Winter 2018

NephroCare

for me

Vascular access –
a lifeline for patients on dialysis

Switzerland:
a multi-faceted gem

Conquering a taboo:
let's talk about constipation

"Kindness is like snow – it beautifies everything it covers."

Khalil Gibran

Welcome!

Dear Reader,

What does wintertime mean to you? Do you dread the cold, or do you look forward to the cosy moments that come along with it? We view winter as a necessary break for nature which will transport us towards spring and new beginnings. There is a lot to discover about "**The beautiful sides of winter**" in this edition of NephroCare *for me*!

In Europe, many people associate Switzerland with the winter season. That is not the only reason why we will take you there in our article. See why "**Switzerland: a multi-faceted gem**" is always worth a journey at any time of year.

However, it would not be a proper edition of NephroCare *for me* without talking about other topics related to nephrology. Have you ever wondered why your vascular access may be different from those that fellow patients have? You will know more after reading our article about "**Vascular access: a lifeline for patients on dialysis**". We will also critically examine the issue of "**Pregnancy and chronic kidney disease**". It is a topic that must be taken seriously, but can have a happy ending "**Against all odds**", as our two patient stories show. We have also gathered information on constipation, as it is time to be "**Conquering a taboo**". After having learned so much, try our quiz to "**Test your knowledge**".

A French patient with chronic kidney disease tells his encouraging story about "**Living life to the fullest with dialysis**". And we would like you to meet **Ana Raquel** and her **passion for dialysis care**. She is very dedicated to her job and shares a bit of her life with us, both private and professional.

Finally, our yummy recipes will warm you from the inside during cold weather.

Until next time,
Your **NephroCare** *for me* Editorial Team

Worth knowing in renal

Fresenius Medical Care informs

Different countries – different habits

Here's to your health

Recipes

Worth living

Inspiring

Editorial Team:
Dr. Otto Arkossy, Ana Raquel de Ferreira Ribeiro, Nicole Voigt, Annemarie Huber, Laura Ion

Vascular access – a lifeline for patients on dialysis

During dialysis, your blood is filtered remotely to remove toxins and accumulated water. The blood is then returned purified to the body. For this procedure, special access to your bloodstream is needed – vascular access (VA). It needs to be created before you start haemodialysis. Here is a short introduction on what you need to know about the process of vascular access creation and how to take care of your lifeline.

During the dialysis procedure, blood needs to flow continuously through the dialyser. The veins lying underneath the skin are not well suited for this. Therefore, vascular access is created to make the treatment possible. As the access will be used on a regular basis, it should be reliable and easily accessible. Various factors influence which access type is best suited for each patient.

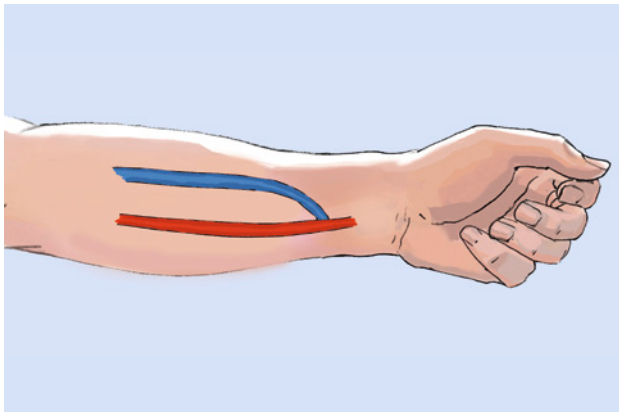
The choice of vascular access depends on the quality and suitability of the patient's blood vessels, the clinical conditions and the time available before haemodialysis is initiated.

For haemodialysis, there are **three types** of vascular access, with **arteriovenous fistulas** being the most common type of access by far. These are followed by **central venous catheters** and finally, **arteriovenous grafts.**

Before creating vascular access

As soon as you know that you will get a vascular access, you should avoid having needle punctures on your upper/lower arm veins. If blood sampling, injections or infusions have to be performed, let the healthcare professionals use the veins in your hand and minor vessels instead.

1. Arteriovenous fistula

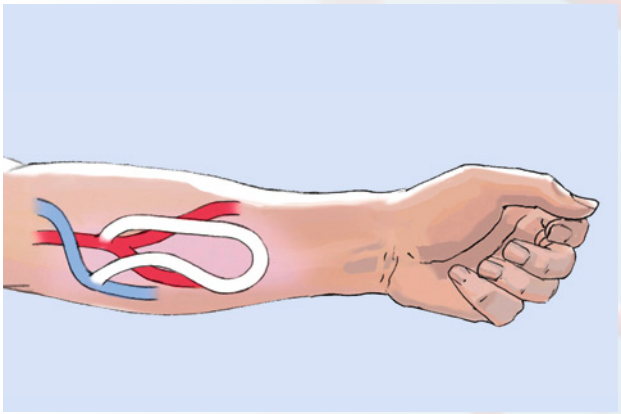


The most common permanent access for a patient undergoing chronic haemodialysis is a native arteriovenous fistula (AVF). It is favoured due to its high functionality and low complication rates. A fistula is created by connecting an artery with a vein, which is why it is called “arteriovenous.”

The procedure is usually done on the non-dominant arm. The fistula has to withstand higher pressure than a normal vein, so it has to increase its wall thickness and diameter before it can be used. During the maturation process the diameter of the blood vessel grows making it easier to insert a needle, and the wall thickness of the fistula increases. This maturation process usually takes two to six weeks after creation.

The fistula can then allow an adequate amount of blood to flow to the extracorporeal blood circuit, which enables effective haemodialysis.

2. Arteriovenous grafts



If the natural connection between two blood vessels cannot be made for the creation of a fistula, an arteriovenous graft can be considered. A graft also connects an artery and a vein, but in this case, by using a tube made of special biocompatible material.

The tube serves as a substitute for the vein and can be cannulated with fistula needles. Depending on the material that is used, the grafts can be used for dialysis treatment two to three weeks after placement. Some early cannulation grafts can even be used one day after placement.

How to care for the fistula or graft:

You will have an active part in keeping the fistula or graft functional for as long as possible.

Immediately after it has been created, you should:

- *Keep the arm warm and dry.*
- *If the surgical wound feels hot, becomes reddened, swells or hurts, contact your dialysis unit immediately.*
- *Ask the nurse to inspect the new vascular access at every haemodialysis session.*

You can easily do the day-to-day care yourself to ensure the long-term functionality of your fistula or graft.

- *Once the wound has healed completely, make sure to clean the access site with soap and water every day and again before each dialysis session.*
- *Feel the thrill every day (i.e. a vibration or buzz that can be felt most prominently when you put your hand on your vascular access).*
- *If you are admitted to hospital, avoid blood pressure measurements, blood sampling and intravenous injections or infusions on the arm with the vascular access. Ensure that clinical staff in hospitals are made aware of the presence of the vascular access (e.g. by wearing a medical bracelet).*

Let the blood move freely and be aware of pressure to your fistula or graft. In particular, you should avoid:

- *Sleeping on the arm with the vascular access, as it can lead to transitory compression and a reduction of the blood flow.*
- *Wearing tight clothing or restricting objects such as watches or bracelets, which may act as a tourniquet on the vascular access or on the vessels above the AVF.*
- *Carrying heavy weights (like carrying shopping bags or lifting children or furniture).*
- *Coughing or sneezing in the direction of the vascular access.*
- *Scratching the vascular access area, especially the access sites.*
- *Participating in violent sports or activities that may cause a trauma to the vascular access.*

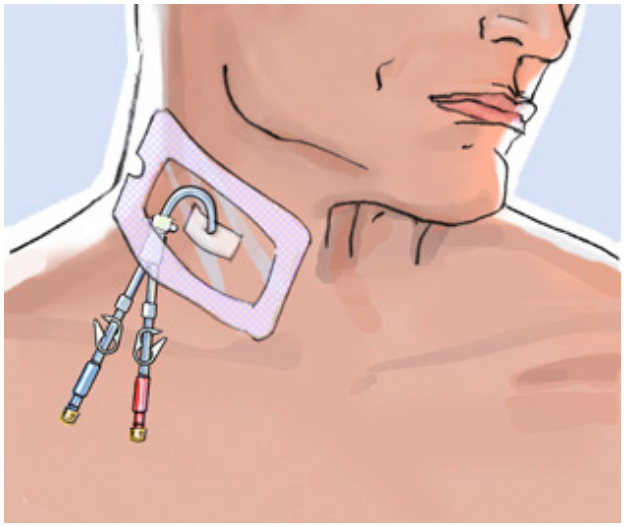
References:

Fluck, R., & Kumwenda, M. (2011) Renal association clinical practice guideline on vascular access for haemodialysis. Nephron – Clinical Practice, 118(SUPPL. 1), 225–240. https://doi.org/10.1159/000328071

Parisotto, M.T. & Pancirova, J. (2014) Vascular Access Cannulation and Care : A Nursing Best Practice Guide for Arteriovenous Fistula. European Dialysis and Transplant Nurses Association/European Renal Care Association. ISBN: 978-84-0567-2

3. Central venous catheter

A central venous catheter (CVC) is a “tube” made with compatible materials that is inserted into a central vein – a jugular vein (neck), a subclavian vein (chest) or a femoral vein (groin), using a simple procedure to insert it. Central venous catheters are used for emergency treatment because they can be used directly after insertion. If the blood vessels are damaged or very fragile so that neither a fistula nor a graft can be created, this may be the best choice for your haemodialysis treatment.



How to care for the central venous catheter:

At home, there are some daily access site care measures you need to follow to preserve the catheter and prevent complications:

- *When taking a bath or shower, prevent the CVC lumens and exit site from getting wet by covering them with a waterproof material, such as plastic wrap sealed with tape.*
- *Refrain from scratching near or around the catheter dressing.*
- *Do not cough or sneeze in the direction of the CVC.*
- *Check that the dressing is intact; if the dressing lifts, do not touch the CVC exit site and contact the dialysis unit for advice.*
- *Never unclamp the clamps on the catheter or remove its caps.*
- *Do not touch the open end of the CVC if the cap has been dislodged; contact the dialysis unit immediately.*
- *If there is redness and tenderness around the catheter, if it is warm to the touch, if there is exudate or odour or if you have fever, rigors, sweating, or chills, contact your dialysis unit immediately.*

The possibilities for creating vascular access may be limited. Your access can serve you for a long time, though, if it is taken care of well. That is why you play a fundamental part in looking after your vascular access.

If you have questions concerning its condition or care, do not hesitate to ask the healthcare professionals at your NephroCare centre. They will be glad to assist you.

Parisotto, M.T. (2016) Vascular Access Cannulation and Care : A Nursing Best Practice Guide for Arteriovenous Graft. European Dialysis and Transplant Nurses Association/European Renal Care Association. ISBN: 978-84-617-4687-3

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Pregnancy and chronic kidney disease

In recent years, we have seen many reports on successful pregnancies of women on dialysis. Although everybody is happy to share these success stories, a balanced overview of both maternal and foetal risks and the requirements for strict monitoring should be given to patients, to avoid arousing false hopes.

Although many physicians care for pregnant women on dialysis, there is broad agreement about the fact that it is rather exceptional and that planned pregnancies on dialysis are not advisable. The medical literature concerning pregnancies in dialysis patients is limited to surveys, case series or anecdotal reports. Apparently, no guidelines have been published in a clinical setting and of course, no clinical trial has addressed pregnancies in dialysis patients.

Two central questions need to be answered when a woman with underlying chronic kidney disease (CKD) becomes pregnant:

1. *What effect does pregnancy have on the underlying kidney disease and disease progression?*

2. *How does the kidney disease affect the pregnancy?*

Effects of pregnancy on the renal function:

Renal disorders are counted amongst the complications of pregnancy, even in healthy women. In up to 10% of women with normal or mildly-reduced renal function, pregnancy is associated with a permanent decline in renal function. Other patients may show a transient, reversible decline in renal function. Patients with hypertension were much more likely to develop disease progression, independent of the pregnancy status.

Regrettably, few data are available regarding pregnancy outcomes in patients with advanced renal disease. The prevailing opinion sees the degree of renal insufficiency as the crucial factor for the ultimate result, however, rather than the underlying renal diagnosis. The outcome may be different and more risk-prone in women with moderate and worse renal insufficiency. The risk of pregnancy complications is high and the probability of carrying the foetus to term is low.

The effects of kidney disease on a pregnancy:

CKD is associated with higher rates of adverse maternal outcomes, such as severe gestational hypertension and prematurity. Also, higher maternal mortality can be identified amongst CKD patients. In addition, adverse effects on the foetus are more frequent in women with CKD. The most common risk, intrauterine growth retardation, a condition in which a foetus doesn't develop at a normal rate, appears at somewhat higher rates amongst women with renal impairment. Preterm births and pregnancy failures occur more frequently.

Pregnancy in the dialysis patient

Conception amongst women of childbearing age on dialysis ranges from 0.3 to 1.5% per year.[1,2] The risk of a miscarriage is higher when a pregnancy occurs. Nevertheless, improvements in the management of women with chronic kidney disease in pregnancy have resulted in increasing the rate of live births in CKD patients.

The improvement in outcome is presumed to be due to the much more active management of uraemia in pregnant women on dialysis.

Although more active treatment regimens have led to better pregnancy outcomes in dialysis patients, planning a pregnancy while on dialysis is still not advisable.

Pregnancy in the renal transplant patient

Transplant recipients have a higher incidence of successful pregnancies, with fewer complications and birth abnormalities. When a patient decides to become pregnant and renal transplantation is likely, it is therefore advisable to wait.

Transplant recipients should abide by these recommendations:

- Discuss any pregnancy plans with the attending physicians, as changes in the drug regimen may be necessary before attempting to conceive.
- Pregnancy is advisable only if there is stable graft functioning.
- Wait at least one (for a live donor) or two years (for a deceased donor) after transplantation to lower the risk of rejection of the transplanted kidney.

In any case, pregnant patients with renal disease should be monitored by a nephrologist and an obstetrician working in close collaboration.

References:

1) August P, Vella J. Pregnancy in women with underlying renal disease, UptoDate 2018.
2) Hou S. Pregnancy in chronic renal insufficiency and end-stage renal disease. Am J Kidney Dis 1999; 33:235.

A passion for dialysis care

Ana Raquel Ferreira Ribeiro came to the German Fresenius Medical Care headquarters in November 2017. Although she misses her family in Portugal, Ana Raquel is excited about optimising treatment conditions for NephroCare patients and nurses. This passion shows when she talks about her work as a nursing manager, so we have asked her to tell you a bit about herself.

Ana Raquel Ferreira Ribeiro

Ana Raquel, what exactly is your job at Fresenius Medical Care?

My team and my responsibilities lie in supporting our nurses and our NephroCare community worldwide, to have a good operating environment and a high quality of care for our patients.

We support and align with the colleagues in the countries, the dialysis procedures and nursing standards, like the recommendable way to connect a patient, how to prevent infections, et cetera. We also collect best practices to share between other countries. That is why we are always interested in the initiatives and activities going on anywhere. We are a sort of junction which links nursing teams around the world and forwards experience, ideas for improvement and learning programmes.

What led you to this field of activity? Did you train for that position?

In Portugal, nursing is a four-year university degree which I completed in 2006. Later on, I studied health management with a focus on clinical management and also got a master's degree as a clinical specialist nurse in nephrology care. For 12 years now, nephrology has been my field of clinical practice and study. At the same time, I have always wanted to be involved in what happens backstage as much as possible – the place where strategies are developed to provide the best quality of care possible.

My work in a NephroCare clinic in Portugal gave me the opportunity to experience the NephroCare nursing standards and some of the best nursing practices in action on a great team. In my current position, I can combine the areas that I'm passionate about: nephrology, management and research.

What is most rewarding about your current job? What do you see as the most significant challenge?

The greatest challenges for me are also the things that make this job so exciting. One is related to our very international setting. We want to ensure that all the patients have the best quality of care possible, while our programmes need to fit the different realities in 27 countries with varying patient profiles, nursing profiles and regulations.

Another important question is how we will shape the future. How will dialysis be carried out in the future? Which needs will tomorrow's patients have? What competencies and skills will our nurses require in order to progress in this increasingly modern and technological environment? We need to think about what dialysis will look like in five to 10 to 15 years.

The most rewarding part of my work is visiting the patients in our clinics and witnessing how our work is put into practice! The nurses are doing a top-notch job that has a real impact on the quality of life of these brave people. It makes me happy to see the patients more empowered and to know that I am a part of the changes and improvements.

You came to Germany roughly a year ago. How are you experiencing the transition?

For me, nursing is about helping people cope with disease or disability, fostering resilience for life. So when I come across a difficulty in my life, I feel inspired by these patients and find the confidence to accept challenges, like moving to Germany to become a nursing manager. I like living in Germany and can say that foreigners are welcomed here. Working with an international team makes the adjustment easier.

Not only my daily life has changed. The way I spend my free time has changed, too, as Portugal has a lot of coastal areas and there, we spend a lot of time on the beach. But the beer here is much better than at home (laughs), and the Germans know how to enjoy it.

Tell us something about your hobbies. What do you like to do in your leisure time?

As Portuguese, my perfect day is spent with the people I love, my family and friends. In my free time, I like to read poetry or go to the theatre, movies or dance performances. In Portugal, I was a member of amateur theatre groups. I have started to learn German and am looking forward to discovering German authors and poets. I also enjoy travelling, although nowadays I mostly go to Portugal to see my family. I love this feeling of going home.

Ana Raquel acting

Ana Raquel and her boyfriend

Thank you for sharing your passion with us, Ana Raquel.

Switzerland: a multi-faceted gem

From the outside, it looks like a country with lots of nature and outdoor sports, with mountains, lakes and beautiful landscapes. From the inside, it is one of the wealthiest countries in the world, with a stable currency and high-tech industries.

Many visitors to Switzerland might consider the countryside to be the nation's biggest attraction. During the summer, trails and vistas invite legions of hikers. The trails, meandering through meadows, along ridges and to the tops of the mountains, can be chosen for any age group and fitness level. In wintertime, skiers are eager to make the most of well-groomed ski slopes and adventures in the snow, enjoying views of the magnificent Alpine panorama and mountain peaks sparkling in the sun, while taking the run to the valley. Or they benefit from the network of cross-country ski trails, combining the luxury of leisurely trails through the glittering snow with healthy exercise, fresh air and an abundance of feel-good hormones.

There is also the more industrious side to Switzerland, though, and it is always right next door to nature's allures. A lot of famous, picturesque towns are embedded in the rural scenery, from Basel, near the German border, to Geneva, near the French border; from Zurich, the financial capital, to Berne, the political capital of Switzerland.

Let's visit the capital

Switzerland does not have a capital city – at least not juristically. When the federal constitution came into force in 1848, people could not decide whether the Swiss Confederation needed a capital at all, and if so, which city to choose – Berne, Lucerne or Zurich. Hence, the founders agreed on a compromise. Berne was going to be the "federal seat" for all important state authorities. The Federal Council comprises seven individuals who constitute the federal government and serve as the collective head of state for Switzerland. They meet in the Federal Palace (the "Bundeshaus"), built in 1852 shortly after the inception of the federal constitution. The building features interesting architecture and today, is under a preservation order. The "Zytglogge," a beautiful clock tower from the middle ages with an astronomical clock and an hourly glockenspiel from 1530 with mechanical figures moving in the tower, is also worth a visit.

The "Zytglogge" clock tower

Zurich is known as one of the global centres of banking and finance and is an economic capital. Walking through the picture-perfect old part of the city or along Lake Zurich with a breath-taking view of the Alpine panorama adds another facet to the economic side. The old town is full of beautiful old buildings and four churches, including the Romanesque Grossmünster cathedral, or the even older Fraumünster, with its elegantly slim tower and colourful windows by Marc Chagall. For a well-deserved rest after their strolls, tourists and locals alike would recommend a coffee or any other hot beverage in the Confiserie Sprüngli, famous for its pralines and most excellent pastries.

Zurich

That leaves **Lucerne**. To call it the left-out capital would do the city wrong, as it has a lot to offer! Lucerne is famous for its covered wooden Chapel Bridge ("Kapellbrücke") with its massive water tower. The bridge, a popular tourist attraction and town landmark, spans the river Reuss and used to be artfully decorated with paintings from Lucerne's history. A walk across Europe's oldest covered wooden bridge, with the town centre and its well-preserved medieval architecture as a backdrop, is always worth its while.

Lucerne

On the border

Our next stop, **Basel**, is situated on the river Rhine, not far from both the German and French borders. With the added benefits of the EuroAirport and Basel railway station as the self-proclaimed "world's first international railway station," the city is an important junction. Two landmarks stand out. The red town hall built from sandstone in the 16th century is indeed impressive. In addition, the Basel Minster shapes the town scenery with its two

Basel

towers, the George's and Martin's towers (Georgsturm and Martinsturm). Animal lovers and art enthusiasts will also easily find something to do, as Basel features a zoo with the most abundant livestock in Switzerland, and enough renowned art galleries and museums to keep them occupied for days.

Travelling further south along the French border, we reach **Geneva**, located near the spectacular Mont Blanc on the southern tip of Lake Geneva. The vast water surface is the perfect setting for the spectacular Jet d'Eau. The famous water fountain is 140 metres high and can even be spotted easily from a plane.

Geneva

A melting pot of rural and high-tech specialties

Switzerland is one of the most highly-developed countries, with the highest nominal wealth per adult in the world. Their watches and army knives are symbols of quality and status. The values most treasured among Swiss people are punctuality, cleanliness and diligence. The Swiss have even managed to make products from their cows into national symbols. Swiss cheese is appreciated and sold worldwide. While you're there, don't forget to try some delicious Swiss milk chocolate, too!

There is no overestimating the many facets of Switzerland, with its stunning scenery, technical accomplishments and down-to-earth specialties supplemented by many technical accomplishments.

If you're planning a holiday in Switzerland, we would be glad to welcome you in our dialysis centre in Münchenstein (near Basel), Lucerne and Zurich.

Your contact in Switzerland:
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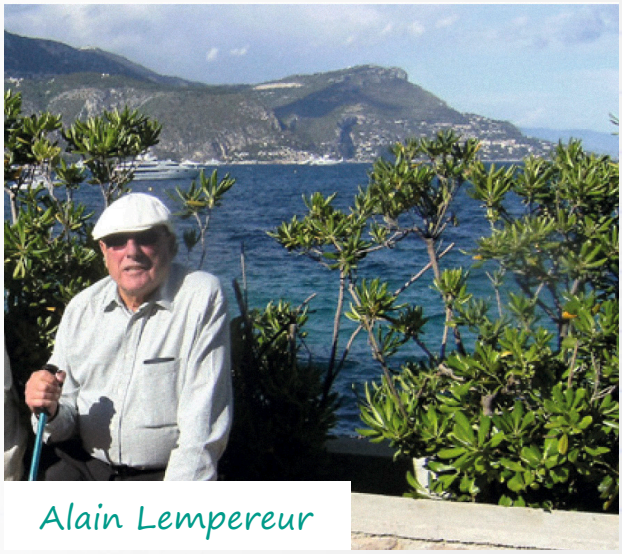
Our website is coming soon:
www.NephroCare.ch

DID YOU KNOW?

- Switzerland has more than 1,500 lakes. That is why you are never more than 16 kilometres away from a lake no matter where you are in Switzerland.
- Europe's largest station clock is in Aarau, west of Zurich. The face has a diameter of 9 metres, even bigger than Big Ben's in London.
- In the watery depths of Lake Geneva, more than 40 shipwrecks and, surprisingly, six railway carriages lie buried. Some of the waggons went under when a bridge collapsed, and some sank after derailing.

Living life to the fullest with dialysis

Alain Lempereur has been a dialysis patient for almost ten years at the NephroCare Maubeuge clinic in France. In this article, he tells us about his travels and numerous activities.



Alain Lempereur

I was born on 31 December 1939 and am now retired. As a manager in the steel industry, my job involved setting up training for and the certification of operators, technicians and engineers for non-destructive checks. It was a trouble-free life, both professionally and personally, until…

I was looking forward to my retirement at the age of 68 when I found myself face-to-face with my first health problems. I had to realise that no, they don't just happen to others…

I went to my appointment with the nephrologist who is still treating me today. As I considered the life-altering diagnosis, I wondered what to do next… I was abruptly confronted with the reality of being human and with the problems inherent to this situation. There were many issues: physical activities, travel, leisure, family.

I underwent peritoneal dialysis from 2009 to 2011. This dialysis did not stop me from travelling around France to various cities and regions: several times, I went to the Auvergne, to Corsica, Toulouse, Saint Cyprien, Haute-Savoie. I travelled during three summers. To do that, you have to order the bags of dialysis fluid in advance, and they are shipped to a requested address within a specified time. Before leaving, you have to check that the bags have arrived at the place where you're spending your holiday.

The joy of travelling – by planning ahead

Since 2011, I have been on haemodialysis at my home centre and on auto-dialysis at other centres when travelling with my family, with tour groups and on holidays, including extended stays in Samoëns and Beaulieu sur Mer... Every year, I spend five months travelling. To be able to do that, I have to book the dialysis centres well in advance, especially during the Christmas and New Year's season and also during school holi-

days. My nephrologist issues permission and submits a very complete medical file. I have used various means of transport: car, plane, coach, ferry, canal boat. I am always careful because accidents, such as surprise strikes, unexpected breakdowns of an aircraft, cable car, lift, etc. can happen. I have travelled as a tourist, staying mainly in hotels, and I have never encountered any serious problems.

With regard to meals, anything is possible, provided you respect your diet and ask for changes to the menu, if necessary and also give your reasons why. You need to take control of your physical activity and not try to overdo it. I like walking outdoors; I swim with my fistula protected by roll dressing, a transparent adhesive film.

When I'm not travelling, I spend my time doing social activities and things to stimulate my mind. In 2016, after 16 years in public investigations as a commissioner and federal investigator for the administrative court of Lille, I decided to stop. I am also involved in a service club where I look after ethical matters as the president of the social action committee. As a member of the board, I am committed to "L'Enfant Bleu," a charity combatting child abuse. Last but not least, I am actively engaged as a member of the users' committee for my clinic, NephroCare Maubeuge.

When asked to write about "dialysis not being a prison," I agreed to be involved in this project because of my experience as a patient. I want to provide significant help and moral support and show patients suffering from this chronic illness that we can enjoy a high quality of life, despite dialysis. I am deeply grateful for the team at the dialysis centre. Doctors, healthcare professionals, nurses, auxiliary staff and secretaries all give me confidence and comfort, working to ensure that quality meets standards. I want to express my particular thanks to my wife, who also helps to ensure my well-being as part of our little family.

I have related my personal experience, which I see as nothing special. Let's make sure to keep our bodies and minds as active as possible. Just get moving. It's worth it!

Alain Lempereur, haemodialysis patient at NephroCare Maubeuge, France

Thank you, Alain, for sharing your story with us. Enjoy your travels!

Against all odds: two happy endings to pregnancies with CKD

Two different women with Chronic Kidney Disease (CKD) in two different parts of the world share one happy story: They both gave birth after successful pregnancies which were carefully monitored by their respective Fresenius Medical Care teams. Both stories are miracles in themselves, and unique in that one was the second pregnancy for a patient diagnosed with CKD, while the other was a twin pregnancy.

It's a girl in Spain!

Khadija became pregnant with her first child at the age of 22, shortly after being diagnosed with CKD. Despite all warnings, she continued the pregnancy and had to begin dialysis three months after giving birth to her son. She remembers the support from Dr. Mora at the Fresenius Medical Care dialysis centre in Granollers near Barcelona when she became pregnant again five years later: "I thought Dr. Mora was going to be angry with me for putting my life and the life of my unborn child at risk again, but when I told him, he calmed me down, supported me and gave me the strength to continue."

Dr. Mora explains: "For patients like Khadija there are many concerns, for instance, the possibility of the pregnancy triggering health complications or special measures that they need to follow. Khadija's weekly dialysis sessions were increased from three to six, paying special attention to liquid control and her blood pressure." He also explains how doctor-patient communication and therapy are two key aspects to avoiding complications: "From the very first moment Khadija understood that she had to follow a set of medical instructions, slightly different from her usual ones, such as daily dialysis. She was eager to collaborate and knew that it was for the sake of both herself and her unborn child. She collaborated until the end, which resulted in a successful pregnancy and birth."

Although CKD is considered a risk for pregnancy and may have negative consequences for the mother and baby, Khadija never stopped fighting for her dream. She currently goes to the Granollers dialysis centre three

Khadija and her children

times a week, where she spends four hours each time receiving treatment. Like any other mother, on the days when she doesn't go to the dialysis centre, Khadija leads a normal life. "I get up early in the morning, do the household chores, take my son to school and take him to play in the park in the afternoon."

After an unsuccessful transplant, Khadija is currently on a cross kidney transplant programme with her husband, awaiting a new gift of life, but always supported by the strength and determination that her children give her every day.

It's twins in South Africa!

In Durban, Lungisile Mbali Manqele welcomed two bouncing bundles of joy named Nknyezi and Kwezi. This brother and sister duo have defied all odds and are one of the very first sets of twins to be born to a mother who is currently on dialysis treatment.

Staff at the Durban Kidney & Dialysis Centre explain that this is indeed a miracle, as, from a science perspective, the elevated levels of urea creatinine accompanied by a minimal to nil urine output would normally make a successful pregnancy, let alone twins, nearly impossible. Women who are on dialysis treatment are made aware early on that renal failure severely decreases the chances of a successful pregnancy. In fact Lungisile, Fresenius Medical Care dialysis patient of three years, only discovered that she was expecting when she was already 17 weeks into her pregnancy. She had attributed what were in fact pregnancy symptoms to the common cold, changes in her dry weight and even food poisoning. It was only through a blood test that her pregnancy was confirmed. When Lungisile had her first ultrasound, she was even more surprised to discover that she was carrying not one but two babies.

Lungisile had her babies delivered at Netcare St. Augustine hospital via a C-section seven months into her pregnancy. During her second trimester, her dialysis prescription was changed to daily dialysis and two weeks before her set delivery date she was admitted to hospital where the daily dialysis continued with the aid of Fresenius Medical Care acute staff. She was also given steroid treatment to allow the babies' lungs to develop fully.

The now mother of four reports that her babies are doing well and have added a new – if initially unexpected – ray of light to her family.

Lungisile and her twins

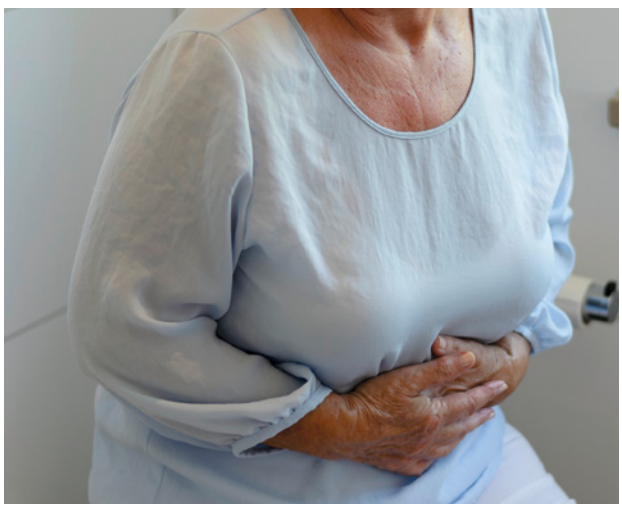
Thank you Khadija and Lungisile for sharing your stories. We wish both you and your families all the best for the future!

Conquering a taboo: let's talk about constipation

Many people suffer from it, yet no one really wants to talk about it: dialysis patients often have problems with constipation due to dietary and fluid restrictions or medication. This should no longer be a matter of "what happens in the bathroom stays in the bathroom". Find out what you can do to relieve digestion problems and how to add more fibre to your diet while adhering to medical recommendations.

Generally speaking, constipation is a change in bowel habits, but it comes in a variety of forms. Typically patients would describe constipation as having infrequent stools; more specifically, less than three times per week. Moreover, stools may be too hard, too small or too difficult to pass. Patients may also feel that their bowels are not empty or they frequently need to strain.

Constipation is a wide-spread problem to which many factors can contribute. In most patients' cases, no single cause can be identified. However, having chronic kidney disease or being on dialysis makes it more likely that a patient will suffer from constipation. Due to the loss of kidney function and various other factors such as a lack of exercise, impaired fluid balance and a reduced dietary fibre intake,[1] the gastrointestinal tract is often adversely affected. Amongst the consequences, constipation is the most frequent symptom. Medications prescribed which relates to kidney diseases, such as iron medication (mainly pills), phosphorus-binding medicines, or potassium binding resins, can sometimes cause digestive problems, too.[1]



The diagnosis is the first step towards getting better

Constipation usually can be diagnosed based on your symptoms and a physical examination. You will likely need a rectal examination, and in some situations, your doctor will order further testing like blood tests, x-rays, an intestinal endoscopy or more specialised testing. The endoscopy will examine only the large intestine (sigmoidoscopy) or both the large and parts of the small intestine (colonoscopy). Don't forget to mention any underlying diseases and medications you take when your doctor asks for history. This might include questions concerning, for example, a family history of colon cancer, blood in the stool, unexplained weight loss or recent changes in bowel habit.

Most people treat constipation themselves. Don't take constipation lightly, though. You should definitely speak to your doctor if constipation is a recent change from your usual pattern, lasts longer than two weeks, is severe or you have other symptoms, such as blood in your stool or on the toilet paper, unexplained weight loss or fevers. The appropriate treatment depends on the type of intestinal obstruction.

What you can do about it

There are a couple of behavioural changes you might consider. Bowels are most active following meals. Start a routine to try to pass the stool at these times. Should you ignore signals to have a bowel movement, these signals will become weaker over time, whereas encouraging the digestive system on a regular basis will have a conditioning effect. Furthermore, you could increase your activity and go for a walk regularly, for example. This will promote bowel movements and relieve constipation.

You should also optimise your liquid intake within the permitted restrictions. While healthy people can drink as much fluid as

they want, on dialysis, you can only drink a certain amount of water and other liquids as prescribed. Your gastrointestinal system needs the permitted quantity of fluids to do its job correctly.

If the changes mentioned above do not relieve your constipation, talk to your physician about which type of laxative would be the best choice for you. Laxatives are substances that help relieve constipation in a variety of ways. Milk sugar (lactose) can aid digestion as well. Again, remember to always talk to your physician or dietician first.

How to benefit from dietary fibre

Increasing fibre in your diet may reduce or eliminate constipation. Dietary fibre is found in plant-based carbohydrates such as fruits, vegetables and grains.[2] As it is the part of plant food which is not digested in the small intestine, it reaches the large intestine or colon. Fibre-rich foods typically contain two types of fibre, soluble and insoluble. Soluble fibre dissolves in water and creates softer, larger stools. Insoluble fibre does not dissolve in water. It actually takes in water and gives bulk to a bowel movement, making the stool easier to pass.[3] Both types generally help waste get through the digestive tract more quickly.

The recommended daily fibre intake for the general population is > 30 g.[4] You should gradually increase the fibre in your diet. This gives your bowel time to adjust to each level of increase before you move up to a greater amount. Lots of fibres are contained in the skin of fruits, so it is better to not peel them and to eat the whole fruit.

However, it is hard to get enough fibre in your renal diet for several reasons. Many high-fibre foods are also high in both potassium and phosphorus[1,2] and you may have to avoid or limit them if you need to follow potassium or phosphorus restrictions in your diet. Also, when you eat more high-fibre foods, you need to increase your fluid intake. It is essential, though, to ensure that you stay within your fluid allowance.

The higher level (35 g a day) of fibre may be impossible to reach for a person with kidney disease.[2,5] It is a good idea to carefully monitor what you eat and drink for a few days. A food diary will help you to have a constructive discussion with your physician or dietician to determine whether your choice of foods is suitable for your current condition.

Some fruits and vegetables that are high in fibre are also high in potassium.[1] You may have to avoid them or limit them if you need to follow potassium restrictions in your diet.

Here is a list of selected foods which are rich in fibre and lower in potassium:

Fruits:
raspberries, blackberries, pears, apples, strawberries, blueberries, oranges, cranberries, cherries, peaches, rhubarb.

Vegetables:
broccoli, cauliflower, zucchini, carrots, corn, cabbage, sweet potatoes, aubergines, endive, squash.

Pulses:
peas (frozen or from the jar), green and yellow beans.

Grains and grain products

Whole-grain is higher in fibre content than refined grains, but also contains more phosphate. It is still preferable, as the human body can only partly digest this form of phosphate.[4] It can absorb only 40–60% of the "unwanted" phosphates in these foods.

You do not have to eliminate certain foods just because you have chronic kidney disease. Always make sure to consume them in proper amounts. It is advisable to eat all your planned fruits and vegetables for the day and drink the amount of liquids permitted. This will support your digestion in the best possible way while adhering to your diet plan.

References

1) *Can Outcomes be Improved in Dialysis Patients by Optimizing Trace Mineral, Micronutrient, and Antioxidant Status?: The Impact of Probiotics and a High-Fiber Diet. Bossola M. Semin Dial. 2016 Jan-Feb;29(1):50-1. doi: 10.1111/sdi.12442. Epub 2015 Sep 19.*
2) *Dietary protein and fiber in end stage renal disease. Sirich TL. Semin Dial. 2015 Jan-Feb;28(1):75-80. doi: 10.1111/sdi.12315. Epub 2014 Oct 16.*
3) *Sirich TL, Plummer NS, Gardner CD, Hostetter TH, Meyer TW: Effect of increasing dietary ber on plasma levels of colon-derived solutes in hemodialysis patients. Clin J Am Soc Nephrol 9(9):1603–1610, 2014.*
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Test your knowledge

There is a lot to learn – and to keep in mind – about haemodialysis. We have covered a couple of topics in this issue. Do you know how to best handle constipation? Or how to make sure your vascular access is in good condition? Test your knowledge and try our short quiz.

1 Constipation is a prevalent problem amongst dialysis patients. Which of the following options may help to prevent constipation?

- A A decreased fibre intake
- B Ignoring signals to have a bowel movement
- C Increased physical activity

2 You should consult your doctor if you experience which one of the following (bowel) problems:

- A You pass a stool fewer than three times a week
- B Blood in your stool
- C Unexplained weight loss
- D All of the above

3 A fibre-rich diet is good for your health because:

- A It helps to maintain healthy bowel movements and controls digestive activities
- B It helps to regulate your food intake while assisting in weight control
- C It improves lipid (fat) metabolism by helping to control cholesterol levels
- D All of the above

4 Dietary fibre is often found in:

- A Plant-based carbohydrates such as fruits, vegetables and grains
- B Lean meat such as chicken, turkey and pork
- C Any sort of fish

5 There are three types of vascular access. The most common among them is:

A Arteriovenous graft
B Central venous catheter
C Arteriovenous fistula

6 Which practice should be avoided, to ensure the long-term functionality of your fistula or graft?

A Measuring blood pressure on my arm with vascular access
B Exercising by lifting heavy objects
C Scratching the fistula site
D All of the above

7 How is an arteriovenous graft created?

A It is created by naturally connecting an artery with a vein
B A tube gets inserted into a central vein
C It is created by connecting an artery and vein, using a tube made of special bio-compatible material

8 What can you do to increase your appetite?

A I can eat some crisps or crackers before a meal; it makes me hungry
B I can go for a walk and get some fresh air
C I can add some cinnamon, mint, or ginger to a dish; they naturally stimulate appetite
D I can add salt and pepper to the dishes

9 Does dialysis change your body's energy needs?

A Yes, my body requires a bit more energy
B No, my energy needs have not changed
C The dialysis fluid gives me additional energy, so I need to eat less

10 What can you do to limit your potassium intake?

A Avoid all foods that contain potassium
B Prepare your food the right way to lower its potassium level
C Eat fresh fruits instead of compote

Solutions: see next pages.
For more valuable information please visit our website
www.NephroCare.com

Test your knowledge: solutions

Did you get the correct answers? It's good to know how to take care of yourself and how to act in certain situations. On these pages, you won't just find the solutions to our questions from pages 8 and 9, but also some valuable advice. So read on!

1 C:

Increasing physical activity is one way that you can reduce the risk of developing constipation. Intestinal contractions are stimulated through regular physical activity, thus preventing constipation. Try to fit in exercise most days of the week. If you do not already exercise, consult your physician before beginning any exercise plan. Ask him or her which kind of physical activities you should do or if there's any kind of exercise you should avoid, depending on your health status and type of vascular access.

2 D:

Don't take constipation lightly. If you experience any of the symptoms mentioned above, you definitively should discuss your concerns with your doctor and work with him or her to solve your constipation disorders.

3 D:

All three statements are correct. Fibre is a type of carbohydrate which plays a vital role in maintaining your body's health. It helps with digestion, the absorption of essential vitamins and minerals in the body and decreasing your cholesterol level. Most importantly, fibre reduces the risk of constipation for Chronic kidney disease (CKD) patients by regulating bowel activity and adding more bulk to the stool.

4 A:

Dietary fibre is found in plant-based carbohydrates such as fruits, vegetables and grains. Fibre helps to keep the digestive system healthy and helps to prevent constipation. Lots of fibre is contained in the skin of fruits, so it is better to not peel them and eat the whole piece of fruit. If you need to increase your fibre intake, it is a good idea to do so gradually. Remember to always talk to your physician or dietician first.

solutions

5 C:

The most common permanent access is the native arteriovenous fistula. This kind of access is highly functional, with a low risk of complications in comparison to other types of vascular access. It is usually created on the non-dominant arm, in order to reduce the risk of site damage from exerting too much pressure. As a result, the dominant hand can be used for activities.

6 D:

To safeguard your access site, make sure that you do not take blood pressure on your arm with the fistula or graft. You should avoid taking your blood pressure and lifting heavy objects with that arm because it can compress the blood vessels, damage the access point and can lead to thrombosis. Additionally, you should refrain from scratching the access site because it can cause infection.

7 C:

An arteriovenous graft is created when an artery and vein cannot be connected naturally. Therefore, a bio-compatible tube is placed to establish a connection between an artery and a vein. In addition, it can be positioned in various locations, but the most common site is in the forearm, using a brachial artery and vein.

8 B and C:

Light exercise and fresh air naturally stimulate your appetite. Adding some seasonings like cinnamon can also be a good idea. Do not add any extra salt or pepper to your dishes; they make you thirsty. The same is true for normal crisps or crackers.

9 A:

Dialysis requires a certain amount of energy and this amount is added to the regular amount of energy your body needs. Your physician will be able to tell you just how much more energy you need.

10 B:

You cannot avoid potassium, as it is present in almost all food. You can actively reduce the potassium level of food, however, by preparing it correctly. Generally, this is done by slicing, soaking and then cooking vegetables, including potatoes. As far as fruit is concerned, compote has a lower potassium content than fresh fruit.

Spaghetti with meatballs and tomato sauce

Add colour to the winter with the tomatoes and basil in our juicy pasta recipe. You can replace the regular spaghetti with whole-grain. Check with your dietician before you do that, though, as they are higher in potassium and phosphorus.

Serves 2

Ingredients

1 onion
1 clove of garlic
100 g courgette
1 tbsp. olive oil
1 pinch of salt, pepper
200 g mixed minced meat
1 egg
2 tbsp. breadcrumbs
1 tbsp. oil
1 can of 'pizza tomatoes' (chopped tomatoes in their own juice, 425 g)
180 g spaghetti
1/2 bundle of basil
1 pinch of sugar
50 g Italian hard cheese, grated (e.g. parmesan)

Nutritional values per serving:	
Calories	892 kcal
Fat	42 g
Sodium	559 mg
Carbohydrates	78 g
Protein	50 g
Phosphorus	653 mg
Potassium	106 mg
Liquid	480 g

Finely dice onion and garlic, clean and grate the courgette. Heat the olive oil in a pan, steam half of the onion and courgette for 3 minutes. Season with salt and pepper, leave to cool.

Mix the mince with the courgette mixture, the egg and the breadcrumbs. Season the mixture as required and form into small balls (approx. 2 cm) with dampened hands. Heat oil in a pan and fry the meatballs for around 5 minutes before removing from the pan.

Steam the remaining onion and garlic in the frying fat until translucent, add the pizza tomatoes and simmer for 5 minutes. Then mix in the meatballs, cover the pan and allow to steep over a mild heat for 5 minutes.

Prepare the spaghetti in accordance with the instructions on the packaging.

Finely chop the basil and add to the sauce. Season the sauce with salt, pepper and some sugar to taste. Drain the pasta and mix into the tomato meatball sauce. Optionally serve sprinkled with the grated cheese.

TIP: For those who are paying attention to their intake of phosphates, the cheese can be either left out or replaced with another cheese with a lower phosphate content, e.g. mozzarella.

Sweet butternut squash muffins with apple

Imagine coming in from the cold and having
a homemade muffin and a hot cup of tea waiting for you.
So delicious – and a great way to get warm again.

12 muffins

Ingredients

150 g flesh from a butternut squash
1 sour apple
1 tbsp. lemon juice
150 g flour
75 g ground walnuts
1 tsp. baking powder
1 pinch ground cinnamon
1 egg
125 g sugar
80 ml vegetable oil
1 tbsp. vanilla sugar
175 ml sour cream
50 g chopped walnuts

Nutritional values per serving:	
Calories	272 kcal
Fat	18 g
Sodium	42 mg
Carbohydrates	23 g
Protein	4 g
Phosphorus	89 mg
Potassium	142 mg
Liquid	34 g

Preheat the oven to 180 °C (fan), line a muffin tray with paper cases.
Finely grate the butternut squash flesh.
Peel and quarter the apple, remove the core, grate finely and, together with the lemon juice, mix into the butternut squash.

In a bowl, mix the flour, ground nuts, baking powder, cinnamon, and the butternut squash and apple mixture together. Slightly whisk the egg in a separate bowl. Add the sugar, oil, vanilla sugar and sour cream, and mix well. Add to the flour mixture and quickly mix in. Distribute the mixture equally among the paper cases and sprinkle the chopped walnuts on top. Bake in the pre-heated oven for approx. 25 minutes until golden brown.

Remove from the oven, allow to cool in the tin for a few moments and subsequently allow to cool on a wire rack. To reduce the amount of phosphate, use cream of tartar instead of baking powder. If you wish, you can vary the types of flour used, e.g. by substituting half of the normal for wholemeal flour – and then adding a little more liquid to the mix if needed. The muffins will be somewhat flatter as a result, but taste just as delicious!

TIP: For those who are watching their potassium levels, the ground walnuts can also simply be replaced by the same amount of flour.

The beautiful sides of winter

"Winter is the time for comfort, for good food and warmth, for the touch of a friendly hand and for a talk beside the fire: it is the time for home," British poet Dame Edith Sitwell once said. In contrast, American actor Carl Reiner complained: "A lot of people like snow. I find it to be an unnecessary freezing of water." The way we view winter is up to us. **How do you feel about winter?**

People typically either call themselves a "summer person" or a "winter person". They either enjoy pastimes in the sun, at the beach or near the water or they favour activities in the snow, like downhill or cross-country skiing or a nice snowball fight. But why does it have to be a question of either summer or winter? Let's enjoy the winter because of what it offers: time for intimate moments and quiet pleasures, for celebrating traditions and warming up over a nice cup of tea or a hot cocoa after coming in from the cold. Let's consider how to enjoy the wintertime, with its beautified, snow-covered landscapes, its grey days which are suitable for snuggling, the scent of cinnamon and cookies and with the cold outside and the warmth inside.

Daylight – or the absence of it in the winter – affects our mood. That is why it is so important to expose the body to as much light as possible. Especially in the morning, light helps the body to shake off sleep and the lethargy that many people associate with winter blues.

Coming in from the cold

When did you last stand outside while it was snowing? When did you take the time to appreciate those lovely crystals which fall from the sky? Aristotle once said, "To appreciate the beauty of a snowflake, it is necessary to stand out in the cold". Put on a warm jacket and a second pair of socks and take a walk outside. There is only the sound of the snow crunching underfoot and snowflakes melt on your face while the world around you is quiet. Take a deep breath, feel the cold, feel the peace, feel like your true self. And make sure there's a steaming cup of tea waiting when you get back inside.

Take good care of yourself when the temperature is low. Your skin is used to protecting the body from outside irritants. Some even call it the "third kidney", because it releases toxins every day through sweating. During

the winter it needs extra protection, though, as it quickly loses its moisture. As soon as your skin feels itchy or taut, apply a nourishing cream. Add a drop or two of face oil to your facial cream before you go outside. Your skin will be grateful. Many soaps have a dehydrating effect. Use a gentle cleanser instead. Also, think about humidifying your home! Heating tends to dry out the air, so install a humidifier or let your laundry dry on a rack in the living room.

Frequent footbaths can also prevent infections because they bring warmth to our bodies and stimulate the blood flow in the upper airways. Just fill a large bucket or bowl with warm water at about 36 °C until your calves are halfway covered. Then refill it every three minutes with hot water so that the final temperature reaches 41 °C. The footbath should last about 15 minutes. Afterwards, dry your feet thoroughly and put on thick socks to continue experiencing the positive effects of the warmth.

In addition, during the winter months, your body will need extra vitamins and minerals to weather cold weather and infections. Instead of supplements, a variety of well-prepared meals can supply these nutrients. Talk to your dietician to make sure it meets your unique needs. For example, consider winter squash, which is rich in vitamin A, vitamin C and fibre. Have a look at our recipe for pumpkin muffins with cinnamon, too (page 30). They are full of good ingredients, follow dietary restrictions and are simply scrumptious!

Time for dreaming and telling stories

The Christmas season is the time to give presents to the people we love. Why not give the gift of conversation and listening to each other this year? Laughing and singing together create precious memories, as does eating and relaxing together. Winter is the ideal season for taking out your playing cards or having fun around a board game. Why not read out loud to each other? Enjoy the cosy atmosphere when it's cold outside and gather around an open fire or a hot beverage and tell wonderful tales from the past or from your imagination.

The winter offers us the opportunity to gather strength and find peace inside ourselves. Can you feel this strength? Winter gives us pause so that we can appreciate what we have. Isn't it time to have a different view of winter?

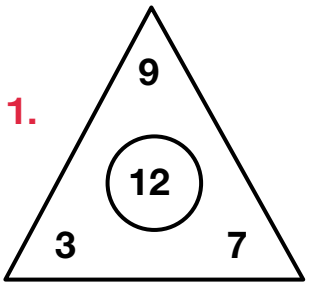
Brain calisthenics

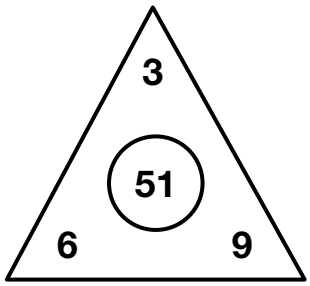
Stretch your mind with these challenging brain teasers.
Whether you do them in a group or with others,
remember the most important part: **having fun!**

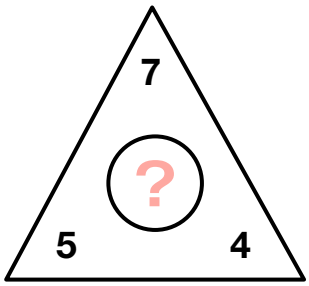
NUMBER QUIZ

Can you figure out what the mystery number is?

1.







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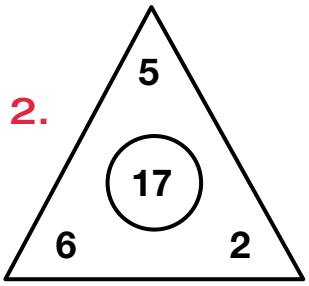
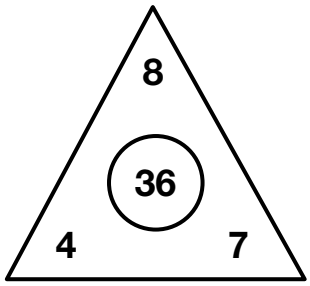
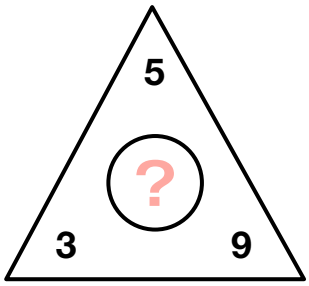






MYSTERY CLOSE-UP

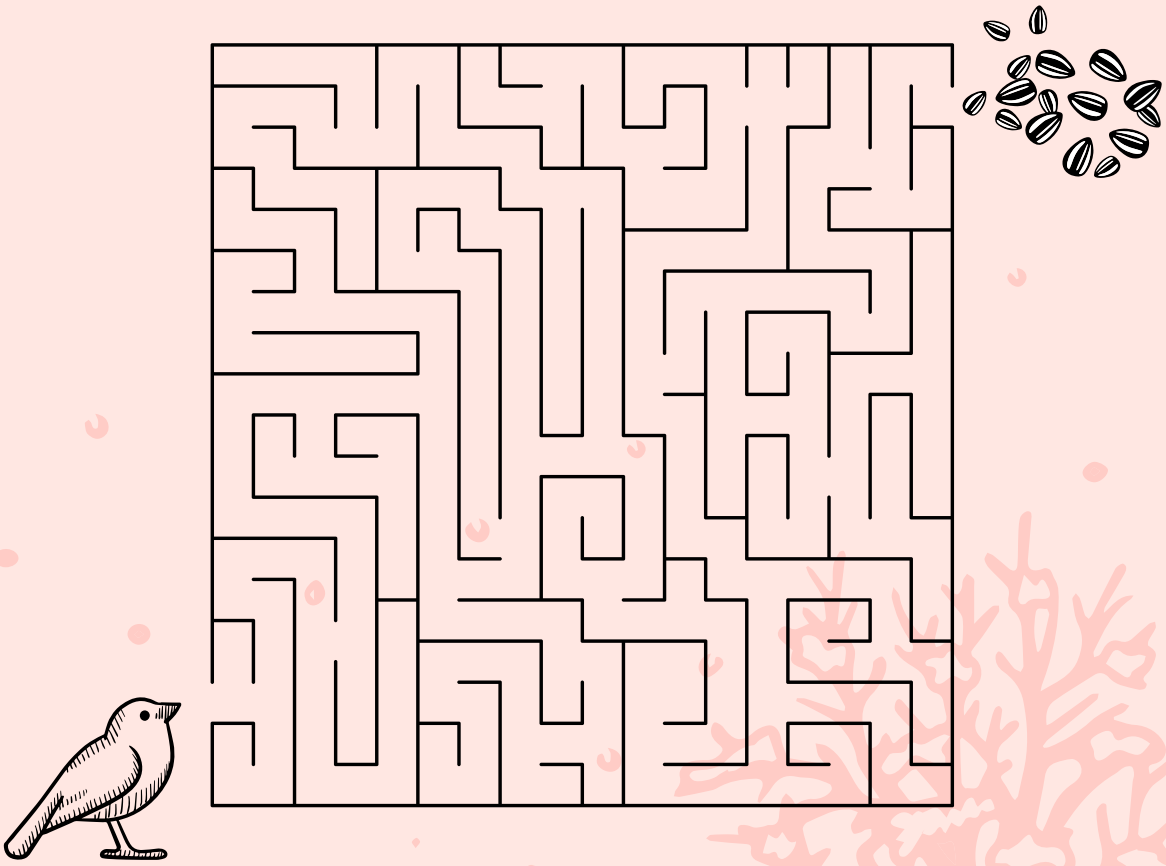
Somebody has been using a microscope.
But what were they looking at? Can you tell?

1.

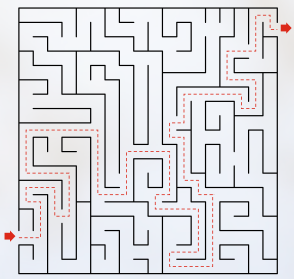
2.

LABYRINTH

Which way would you go
to reach the destination?

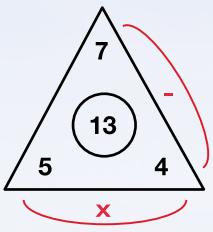


Brain calisthenics solutions

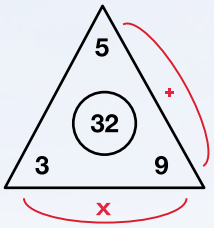


1. Page 23
Peas

2. Page 33
Winter landscape



5 x 4 = 20
20 - 7 = **13**



3 x 9 = 27
27 + 5 = **32**

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