SIOUNG WITH CHRONIC KIDNEY DISEASE | ISSUE 1-2022 SIOUNG WITH CHRONIC KIDNEY DISEASE | ISSUE 1-2022

A PATIENT'S STORY

Follow one man's journey from kidney failure to transplantation

RECIPE

Light, delicious summer cuisine that's ready in no time

TRAVEL STORY

The district of Viseu offers visitors a fascinating window into Portuguese culture

HEALTHY LIFESTYLE

WALKING THE WALK

Regular walks are a gentle and natural way to stay active and fit

ISSUE 1-2022

Shai

Dear readers.

Life is often full of surprises — and we're often not sure at first what they have in store for us. So it's a good idea to take a

basically positive attitude to them. Like Pavel Mikš from

Lovosice in the Czech Republic, whom we'd like to introduce you to in this issue of Share for Care. When Pavel, a qualified truck driver, developed chronic renal insufficiency, he retrained as a bus driver. When the dialysis results didn't turn out as hoped, home dialysis became an option for him. And then his life took another surprising turn. But you can read on for yourself...

The sudden adjustment to living with chronic kidney disease is challenging not only for patients but also for their families and relatives. Lots of things change very quickly - from having to visit the doctor regularly to the way tasks are shared out in the family to everyday diet. What you need to watch out for and how you can still manage to organize everyday life in an enjoyable and relaxed way and stay open to positive surprises that may come your way — that's the focus of this issue's special topic.

Our travel tip this time takes you to Central Portugal, to the magical city of Viseu, where the long summer days can be enjoyed while strolling in the evocative atmosphere of the historic old town and going on relaxing outings to the surrounding countryside.

Of course, you already know it's good for your health to go for a walk every day. The positive influence of exercise is the subject of various pieces in this issue — from taking a daily walk to doing stretches to cycling. Maybe this summer you might like to try out a new way of feeling the wind streaming past you? E-bikes and pedelecs are good options. We've taken a look at what you need to pay attention to with them.

We look forward to getting your feedback on this issue of Share for Care, by e-mail to dialysis@bbraun.com, and wish you a relaxing and enjoyable summer — with plenty of exercise!

Your B. Braun editorial team

Christopher Boeffel

Martin Kuhl

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HEALTHY LIFESTYLE

E-bikes are popping up everywhere. Bringing together gentle exercise, natural landscapes, and practical locomotion, this trend is a perfect addition to any healthy routine.



COMBATING CANCER WITH MINI-MAGNETIC SPHERES

Magnetic resonance imaging (MRI) technology has so far been successfully used as a way of diagnosing diseases, including cancer. In the future, it may also become possible to use it for treating cancer. In animal experiments, British researchers have successfully used an MRI scanner to guide a tiny magnetic ball through the brain, so that cancer cells can be heated up and destroyed. The new technology, called minimally invasive image-guided ablation (MINIMA), could help in the future to combat brain tumors or prostate tumors that are difficult to access without major surgery. If it even becomes possible to reshape the structure of the tiny magnetic sphere so that it can act like a tiny cutting knife, then even better-targeted remotely controlled surgery would be possible — potentially revolutionizing non-invasive surgery.

and psychological quality of life in patients with chronic kidney disease. However, further research is needed to determine more specific "walking doses" taking into account age group and physical condition.

ANEMIA: ORAL MEDICATION AS GOOD AS CONVENTIONAL THERAPY?

Patients with chronic kidney disease typically suffer from anemia, as the disease disturbs the production of the hormone erythropoietin (EPO). EPO stimulates the production of red blood cells. Until now, one standard treatment for anemia in patients with chronic kidney disease has been to administer EPO-stimulating agents, known as ESAs, using subcutaneous or intravenous injections. In patients who are not yet on dialysis, these injections are mostly done by professional health-care workers in specialized medical offices.

Current research suggests that an agent called daprodustat, which belongs to a new class of orally administered drugs, may be just as effective as the previous standard therapy in the treatment of anemia. The investigated study participants of both groups showed similar rates of side effects. Oral therapy could simplify the treatment, since patients would be able to take their medication at home.

Daprodustat may therefore be able to contribute to better patient care.



COVID-19 VACCINATION MAY PROTECT DIALYSIS PATIENTS FROM SEVERE DISEASE COURSES

Although dialysis patients only build up limited immune protection themselves through COVID-19 vaccines, they do benefit from vaccination. According to studies by a French research team, in addition to individual immunity, the percentage of vaccinated individuals in the population in particular influences how many dialysis patients have to be hospitalized due to COVID-19 infection. Specifically, this means that the larger the number of people who are vaccinated, the smaller the numbers of dialysis patients who will develop severe COVID-19.

For the studies, the research team analyzed data on COVID-19-related hospitalizations of dialysis patients during the first, second, and third waves of infection. This showed that in the first wave, the proportion of dialysis patients who were hospitalized was about the same as in the general population. In the second and third waves, however, when vaccines were available, the incidence of hospitalization in dialysis patients was lower than in the general population.

As the authors note, these findings suggest that both individual and herd vaccine-induced immunity may have a protective effect against severe forms of COVID-19 in dialysis patients.

STICKING TOGETHER

AND LOOKING AFTER YOURSELF

Chronic kidney disease requiring dialysis doesn't just change daily life for the individuals affected by it — a new phase of life also starts for their family members. Working together is the best way of coping with these challenges.

Relatives can

provide support

in lots of

different ways.

What's the best way I can help? That's probably the most urgent question facing lots of relatives when a member of the family starts

requiring dialysis. The answer is clear: relatives are tremendously important for the person with the condition and they can

provide support in lots of different ways — practically, psychologically, and on the interpersonal level.

Following the diagnosis, people with kidney disease often go through a phase of uncertainty, and many also feel despondent and anxious. As a relative, you should take the worries that arise seriously and actively discuss them. Having conversations based on trust and together attending information meetings about kidney disease are important ways of reducing anxieties and uncertainties. If the family member with the disease has been

despondent or even depressed for a longer period, it's advisable to seek counseling support early on. You can help here actively with

> arranging appointments and preparing for therapy discussions — for example, by writing down questions and worries together

before the appointment.

As a supportive member of the family, you should also try as much as possible to be present at all of the other medical appointments. This indicates solidarity and gives the affected family member a feeling that they're not having to go through the disease on their own.

You will also receive important information about the disease so that you can provide better support for your relative in all sorts of practical ways in daily life.





AN IMPORTANT POINT: DIET

When dialysis treatment starts, the recommended food and fluid intake for the patients affected also changes in order to have a targeted and positive influence on the course of the disease. The adjustments involved are challenging, and the best way is to deal with them together.

It should be noted that there is no longer any classic "dialysis diet." Instead, your dialysis team will give you individual advice so that you can identify a suitable strategy for meals together in your family. The routine of having meals together should be at least as important as before the diagnosis. Pay attention to having a nicely set table and a pleasant atmosphere when eating, so as to strengthen family cohesion. You can also invite friends and relatives home for meals, helping the family member with the disease to keep up social contacts.

Dialysis patients also receive information from the dialysis team about how many drinks and watercontaining food items they can consume per day to ensure that not too much liquid accumulates in the body. If you keep these recommendations in mind in daily life, you'll be able to support the management of the fluid-intake log and make things easier for your family member. Lots of things become routine over time, but during the adjustment phase it's important to focus attention and energy on the important changes.



GOOD ORGANIZATION IS EVERYTHING

Particularly when the person with the disease is still fully involved in work and family life, it's necessary at the start of dialysis to talk about organizational matters and everyday routines. If necessary, you can reassign various tasks, since the person affected may no longer be able to manage everyday chores in the same way as before. Remember that from now on, the dialysis time will have an impact on your daily and weekly schedule. Outside assistance can also make things easier.

Don't be shy about asking friends and family for help. They're often pleased to be able to take on childcare or shopping.

In some countries, it's also possible to receive additional practical assistance through health insurance and nursing insurance schemes.

SPECIAL TOPIC

GETTING THE CHILDREN INVOLVED

Children are often unsettled by the new situation. The more clearly you explain the new facts to them, the better they'll be able to accept them. Answer their questions in a way that takes their age into account. On the other hand, silence and denial are very unsettling for children and promote anxiety. If you're not certain about anything yourself, self-help groups can assist with practical experience.



- · Take worries and fears seriously.
- · Go to medical appointments and information meetings together.
- · Reorganize your everyday routines together.
- · Contact self-help groups for dialysis patients and their relatives.
- · With medical support, set up a new weekly menu plan for the family.
- · Get your social world involved and help your family member to continue taking part in social life.



mental boundaries and seek medical

advice early on.



CONSERVE YOUR OWN ENERGY

It's only if you look after yourself properly that you can look after others. So it is a good idea to plan regular breaks to pursue your own interests. Treatment days when your family member is at the dialysis center are good opportunities for this, for example. An evening walk, meeting up with friends, or pursuing your favorite hobby can also help you switch off and store up energy. Relaxation exercises such as yoga can strengthen your psychological resistance.

RECOGNIZING WHEN YOU'RE OVERSTRESSED

But what if your worries about your family member are causing you constant mental stress? Maybe you're afraid something could happen — such as the vascular access permanently closing, or additional health problems developing? In that case, you should definitely contact the medical specialist staff. They are best able to assess the situation and can provide reassurance in many cases.

If you have the feeling that you're no longer able to cope with a mental low point or may be starting to have physical symptoms, you should definitely look for assistance yourself. Ask a doctor to advise you on what could help you overcome your anxieties or depression and build up fresh energy.

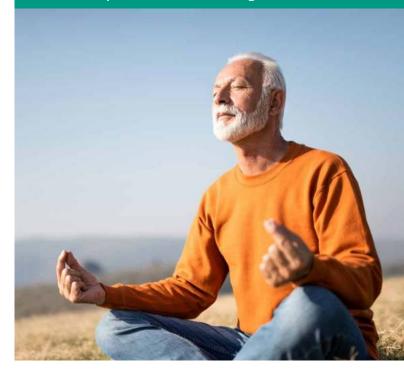
Remember that you're not perfect and you don't always have to be strong. Try to keep the discussion atmosphere in the family as open as possible and discuss even difficult feelings calmly. Even a member of the family who is unwell will probably want to be treated perfectly normally and not be protected from everything. Look after each other and

always keep open the option of looking for outside help. That will strengthen you as a family — even in difficult moments.

Networking with other individuals who have been affected by the disease and attending self-help groups can also be strongly recommended. That's where you can find out how other people with the disease and their relatives cope with all of the different challenges that dialysis treatment can create — from managing the fluid intake schedule to organizing a long-planned trip to your dream destination. Talk about it with people who are in a similar situation.

You'll soon find that this not only gives you energy and leads to new friendships but also produces lots of good ideas for ways in which living with dialysis can still be fun and work well.

Remember that you're not perfect and you don't always have to be strong.



TWIST OF FORTUNE

Pavel Mikš

65, comes from Lovosice in the Czech Republic, where he and his wife share a house with his son's family. He has already become a grandfather and is looking forward to taking care of another grandchild soon.



Pavel Mikš is a very optimistic and positivethinking person. He used to work as a truck driver, before switching to driving buses. Due to a combination of kidney disease and diabetes, he now lives on a full-time disability pension, spends lots of time with his family and tends his garden and he can enjoy life without dialysis, thanks to a successful kidney transplant last year.

DIAGNOSED WHEN TAKING A COLLEAGUE TO THE DOCTOR'S OFFICE

Pavel has known that he has diabetes mellitus since 1998. When he first started noticing symptoms like severe thirst and frequent urination, he didn't pay much attention to them. It was only when he was accompanying a colleague who was ill to the doctor one day that he happened to take a blood test during the visit, and received test results that clearly showed diabetes.

WHEN THE KIDNEY FAILURE STARTED

In 2013, Pavel started having problems with his eyes, and the doctors had to change his medication. He now thinks this is when the kidney problems started. Due to his deteriorating health, he had to give up his job as a truck driver. He simply no longer had the energy for the time-consuming, high-

energy work, which often involved extended stays abroad. But he was not discouraged and started working as a bus driver instead. Unfortunately, the kidney problems soon became worse, and he had to give up that job as well.

In 2018 Pavel started on peritoneal dialysis because he had developed chronic kidney disease. This is a type of dialysis in which a sterile cleansing fluid is introduced into the abdominal cavity, into which a peritoneal catheter is placed. Initially, Pavel visited the B. Braun dialysis center in Litoměřice. He remembers taking plenty of fluids so that the dialysis would not be too exhausting. At first, he had no problems with urination, but the dialysis wasn't as effective as hoped and too many harmful substances were left in his body.



HOME DIALYSIS SAVES TIME AND GIVES YOU A SENSE OF RECEIVED ON THE SENSE OF BACK

After a while, Pavel was given the option of performing dialysis himself at home. He thought it over and finally agreed. From his point of view, there were two clear points in favor of it: the home environment and the time saved. Pavel used to have to wait for the ambulance to drive him to the center and take him home again afterwards — a process that took several hours and was repeated several times a week.

For Pavel, home dialysis meant finally not having to wait around so much. It also gave him the reassurance and familiarity of the home environment. Another reason he opted for home dialysis was that he frequently went on cycling trips around the Czech Republic with friends. During these vacations, he had previously had to visit dialysis centers all over the country. With home dialysis, that was no longer necessary and he had more independence.

At the time when Pavel's doctor in Litoměřice offered him home dialysis, a brand new dialysis machine from France, the Physidia S3, was just becoming available. It also worked on the principle of exchangeable bags of dialysis fluid, but it had not been tried by anyone in the Czech Republic before that.

After an preparatory session during which Pavel was introduced to the new machine, he decided to use this form of therapy and became a pioneer with the new dialysis technique. A whole series of organizational steps followed, from agreements with his health insurers to ensuring that Pavel had adequate conditions for an injection into the arteriovenous fistula. Pavel then completed the necessary training program at the center in Litoměřice. His wife also took part, so the doctors could be sure she would be able to help him in an emergency. With guidance from the dialysis team treating him, Pavel quickly learned to use the controls and developed a confident routine.



THE CORONAVIRUS PANDEMIC AND A SUCCESSFUL TRANSPLANT

Although Pavel was succeeding in using the dialysis machine, the completion of his training was delayed. Pavel kept at it anyway, and after a while he managed to obtain all the equipment needed for home dialysis: needles, bags, and a comfortable chair, among other things. He even managed to organize regular check-ups with a staff member at the dialysis center in Litoměřice during the pandemic emergency.

Then, when Pavel had finally managed to obtain all the equipment he needed, one day he was notified that he was eligible for a kidney transplant. What a surprising twist of fortune! He then had the donor kidney successfully transplanted in June 2020.

Pavel is now living at home again. The transplant was only six months ago. He still has eye problems, so he can't return to his old job as a driver. But there's always something for him to do around the house and in the garden. He has even built a chimney and a smokehouse out of natural stone, which he used a hammer to break into smaller pieces himself. Because of the transplant, he now has to take a break from heavy physical work again, however. Gardening and light work around the house are now his favorite pastimes. He also picks up his wife, who is a teacher at the local preschool, from work every day. They walk home together from school and do the shopping on the way.

Pavel tries to go for a walk every day — sometimes for longer walks, depending on the weather and his health. But getting out every day, at least for a short stroll, is a must.

Authors: Magdalena Bambousková and Petr Radovič





FAVORITE?

EIING YO -XFRCISE WALKING, NORDIC WALKING, HIKING – WHICH IS YOUR

Staying fit doesn't always have to involve a complicated training program. The important thing is to keep moving around regularly to promote circulation, metabolism, and mobility. Conveniently, two of the most effective training methods — walking and stretching — don't require any extra exercise equipment, and you can get started at any time.

Being mobile is part of our nature, and walking is one of the body's basic physical needs. Our ancestors often walked many miles a day to hunt or forage for food. Today, however, we often suffer from lifestyle-related lack of exercise and the resulting diseases of civilization such as obesity, diabetes mellitus, and high blood pressure. So it makes sense to use the power of mini-exercises to create healthy habits that are good for you and don't involve too much time or effort. Even a daily walk and a few minutes of stretching every day can have a positive impact on your health (see the News section) and make you feel more active and comfortable.

WALKING, NORDIC WALKING, HIKING -WHICH IS YOUR FAVORITE?

Everyone has their own preferences when it comes to getting out for some fresh air. Which do you personally enjoy most? Walking the dog every day, meeting up with a friend for Nordic walking every week, hiking on the weekends or during vacations?

Every kind of walking is healthy, but the intensity of training varies depending on speed. You don't have to get severely out of breath — the ideal speed and exertion should be a slight challenge, but without straining you. It's best to seek medical advice and increase the intensity slowly.

Nordic walking with poles, for example, is a particularly gentle and effective form of endurance training, as it reduces the strain on the musculoskeletal system by 30 percent and also trains the upper body muscles. Using a pedometer helps you keep track of how many steps you are currently managing each day. If there hasn't been an opportunity for much exercise one day, you can make up for the deficit a bit in the evening with a few extra minutes of climbing stairs, for example.

Find out what your favorite form of walking is and schedule it firmly into your daily routine. Routines and appointments help you stay on the ball even when the weather isn't so good or your motivation is low.



This is how to do it:

Stand up straight in front of a wall. Make sure you have secure footing, and wear nonslip socks or sturdy shoes.

Place one foot back slightly.

4

Brace yourself against the wall with both hands.

Gently push the hips forward and hold the tension for 10–15 seconds. The front knee is slightly bent. Extend the back leg and slowly press the back heel toward the floor.

Relax and return to the starting position.

Place the other foot slightly back and repeat the exercise with that leg.

Rest for one minute.

Repeat the exercise on both sides.



If you want to increase the intensity of the exercise, you can do one more repetition. Alternatively, you can place the pressure-bearing foot slightly further back and take a longer stride position. The stretching should be noticeable, but should always remain comfortable. If you feel any pain during the exercise, you should stop.



HOW LONG HAS DIALYSIS BEEN AVAILABLE?

The first successful hemodialysis procedures in humans were performed as long ago as 1924 by an internist in the German city of Giessen, Georg Haas. The procedure was further developed by various scientists during the decades that followed — such as the Dutch internist Willem Kolff, who used a device he had developed in 1945 to save the life of a patient with acute kidney failure for the first time, and a Swedish physician, Nils Alwall, whose dialysis device was able not only to clean the blood but also to wash out edema fluid. However, dialysis has only existed as a regular treatment since 1960. Today, it is a standard therapy all over the world. Outpatient peritoneal dialysis (continuous ambulatory peritoneal dialysis, CAPD) has also been available since 1976. Today, dialysis is a tried and tested procedure, with thousands of patients receiving treatment worldwide.

WILL DIALYSIS KEEP ME WELL?

We can't promise that you will feel as well on dialysis as you did before kidney disease developed. Unfortunately, a complete replacement for healthy kidneys is not yet available. But with treatment comprising the three elements of dialysis, nutrition, and medication, it is possible to ensure that you stay as well as possible. The hemodialysis diet takes some getting used to, since from now on you will have to pay attention even more intensively to your intake of fluids and of food items that are high in sodium and potassium. However, with a little creativity, very enjoyable meals are possible despite these limitations. As with any chronic disease, there will be times when you feel tired and drained. But if you are careful and follow your physician's advice, you can carry out most normal activities even with the disease.

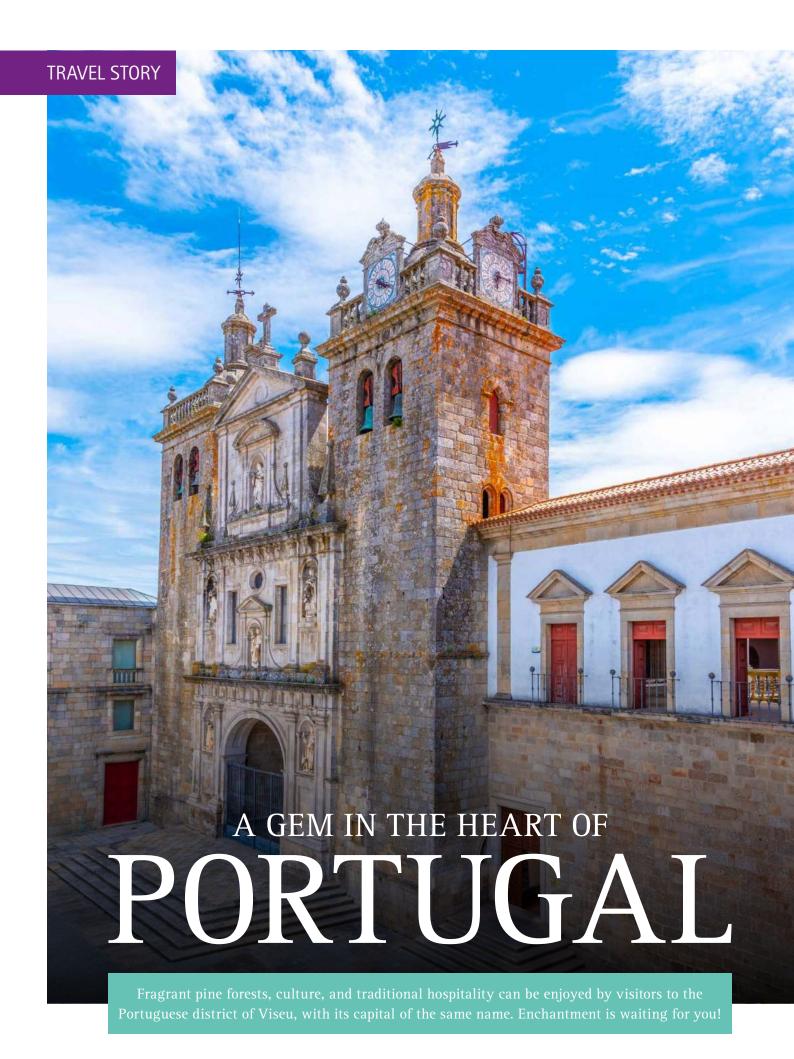
CAN I READ, WORK, AND USE MY DIGITAL DEVICES DURING THE TREATMENT?

It's definitely a good idea to actively plan the time you have to spend in the dialysis center. After all, we're talking about several hours on several days of the week. Reading and using digital devices during dialysis are generally permissible and possible. However, you need to bear in mind that you can only use devices such as tablets and laptops with one hand during dialysis. It's also advisable to fully charge your digital devices at home before you come for treatment, as charging them is not possible for safety reasons during the dialysis treatment. If you are sharing the treatment room with other people, it is also important to be as considerate as possible about how to manage your time together well. Remember that long, loud phone calls may disturb others in the room. Also, if you are playing videos and music you should always use headphones.

WHAT INFORMATIONAL MATERIAL IS AVAILABLE FOR DIALYSIS PATIENTS?

Thanks to the Internet, a great deal of information is now available about dial-ysis and kidney disease. However, be sure to rely only on trustworthy sources — such as the websites of national organizations for kidney patients. If in doubt, it's best to ask your dialysis center where the most reliable information is available for you in your country and in your language.







Rivers and streams, wooded hills, and renowned wineries are typical in the country-side of the district of Viseu in Central Portugal.

On the west, it borders the Serra do Caramulo mountain range, famous for its clear air and charming mountain villages. In the spring, this picturesque landscape, far from the hustle and bustle of the coast, is covered with lush carpets of flowers. Viseu, the region's capital, also provides an opportunity to experience a piece of unspoiled Portugal. With a population of around 100,000, the vibrant city offers citizens and visitors a particularly high quality of life. Shady parks, an impressive historical backdrop, little squares, markets, street cafés, and restaurants are there to tempt you to explore the culture and go on enjoyable walks.

Archaeological findings show that the area was probably first settled as early as the end of the Bronze Age. Conquest by the Romans followed later, with traces remaining in some surviving milestones. Viseu achieved special cultural importance in the sixteenth century, when the artist Grão Vasco founded the school of painting named after the city, which continued to produce numerous masters up to the eighteenth century. Some of their works can be seen today in the Grão Vasco Museum in Viseu.

The Sé Catedral de Viseu, located in Largo da Sé, the Cathedral Square, is the city's most famous building. Its two medieval towers still dominate the silhouette of Viseu, and the interior offers opulent vaulting, gilded carvings, and tile paintings. On the upper level is the Museum of Sacred Art.





If you want to take it easy, the best way is to use the Funicular de Viseu electric cable car. Every half hour, it takes passengers from the center of town to the Cathedral Square higher up. Horse-drawn carriages are also available at several locations to give your exploration that special magic.





The nearby Caramulo mountains and the Cambarinho Nature Reserve, which has the largest assortment of rhododendrons in Europe, are also unmissable. And even wellness enthusiasts can get their money's worth in the region: the thermal springs of São Pedro do Sul (about 45 minutes away by car), with beneficial effects including relief of respiratory problems and rheumatism, have a long history and were already appreciated by the Romans.

THINGS TO KNOW



YOUR LOCAL DIALYSIS CENTER:

Renal Care Center Viseu | Rua do Palácio do Gelo | +351 232 446 140



VISEU

For your personal travel and appointment planning, please contact the center at +351 232 446 140.

E-mail: geral-dialise.pt@bbraun.com



HOW TO GET THERE:

You can reach Viseu from Porto International Airport. A bus to Viseu leaves from there several times a day, with a journey time of about 90 minutes.

VACATION SEASON:

The best time for visiting is from May to October, when the average temperature is 21-30 °C (70-86 °F). In the winter months, it's often rainy and cool, at about 3-14 °C (37-57 °F).

FURTHER INFORMATION IS AVAILABLE AT:





GREEN CURD CHESE

WITH HARDBOILED EGG AND JERKY STRIPS



TO MAKE THE GREEN CURD CHEESE

Place the herbs, curd cheese, mustard, honey, and garlic into a blender and purée until smooth. Add pepper and lemon juice to taste.

JERKY STRIPS AND EGGS

Cut the jerky into very thin strips and hard-boil the eggs (5–6 minutes). Pan toast the baguette in butter until golden brown.

SERVES 4

1 bunch of green mixed herbs250 g curd cheese1 TSP mustard1 TSP honey1/2 garlic clove

Freshly ground pepper

A few squirts of lemon juice

60 g jerky

5 eggs

4 slices of baguette

Butter for pan toasting





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.

STAYING MOBILE WITH



A bike ride can be so enjoyable! The scent of freshly mown summer grass rises as you ride happily past meadows and fields, the sun pleasantly warming your back. Outings like this are particularly fun with an e-bike, as you don't have to produce the energy to get around all by yourself. But exercising in the fresh air can still have a positive influence on your well-being — strengthening the cardiovascular system and muscles with moderate exercise.

E-BIKE OR PEDELEC?

When people talk about e-bikes, they usually mean what's known as a pedelec. This has an electric motor that assists the rider up to a speed of 25 km/h (15 mph). But you still have to pedal yourself. You can adjust the motor as needed — increasing the powered assistance when going uphill or into a headwind, and reducing it or even doing without it altogether when going downhill. A real e-bike, on the other hand, provides power even without pedaling, but is no longer regarded as a bicycle under traffic legislation, so the regulations applying to motor vehicles in this category have to be observed. The same also applies to S-pedelecs, which can reach a speed of 45 km/h (28 mph) with pedal assistance.

BUY OR RENT?

Before buying a motorized two-wheeler, you should get some advice and try out different models. What sort of activities do you want to use the bike for? For short trips to the supermarket, you'd need a different bike than for extended cycling tours. There are big

differences between them, especially in battery life. Have you thought about where you'll be able to park the bike at home? With their heavier weight, the bikes are often difficult to carry into a basement or apartment — so it's good to have an easily accessible parking space.

Good e-bikes for beginners cost much more than normal bikes, even just for the battery technology involved. As they are usually exposed to higher loads, the frame and other components also need a stronger construction, and that has an impact on the price too. But it's worth investing in quality. Bikes sold at very low prices often have construction defects, which increases the risk of accidents and means that the bikes wear out faster. If you're only expecting to use an e-bike rarely, there's also the option of hiring one for a day. That's also a good way of trying out whether a powered bike will suit you at all.







BATTERY ISSUES

There are various ways of attaching the rechargeable battery to the bike – underneath the luggage rack, on the frame, or partly or fully integrated into the frame. All the different variants have advantages and disadvantages. If the battery is outside the frame, you can remove it easily and take it indoors for charging, and also it's better protected from extreme temperatures.

Batteries that are integrated into the frame are not visible from the outside and are therefore less exposed to external influences such as moisture or gravel. However, since it's not possible to remove all integrated batteries from the bicycle without professional help, it then needs to be possible to charge the battery directly outside at a bicycle parking area.



- 1 Take your time to familiarize yourself with the new bike.
- 2 Remember, with a weight of 20–25 kilograms (40–55 pounds), the bike weighs much more than a normal bicycle and is a little more difficult to control.
- 3 Quiet areas without car traffic are best for test routes.
- 4 If possible, take advantage of the special training courses offered by cycling clubs and some dealers.
- 5 Don't forget to wear a helmet. It can protect you from serious head injuries in case of an accident.

Wishing you loads of fun and a good trip!

A NETWORK OF COMPETENCE

Exploring the world with B. Braun



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