysis (AI in the future)

CONS:

- Data security/data protection
- Dehumanization of treatment

FAQs



AS A DIALYSIS PATIENT, CAN I TAKE A DANCE COURSE?

"Tripping the light fantastic" on a dance course is actually a great idea. Dancing combines exercise with socializing and enjoyment of music. Of course, you should go easy at first and make sure you don't overdo it. You can seek medical advice beforehand – for example, on how to ensure balanced fluid levels during a long evening of dancing and how best to protect your vascular access.

THE EVENING ARE GETTING DARKER. WHAT CAN I DO AGAINST WINTER BLUES?

Winter, with its gray, dark days, can really get you down. One of the reasons for this is the shortage of daylight, which inhibits the production of the "happiness hormone" serotonin. If you are suffering from pronounced fatigue and listlessness during the winter months, you should seek medical advice to rule out the possibility of depression. Getting plenty of daylight and exercising in the fresh air helps combat the winter blues. You can also use a daylight lamp, which lets you absorb filtered white light via the eyes for 30 minutes a day – for example, while working at the computer (if you have any eye diseases, ask your doctor about this first). All sorts of things that bring variety and energy into your life are also good: exercise, meeting friends and family, taking a language course, going to the theater, or reading an exciting book.

WHAT CAN I DO TO GET A BETTER NIGHT'S SLEEP?

Healthy sleep is extremely important for overall health – a fact that is often underestimated. Sleep problems can have a wide variety of causes. It's best to talk to your doctor about this. For example, certain medications can have an unfavorable effect on sleep quality – but so can unhealthy daily routines. It's important to give the body and mind enough time to rest in the evening. For that reason, you should generally avoid using digital media and eating meals immediately before bedtime. Also, make sure you get plenty of exercise and fresh air during the day – and always go to bed at the same time, if possible. A calming cup of tea and regularly practiced relaxation exercises can help you fall asleep. You can find out more about sleep quality in the article "Understanding Sleep Better" in the Healthy Lifestyle section of this issue.

Simonstown

in South Africa – with a view of the Cape and penguins

Simonstown (also spelled Simon's Town) in the Western Cape province is a great destination for anyone wanting to experience as many facets of South Africa as possible, all on a single trip: beaches, mountains, vineyards, wilderness. And of course, the famous Cape of Good Hope.

Fine old houses in Victorian and Cape Dutch styles are typical in the center of the port of Simonstown, about 40 kilometers (25 miles) from Cape Town. The attractive little town, with a population of around 6,500 today, has been shaped by its colonial history, as it was founded by the Dutch East India Company – and it's also an important naval base. Fans of colonial seafaring history and more recent military history shouldn't miss the local South African Naval Museum. Interesting facts about the town's history can also be discovered at the Simonstown Heritage Museum and Simonstown Museum.

The clear, sheltered waters of False Bay, the Mediterranean climate, and the picturesque harbor – only a few steps away from the Simonstown renal care center, newly opened in 2022 – make Simonstown a favorite destination for seaside vacationers and lovers of the sea. The tourist infrastructure, accommodation facilities, and medical services are excellent. Divers and snorkelers can explore the crystal-clear sea with its rich marine life, shipwrecks, and reefs. The fresh catch of the day is available from fishmongers in the harbor. And day-trippers can disperse aboard all the excursion boats along this unique coastal strip to watch – with a bit of luck – all of the sea's "big five": whales, sharks, dolphins, seals, and penguins.

At least as far as penguins are concerned, that's easy to do at nearby Boulders Beach, the town's biggest attraction. Several thousand African penguins have

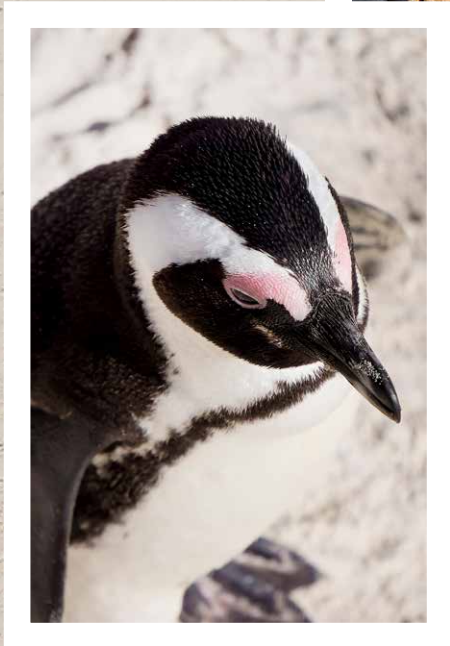
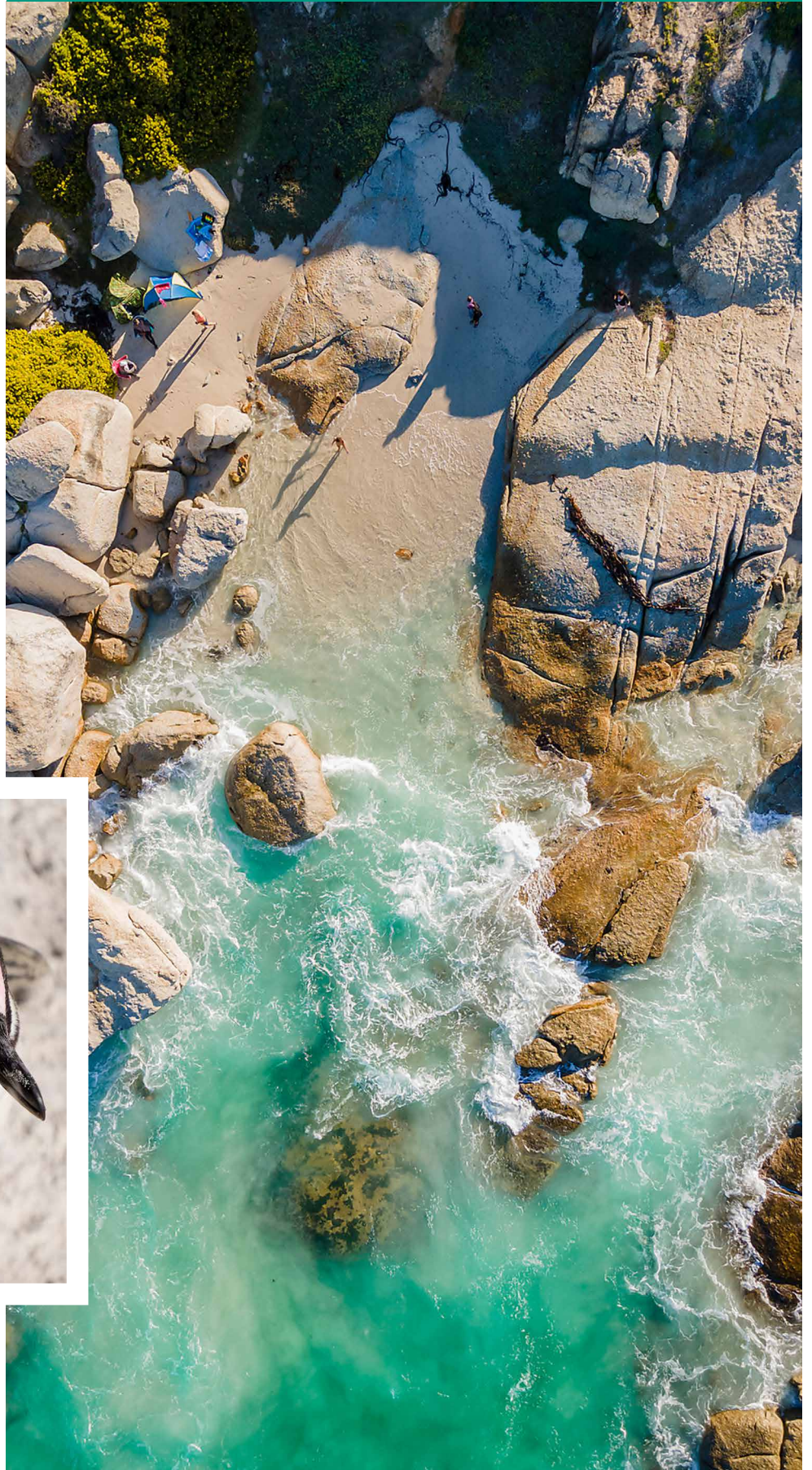
a colony there. Visitors can watch them at their leisure right up close and appreciate these funny characters. People who are really daring even plunge into the waves alongside the feathered swimmers.

It's only a short drive from Simonstown to the Cape of Good Hope, once feared by sailors. Letting the wind blow around you here is an experience in itself, especially with the unique view of the Atlantic Ocean.

The Cape Point Nature Reserve, recognized as a World Natural Heritage Site, offers ideal conditions for outdoor enthusiasts, hikers, and cyclists. Another special feature is a hike along the Shipwreck Trail, where you can discover the wrecks of two ships that once ran aground on these historic cliffs.



Several thousand African penguins have a colony at nearby Boulders Beach. Visitors can watch them at their leisure right up close and appreciate these funny characters.



The mountainous hinterland has first-class hiking tours. But the top attractions in the Western Cape, such as Kirstenbosch Botanical Garden and the beautiful vibeyards are also easily reached from Simonstown in a day.

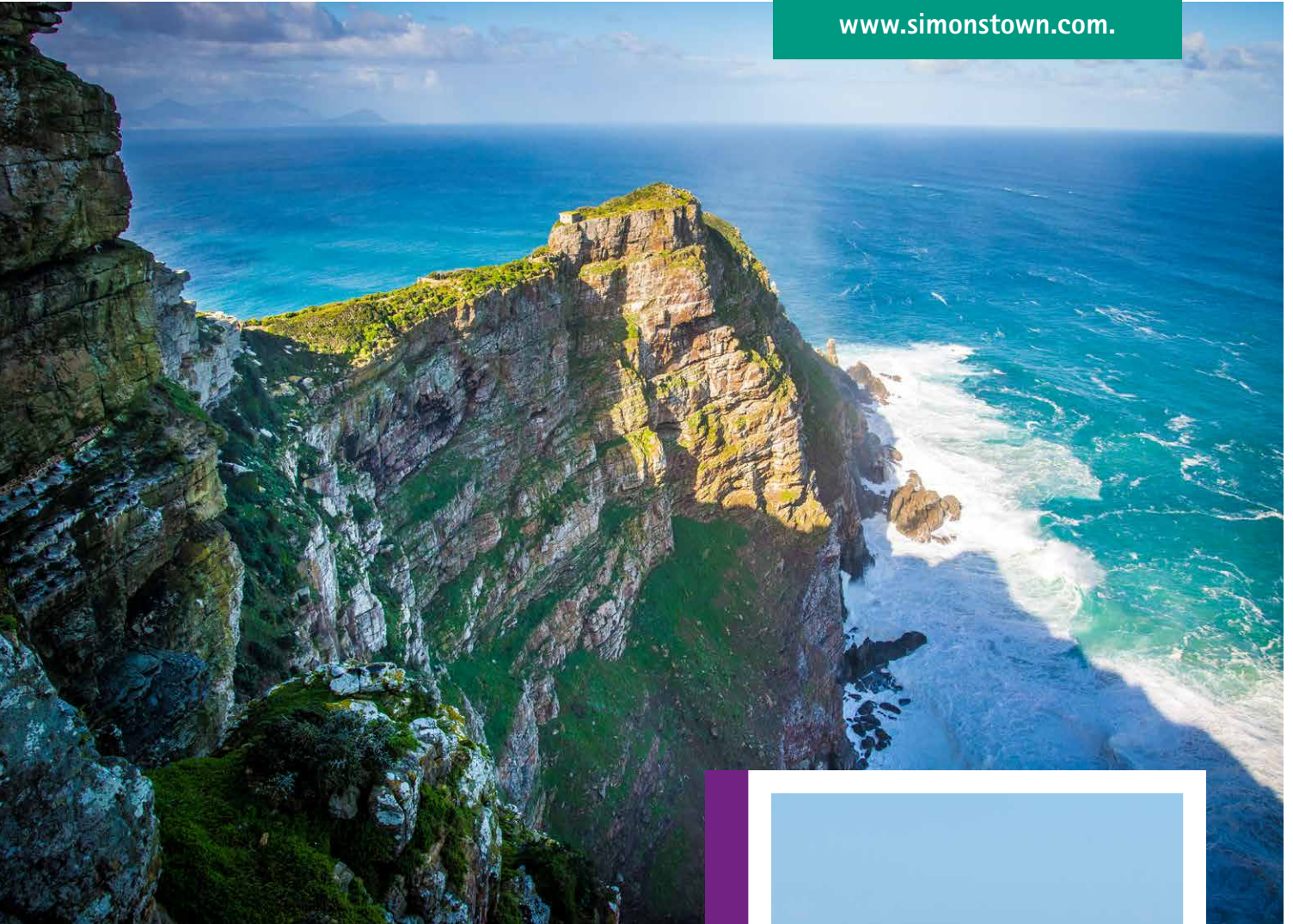
And about two hours north is the 1,600-hectare (4,000-acre) Buffelsfontein Game and Nature Reserve – home to buffalo, rhinos, leopards, giraffes, zebras, and various antelope and bird species. You can visit the reserve for a day to go on a mountain-bike safari, for example, or stay in the stylish lodges for several days.

Last but not least, there's Cape Town, the vibrant metropolis with its varied restaurant, bar, entertainment, and shopping scene, just an easy hour's trip away by local train. From there you can also easily get to the trip's obvious high point: either on foot or by cable car, you can go up Table Mountain, 1,086 meters (3,563 feet) high, with its unique view over the city and the entire Cape. A mountain that is truly the perfect image of the region: relaxing and overwhelming at the same time.

A mountain that is truly the perfect image of the region: relaxing and overwhelming at the same time.



For more information, visit
www.simonstown.com.



WORTH KNOWING

Getting there:

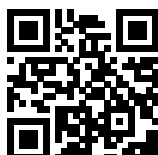
Simonstown is about 40 kilometers (25 miles) from Cape Town International Airport. Transfer by rental car or cab takes about 45 minutes.

Your local dialysis center:

B. Braun Avitum Simonstown Renal Care Center
Dido Valley Road, Harbour Medical Centre,
2nd Floor, Suite 9, Simonstown, South Africa

For your personal travel and appointment planning, please get in touch with the clinic's contact person, Ms. Sonja Vandersandt. By e-mail: sonja.vandersandt@bbraun.com.

Website:



Grilled shrimp

WITH DILL DRESSING

TO MAKE THE DILL DRESSING

Swirl the curd cheese, 1 teaspoon of honey, pepper to taste, and the chopped dill together into a smooth cream. Soak the gelatin sheets in cold water. Heat it up to lukewarm until the gelatin has melted into a liquid. Gently stir the liquid into the curd cheese mixture. Whip the cream until stiff and fold it into the curd cheese mixture. Place this mixture into molding cups and refrigerate for at least an hour.

GRILLING THE SHRIMP

Season the shrimp (which must be peeled and deveined) with rosemary, thyme, and garlic and sear in olive oil.

TO MAKE THE CUCUMBER SALAD

Blend 1 teaspoon of honey, 1 teaspoon of dill, and the chili powder into a marinade. Cut or grate the cucumber into thin slices and place the slices in the marinade. As a garnish, place lettuce leaves or sprouts that are in season on the plate. Plate the shrimp, marinated cucumber slices, and dill dressing.

Instead of curd cheese, you can also use sour cream or cream cheese. The curd cheese and the shrimp are excellent sources of protein. You can use fresh cucumbers as they only contain small traces of potassium.





SERVES 4

- 250 g curd cheese
- 2 TSP honey
- Freshly ground pepper
- 1 handful of dill, finely chopped
- 2 sheets of gelatin
- 50 g heavy whipping cream
- 8 colossal shrimp
- 1 sprig of rosemary
- 1 sprig of thyme
- 1 garlic clove
- Olive oil for pan searing
- 1 cucumber
- 1 pinch of chili powder
- Lettuce leaves for garnishing



Nutritional value (All nutritional information per serving. This corresponds to 1/4 of the total recipe.)

Energy	Carbohydrates	BE	Protein	Fat	Potassium	Phosphate	Sodium	Water
194 kcal	6 g	0.5	13 g	13 g	302 mg	174 mg	59 mg	162 ml

These nutritional values represent average figures, which may differ in certain cases. They should be used only as a guide and cannot replace a consultation with your doctor or nutritionist.

UNDERSTANDING

Sleep Better

Do you just wish you could sleep better?
You're not alone there!

At some point in their lives, lots of people have trouble getting to sleep or sleeping right through the night. This article explains a few things that can help – and what to expect from modern tools such as sleep-tracking apps or a sleep laboratory examination.





According to research studies, the recommended average duration of sleep for healthy adults aged 18–64 years is seven to nine hours, and seven to eight hours for those over 65 years – but for many people that’s only a distant prospect. Relaxing sleep is a basic human need and protracted sleep disturbances are therefore a major physical and psychological problem for people who suffer from sleeping problems. Dialysis patients in particular may suffer from sleep disorders due to the disease. In addition to common causes such as stress, irregular sleeping times, lack of exercise, and eating habits, the most common sleep disorders in patients with end-stage renal failure are insomnia (difficulty in falling asleep or in sleeping through, or sleep that is not restful), marked daytime drowsiness, sleep apnea, and restless legs syndrome, as well as periodic limb movement disorder. Anxieties and worries about the disease, or a disturbed sleep-wake cycle caused by dialysis appointments that don't match your own natural rhythm, can also have a negative effect on sleep.

If you're having sleep disorders with causes like these, don't hesitate to talk to your dialysis team about it.

You can find
useful information
for your
health & fitness
at our website,
www.bbraun-dialysis.com.

WHAT CAN I DO?

Try to follow the general recommendations for sleep hygiene. The following

BASIC TIPS

may already be helpful with problems in getting to sleep and sleeping through:

1.

Always go to bed at the same time.

2.

Get plenty of exercise in the **fresh air**.

3.

Avoid meals, as well as coffee and black tea, right before bedtime.

4.

If possible, avoid having a television and digital media in the bedroom. Instead, make sure the room is **dark and well ventilated**.

5.

Don't get into bed until shortly before **bedtime**, and don't lie awake for more than 15 minutes.

6.

Find out about **relaxing rituals** such as autogenic training or progressive muscle relaxation and do them just before bed.



If you often fall asleep during your dialysis appointments, that could be one reason why you can't rest properly at night. In that case, it would be useful to find a dialysis time that would match your sleep-wake rhythm better. You should also try to solve problems and worries during the day – in self-help groups or with a therapist, for example – so that you can switch off better in the evening.

If you've been struggling with sleeping problems for a longer period, or if you're not able to get a proper rest during sleep, then keeping a sleep diary is recommended. You can also consider having an examination in a sleep laboratory. The lab can carry out what's called polysomnography, in which brain waves, heart rate, eye movements, muscle activity, and oxygen saturation in the blood are measured to identify the sleep phase during which the disturbances are occurring and what can be done about it.

For sleep apnea, one of the preferred treatment options is CPAP therapy, in which a mask is used to maintain continuous positive airway pressure. Weight reduction can be needed if the patient is overweight. According to one study, nocturnal hemodialysis might also possibly reduce the severity of sleep apnea. A surgical intervention may also be an option in selected cases.

Iron deficiency is one of the factors that may be responsible for the development of restless legs syndrome. Correcting anemia by taking iron and the hormone erythropoietin is therefore a treatment option. In addition, there are other drug treatment options that your doctor may recommend. One study also found that physical exercises during dialysis can partly reduce the symptoms of restless legs syndrome.

For chronic insomnia, cognitive behavioral therapy (CBT) for insomnia is the recommended treatment option. This involves trying to change behaviors that promote insomnia. By contrast, long-term and continuous use of drugs with sleep-inducing properties is not recommended. Nocturnal dialysis may perhaps be beneficial, but the research results on the subject are inconsistent.



DIGITAL TOOLS FOR BETTER SLEEP?

Getting a good night's sleep is an important issue for nearly everyone, and there is increasing interest in helping people to monitor their sleep patterns. Sleep trackers, which are incorporated into smart watches, for example, are very popular. They measure the duration of sleep and try to provide information about the quality and length of the various sleep phases. However, sleep researchers have warned against taking these data too seriously, because the devices mainly just measure how much you move during the night – although some of them also record heart rate and oxygen saturation.

Although the technology is constantly improving, it can neither replace a medical diagnosis of a sleep disorder nor your own assessment of whether you've had a restful night's sleep. Too much (digital) control can also create additional stress and lead to increased problems.

However, apps for the smartphone or PC that are based on the methods of cognitive behavioral therapy for sleep disorders are worth trying. This method of treatment has proved successful in personal therapy, and courses can now also be completed online using these apps. Over several weeks, patients learn step by step what they themselves can do to improve their sleep. The digital training programs teach the rules for sleep hygiene and gently coach users to take a different inner attitude toward sleep to help them get to sleep, sleep through the night, and improve sleep duration in

a lasting way. It's important to use products that have had their quality tested and confirmed by an independent body and have been prescribed as appropriate by the doctor treating you.

The best idea is to seek advice from your treatment team or a specialist in sleep medicine for this.

A sleep cycle starts with the falling asleep phase, followed by the light sleep phase; then the deep sleep phase, which is particularly important for rest; and finally, the dream phase, also known as the REM (rapid eye movement) phase. A sleep cycle usually lasts 90–110 minutes and takes place several times in succession during the night. Short periods of wakefulness between the cycles are normal, and healthy sleepers don't notice them because they quickly fall asleep again.

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