

the magazine of Blood Pressure UK

ISSUE 42 > WINTER 2017-18

POSITIVE

pressure

**GET READY FOR
THE NEW YEAR**

WITH OUR TIPS FOR
HEALTHY LIVING

**WHEN THE
DRUGS
DON'T WORK**

how doctors
are looking for
alternatives to
blood pressure
medications

**YOUR
BLOOD PRESSURE
FRIENDLY
MEAL PLAN WITH
RECIPE IDEAS
FOR THE
WINTER**

**HOW HIGH BLOOD PRESSURE
CAN AFFECT PREGNANCY**

and what can be done to help



**Blood Pressure
UK**

Helping you to lower your
blood pressure

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pressure the magazine of UK charity, Blood Pressure UK. We aim to significantly improve the prevention, diagnosis and treatment of high blood pressure in order to prevent death and disability from stroke and heart disease. We are an independent registered charity and rely on donations and grants to carry out our work. All views expressed within the magazine are those of the authors and do not necessarily reflect those of Blood Pressure UK. The information in this magazine is designed to support and supplement your relationship with your doctor, not to replace it.

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Welcome

From Katharine Jenner, Chief Executive Officer

The last few months and years have seen not only more awareness of the growing problem of high blood pressure, but also a greater interest in what to do about it.

Medications play an important part in treatment, but can also bring side effects and worry. High blood pressure which can't be brought under control with medications is a hot topic, along with people avoiding medications due to their side effects. Now, the experts are turning their focus to encouraging more open conversations between doctor and patient and to finding alternative treatments. One doctor on the front line, Dr Manish Saxena, explains how he's been making progress with these issues on page 15.

Meanwhile, leading experts in high blood pressure put their heads together at the British and Irish Hypertension Society meeting this September, sharing their ideas on all manner of problems faced by people with high blood pressure and what they're doing to find solutions.

While better treatments for the future are in the pipeline, there's still a lot you can do for yourself by taking care of your body and what you eat. We've had a lot of requests to help you do just that, so we've created a blood pressure-friendly meal plan for the winter which you'll find on page 10, and shared our favourite tips for getting active and living well on page 22.

While the researchers are busy behind the scenes making 2018 a year of progress in treatments, we're here to help you make it a year of progress in your own health. And remember, if you ever have a question or need a helping hand, we're only a phone call away.

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Out and about

A few things we've been up to lately

HEALTHY HEARTS FOR HEALTHY COMMUNITIES

This September, the team at Healthy Hearts launched a new free blood pressure checks programme in West London – a brilliant way to take on heart disease and stroke within the community. Our CEO Katharine explained why blood pressure control is key at the launch night, and volunteers were ready to start giving blood pressure checks just in time for Know Your Numbers! Week at an impressive 17 Pressure Stations.



FOOD MATTERS LIVE

With talks from chef Heston Blumenthal



and neuroscientist Baroness Susan Greenfield to look forward to, we were very excited to attend Food Matters Live 2017 in November. This huge event was a showcase for new ideas and technology in the food and drink industry, and the perfect opportunity for us to stand up for healthier food production – we gave a popular talk on how nutritional labelling and packaging plays a growing role in the food choices we make.

OUT AND ABOUT

Inspiring women to lower their blood pressure

Katharine made a trip to Central Hall Westminster in September to speak to over 1000 women at the MFM Women Foundation UK conference – a group who have been supporting Know Your Numbers! Week for years. Blood pressure-related diseases are high in black people, and Caribbean and West African diets can be high in salt, so it was especially important that we had a chance to address this congregation.



Know Your Numbers! Week

With a little help from the Royal Mail, Twitter users, the national press and the hundreds of brilliant volunteers running Pressure Stations around the country, we took on stroke with our annual flagship campaign. See page 8 for the highlights.

SUGAR AWARENESS WEEK

Events around the country explained how foods high in 'free' sugars can lead to weight gain this November for Sugar Awareness Week, led by our friends at Action on Sugar. We showed our support at the House of Commons event with guest speakers including Chris Bavin who presents the BBC's 'Eat Well for Less?' and media doctor Dr Hillary Jones (pictured right).



The team on the ground

We've been tackling high blood pressure out in the field with free blood pressure checks, lifestyle advice and awareness-raising talks. We've been to the Queen Mary University of London Festival of Communities, Lewisham Market Place, Enfield Deaf Club, Ocado's head office, GP practices and the University of East London. Phew.



ONE IN 10 MEN HAVE A HEART '10 YEARS OLDER' THAN THEY ARE

Getting fitter during middle age could halve your risk of stroke

An encouraging new study shows benefits of getting fit in middle age

Researchers in Norway have found that getting fitter or losing fitness during middle age could have a dramatic effect on your risk of stroke. They tested the fitness levels of 1,400 men in their 40s and 50s and tested them again seven years on, then looked at how many had had a stroke 28 years later.

While most men became less fit, around a quarter managed to get fitter before their seven-year check-up. Those who improved their fitness the most were 56% less likely to have a stroke than those whose fitness had declined the most – regardless of how fit they were to start with.

Meanwhile, we are exercising less

Just as these findings were presented this August, Public Health England (PHE)

revealed that in the UK we're 20% less active than we were in the 1960s, and we walk 15 miles less each year than in the 1990s.

In fact, a quarter of adults aged 40-60 in England don't manage a 10-minute brisk walk each month and are missing out on the important health benefits. A 10-minute brisk walk each day cuts the risk of early death by 15% and will help to stave off type 2 diabetes, cardiovascular disease, dementia, and some cancers.

PHE are encouraging adults to build a 10-minute brisk walk into their day, and have developed a free mobile phone app called Active 10 to help you.

 *Getting active is one of the best things you can do for your health, and it's never too late to start. A 10-minute brisk walk each day is an achievable target even for the busiest of busy people, and will be a big help towards the national exercise target of 150 minutes per week.*

Public Health England reveal the results of their Heart Age Test

This September, Public Health England announced that one in ten men aged 50 who have taken the Heart Age Test have a heart age 10 years older than they really are. The online test asks a series of simple questions, such as your age and weight, to give an estimate of the health of your heart and advice to help you improve it. The higher your heart age, the higher your risk of heart disease and stroke.

It's not just men who need to look after their hearts. The number of hospital visits by women with heart disease and stroke has reached a record high according to the British Heart Foundation, rising by 100,000 in the last ten years.

 *We want everyone to be as familiar with their heart age and blood pressure numbers as they are with their height and weight, as the first steps to a healthy life. Take the Heart Age Test at nhs.uk/tools/pages/heartage.aspx*



A high salt intake can double the risk of heart failure

An important new study suggests a direct link between salt and heart failure

Heart failure is where the heart can't pump blood around the body as well as it should, leaving you very tired and short of breath and leading to more serious problems. It's long been known that high blood pressure leads to heart failure, and that high salt intake raises blood pressure. Now, researchers in Finland have found a link between salt intake and heart failure even when taking blood pressure, cholesterol and body mass index (a measure that looks at whether your weight is healthy for your height) into account.

The scientists tested the salt intake of more than 4,500 adults and, 12 years later, found that those who ate more than 13.7g a day had double the risk of heart failure compared to those who ate less than 6.8g a day.

Blood Pressure Tip SAYS We have an ageing population, and heart failure is becoming more common. This study sends a powerful message that we need to be more ambitious in cutting salt from our diet.

Type 2 diabetes is reversible

Good news for people with type 2 diabetes

There is a common belief that type 2 diabetes can't be cured, but a report published in the *BMJ (British Medical Journal)* this

September showed that by losing around 15Kg in weight, and maintaining the weight loss, it's sometimes possible to completely reverse the condition. The problem is that very few people manage it.

3.2 billion people in the UK are affected by type 2 diabetes, costing the NHS nearly £1 billion a year. The researchers are calling for better awareness that weight loss through diet and exercise can reverse diabetes, giving a huge sense of satisfaction to the patient as they come off their medications and let go of their worry, symptoms and side effects.

Blood Pressure Tip SAYS Losing weight can feel like an impossible task but can help to control blood pressure and related conditions including diabetes. Have a look at the blood pressure-friendly meal plan on page 10 and our top tips for 2018 on page 22 to get you started.



NEWS ♥

Free of gluten and full of salt



New survey reveals gluten-free snacks are often needlessly high in salt

Consensus Action on Salt & Health (CASH) looked at 106 products including crisps, pretzels and popcorn, and found that some similar gluten-free products had an 80% difference in their salt content. Some types of crackers and crisp breads, for example, contained 3.5g of salt per 100g, while others contained just 0.7g.

If all the gluten-free products had front of pack nutrition labelling, 35%

would have a red label for salt and 65% would have amber. But only a third (33%) of the products had labelling, making it difficult to compare products within the gluten free range.

Blood Pressure Tip SAYS Gluten-free products have an image of being healthy but the high salt content of some of these products could lead to high blood pressure. The variation between products shows they simply don't need to be so salty and highlights the need for better labelling.

The latest in blood pressure research



The British and Irish Hypertension Society (BIHS) annual meeting in Glasgow this September was home to a lively series of seminars and debates, where the movers and shakers of the blood pressure world shared their new ideas and research discoveries

TRENDS IN RESISTANT HYPERTENSION



Dr Sarah-Jo Sinnott is Assistant Professor at the London School of Hygiene & Tropical Medicine. She presented her work on 20 years trends of resistant hypertension – blood

pressure that remains above 140/90mmHg despite being treated with optimal doses of three or more antihypertensive drugs, including a diuretic. To do this research, Dr Sinnott and her team examined the anonymous medical records of more than 1.3 million people in primary care in the UK, and from these, established the numbers of people developing and living with resistant hypertension.

Dr Sinnott explained: “6.5% of all people with hypertension had resistant hypertension in 2015, so we know it’s fairly common. This is worth highlighting as it’s an important risk factor for heart disease and stroke.

“The rise and fall in the numbers is probably not due to any changes in physiology, but perhaps because of changes in the detection and treatment of high blood pressure over time. We believe that interventions to lower the numbers with resistant hypertension would be best focused on adherence to blood pressure medications.”

WE REACHED OUT TO HEALTH PROFESSIONALS

We were delighted to be invited to speak at the event and our CEO **Katharine Jenner** gave a talk about our successes so far and our aspirations for the future. As well as our awareness-raising work to lower the nation’s blood pressure, Katharine explained that we’re also here to help health professionals

give the best care to patients. We have resources to help identify people with high blood pressure and develop treatment plans to suit each individual. Some health professionals discovered our work as a result of the talk and have since become members.

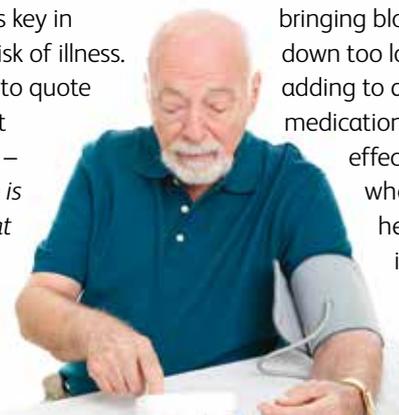


BLOOD PRESSURE IN OLDER ADULTS

Dr Nigel Beckett from Imperial College London discussed how a number of changes in our bodies cause our systolic blood pressure to rise as we age, while diastolic blood pressure tends to rise up until the age of around 50 then levels off. It’s the systolic blood pressure that’s key in reducing the risk of illness.

He went on to quote epidemiologist Geoffrey Rose – “Hypertension is defined as that level at which treatment

does more good than harm” – to highlight some of the challenges in deciding who treat and to what level. Doctors will want to lower the risk of heart disease and stroke wherever possible, while avoiding the risks of bringing blood pressure down too low or simply adding to a long list of medications and side effects in people who have various health related issues.





PHARMACOGENETICS OF BLOOD PRESSURE RESPONSE

Dr Helen Warren,

Lecturer in Statistical Genetics at Queen Mary University of London, gave an update on the exciting field of pharmacogenetics.

This is the study of how our genes affect the way we respond to blood pressure medications, and aims to explain why different people respond differently to the same medications.

Dr Warren explained: "This



is quite a novel area of research. We have already found a number of genes which affect blood pressure, now we're aiming to find out whether our genes affect the way we respond to blood pressure medications and which genes these are. The ultimate aim is personalised medicine, where we can prescribe the right drug for each person based on their genes."



There was a sense of fun at this year's conference

INTRODUCING: A NEW MENTORING SCHEME FOR YOUNG INVESTIGATORS

Last year the BIHS introduced their Young Investigators Network, making sure young scientists working in blood pressure research are given the representation they need to promote their work. This year's meeting saw the launch of a new mentoring scheme where young members are supported by a senior scientist – helping them with career advice, professional development and networking. Young Investigator Representative, Dr Helen Warren, explained: "This will not only help to attract young scientists into the Society, but support them through their career as they build the future of blood pressure research."

HIGH BLOOD PRESSURE IN ADOLESCENTS



Dr Manish Sinha is a consultant children's kidney specialist from Evelina London Children's Hospital. He explained high blood pressure is common in children and adolescents who are carrying excess weight – up to a third of obese children have blood pressure that's above the normal range – and they

often have a high salt intake. There is also evidence that excess weight and raised blood pressure in adolescence will often carry on into adulthood, raising the risk of problems later on.

Dr Sinha explained: "Often the parents we see in clinic don't realise that their child is overweight, and both children

and their parents are unaware of their high salt intake, as they don't add salt to their food. We're surrounded by salt but we don't see it, it's hidden in the foods we buy and they often don't taste salty. Clear labelling highlighting salt content is really important in helping young people and their families reduce their salt intake."

Know Your Numbers! Week takes on early stroke

With the proportion of strokes in younger adults on the rise, we urged the public to Know Your Numbers! regardless of your age

This September, Pressure Stations popped up in pharmacies, leisure centres, health centres and even HMP prisons for this year's Know Your Numbers! Week, our annual flagship campaign. They offered free blood pressure checks to colleagues and communities all around the country, improving health and boosting morale.

This year's event marked the end of our 2017 campaign to STOP Stroke. Every day, around 70 people under the age of 75 will die of a stroke or heart attack. But most strokes are preventable and many are due to high blood pressure. That's why we urged the public to Know Your Numbers! regardless of your age.

We would like to say a heartfelt thank you to all those who took part, hosting Pressure Stations, talking about the event or raising awareness of high blood pressure. Thank you to The Daily Express, The Mirror, The Sunday Mirror and all the regional radio and television stations who featured the campaign.



“IT WAS AN INTERESTING CAMPAIGN AND WELL WORTH THE EFFORT.”
Frimley Health NHS Trust

“WHAT AN INCREDIBLE KNOW YOUR NUMBERS! WEEK.”
Kinetik Wellbeing

WE'RE EXTREMELY GRATEFUL TO ROYAL MAIL WHO STAMPED A KNOW YOUR NUMBERS! WEEK POSTMARK ON ALL MAIL FOR THE WHOLE WEEK.



I WANT PEOPLE TO TAKE MORE CARE OF THEIR BLOOD PRESSURE

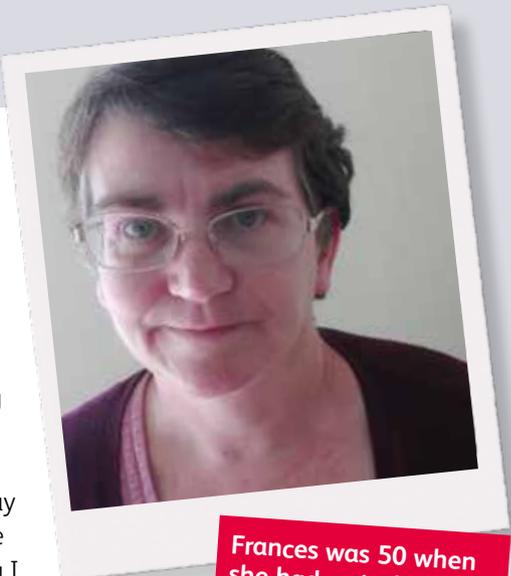
My stroke was purely caused by high blood pressure. I remember that my very last reading at the surgery had a top (systolic) reading of 200. At the time I was pleased that my GP wasn't pushing me to take medication, which I saw as the first step towards long-term health anxiety.

The stroke knocked out my right side basal ganglia, which means I lost my movement on the left-hand side. A year on, I am able to walk, albeit unsteadily with a stick and it is very tiring. I have no useful voluntary movement in my left arm or hand. I am back at work but have had to take a very different role and I have to learn to drive all over again.

The impact on my life has been dramatic. I

hadn't realised how much pleasure I gained from simple practical activities such as gardening, cooking and decorating, even doing the laundry!

Had I known that just by taking a couple of pills a day I could more or less remove the risk of this terrible thing I would have gladly done so. I'm speaking out in the hope it will prevent someone else from going through the same horrible experience, and I have managed to get several people to take more care of their blood pressure.



Frances was 50 when she had a stroke in May 2016

IN A STRANGE WAY, MY STROKE CHANGED MY LIFE FOR THE BETTER

I had my stroke on 15 December 2014 and, with it being so close to Christmas and having two young children, it was a very difficult time for my family. My stroke was caused by high blood pressure. Before this I never really got it checked. I was overweight and didn't exercise, I worked away a lot and generally never looked after myself. I spent a week in hospital and a further six months off work recovering.

The whole incident has completely changed my life. I'm now exercising every day, either in the gym or swimming, and running 10k races. I've lost lots of weight and my blood pressure is controlled.

I appreciate how lucky I've been as I've made a full recovery, but I know it could have been a lot worse. On the day it happened I was at work, only two minutes from the local hospital, so I was treated very quickly and I was put on a drug trial.

In a strange way, having a stroke really changed my life for the better. I'm fitter and healthier than I have been for 20 years! I advocate people having their blood pressure checked and I regularly bring my blood pressure monitor into work.



Jon was just 39 when he had a stroke

“A BIG THANK YOU TO HEMINI AND THE BLOOD PRESSURE UK TEAM FOR THEIR SUPPORT AND PROFESSIONAL INFORMATION TO MAKE KNOW YOUR NUMBERS! WEEK 2017 A SUCCESS.”

Greencore

There was a real buzz on Twitter with #KnowYourNumbers trending on launch day

@Eventos2017 tweeted:
@Blood Pressure – You're Going Down! Know Your Numbers! Week 18-24 Sept 2017

@MandyPR tweeted:
know how much you weigh ✓ know your PIN number ✓ know your blood pressure ✓

@FHFT_wellbeing tweeted:
Well that's our week done, we found 113 people with raised BP and requiring follow up with GP/ Lifestyle advice

Start lowering your risk of stroke today

Visit our website www.bloodpressureuk.org or call our healthcare team on 020 7882 6218 to learn about medications and healthy changes to your lifestyle.

Your blood pressure-friendly **WINTER MEAL PLAN**

From our Nutritionist, Shefalee Loth

This meal plan of family favourites is low in salt and saturated fat but will give you all the energy and nutrients you need, helping you to look after your blood pressure as well as your waistline and your overall health.

You can stick to the plan if that's helpful, or use it as a guide for ideas. You could double up ingredients for the recipes and keep half in the fridge or freezer for another day – so you always have something quick to hand.

Remember to eat at least five portions of fruit and veg each day, so a portion (around 80g) or two at each meal and as snacks, and two to three portions of dairy – choose lower fat and sugar options like semi-skimmed milk, unsweetened yoghurts and low-fat cheeses. And remember to check labels of anything ready-made for their salt content, bread and dips for example can vary greatly.



Your Weekly Plan

	Breakfast	Lunch	Dinner
SUNDAY	Pancakes with Greek yoghurt and berry compote – simply simmer some frozen berries over a low heat	Roast chicken served with cabbage, peas and roasted veg such as potatoes, carrots, parsnip and sweet potatoes	Mackerel pâté with oatcakes, green salad and carrot crudités <i>Recipe on page 12</i>
MONDAY	Porridge made with semi-skimmed milk and topped with chopped banana, nuts and a sprinkle of cinnamon	Chunky chicken and sweetcorn chowder – use leftover roast chicken for this recipe <i>Recipe on page 12</i>	Bubble and squeak made with leftover vegetables from Sunday, served with a lean pork chop (fat removed)
TUESDAY	Low-sugar baked beans and grilled mushrooms on granary toast	Baked eggs with spinach <i>Recipe on page 12</i>	Veggie chilli with rice <i>Recipe on page 13</i>
WEDNESDAY	Scrambled eggs and spinach on a wholegrain muffin	Veggie chilli leftovers, served with a baked sweet potato	Pasta with salmon and courgettes <i>Recipe on page 13</i>
THURSDAY	Banana yoghurt smoothie – simply blend a banana with yoghurt and a little semi skimmed milk	Butternut squash soup <i>Recipe on page 13</i>	Shepherd's pie <i>Recipe on page 14</i>
FRIDAY	Porridge made with semi-skimmed milk, topped with dried fruit or frozen berries	Shepherd's pie leftovers <i>Recipe on page 14</i>	Healthy fish and chips <i>Recipe on page 14</i>
SATURDAY	Healthy breakfast – poached egg, grilled tomatoes and mushrooms, wilted spinach, low salt and sugar baked beans and toast	Butternut squash soup leftovers	Baked potato with tuna and cottage cheese



Healthy snacks

Have one or two snacks a day when you're feeling peckish

- Oatcakes or crackers topped with peanut butter and apple slices
- Vegetable crudités with houmous, salsa or tzatziki
- Fruit – fresh, dried or tinned in natural juice
- A handful of unsalted nuts
- Homemade popcorn, without the salt
- A slice of fruit loaf
- A banana milkshake



Recipes

Mackerel pâté

INGREDIENTS, SERVES 2

- 125g cold cooked mackerel, fresh or canned in water
- 3 tbsp cream cheese
- 1½ tsp horseradish sauce
- ½ tsp finely grated lemon zest
- 1 tbsp fresh chopped chives
- pepper to taste

METHOD

- Flake the mackerel into a bowl and mix in the cream cheese and horseradish sauce. Mash the ingredients together.
- Add the lemon zest, chives and pepper to taste.
- Serve the pâté with oatcakes, a green salad and carrot crudités.



Chunky chicken and sweetcorn chowder

INGREDIENTS, SERVES 2

- 1½ tsp rapeseed oil
- 1 small onion, chopped
- 1 stick of celery, chopped
- 1 large potato, peeled and chopped into chunks
- 85g mushroom, sliced
- 300ml homemade or very low-salt chicken or vegetable stock
- black pepper to taste
- 150ml semi-skimmed milk
- 100g cooked, boneless chicken – left over from the roast dinner
- 85g frozen peas
- 85g frozen sweetcorn
- Chopped parsley

METHOD

- Heat the oil in a non-stick saucepan. Add the onion and celery and sauté over a medium heat for about five minutes or until the vegetables are beginning to soften. Stir in the potato, mushrooms, stock and black pepper. Bring to boil; reduce the heat, cover and simmer for 15-20 minutes, until the vegetables are just cooked, stirring occasionally.
- Stir in milk, chicken, peas and sweetcorn. Cover and bring gently back to the boil. Simmer gently for five minutes, stirring occasionally.
- Stir in the parsley. Serve on its own or with crusty bread or rolls.



Baked eggs with spinach

INGREDIENTS, SERVES 4

- 1 tablespoon olive oil
- 1 onion, sliced
- 2 cloves garlic, chopped
- 1 red chilli, chopped, or 1 tsp chilli flakes
- 1 tablespoon curry powder
- 50g spinach or kale leaves, chopped
- 2 400g tins of chopped tomatoes
- black pepper
- 4 eggs

METHOD

- Heat the oil in a frying pan and gently fry the onion for a minute or two before adding the garlic, chilli and curry powder. Fry for a few minutes until the onions are soft, then stir in the spinach or kale and cook for another minute.
- Add the tomatoes and some black pepper and cook for about 10 minutes so that the sauce thickens, stirring occasionally.
- Make four wells in the tomato mixture, then crack an egg into each one. Cover the pan with a lid and cook over a low heat for six to eight minutes, depending on how well done you like your eggs.
- Serve with couscous or crunchy bread. You can vary the spices depending on what you have to hand. Try using coriander or a little cinnamon for example.

Veggie chilli

INGREDIENTS, SERVES 4-6

- 2 tbsp rapeseed oil
- 1 large onion, finely chopped
- 2 carrots, chopped
- 2 courgettes, chopped
- 100g mushrooms, chopped
- 1 red pepper, chopped
- 1 green pepper, chopped
- 2 cloves garlic, crushed
- 1 red chilli (optional), finely chopped
- 1 tsp each of chilli powder, ground coriander and ground cumin
- 2 tsp tomato puree
- 1 tsp dark, soft brown sugar
- 400g of chopped tinned tomatoes
- 400g can of red kidney beans, drained and rinsed
- 400g can of black or pinto beans
- Fresh coriander (optional)

METHOD

- Heat the oil in a heavy-based non-stick pan; add the vegetables and fresh chilli. Cook over a medium heat for about 10 minutes or until vegetables are beginning to soften; stir occasionally.
- Stir in the chilli powder, ground spices and tomato purée; cook for a minute, stirring. Add the sugar, tomatoes and a little water. Bring to the boil; reduce heat, cover and simmer gently for 30 minutes, stirring occasionally.
- Stir in the beans; increase heat slightly and cook gently for a further 10-15 minutes. Garnish with chopped coriander (optional) and serve with rice.



Pasta with salmon and courgettes

INGREDIENTS, SERVES 4

- 1 tsp rapeseed oil
 - 1 leek, thinly sliced
 - 1 courgette, thinly sliced
 - ½ tsp dried tarragon
 - 1½ tbsp cornflour
 - 275ml semi-skimmed milk
 - 1 cooked fresh salmon fillet, flaked, or 1 small can of pink salmon, drained and flaked (take care to remove any bones)
 - 150g dried pasta
- ### METHODS
- Heat the oil in a non-stick saucepan. Add leeks and courgettes; cover and cook gently for about 10 minutes or until softened, stirring occasionally. Remove the pan from the heat; drain off excess liquid. Transfer vegetables to a bowl; stir in the tarragon and set aside.
 - Rinse the cooking pan and use it to

make white sauce. In a small bowl, mix the cornflour with a little of the milk until smooth. Pour the remaining milk into the saucepan and stir in cornflour mixture. Bring to the boil over a medium heat, stirring continuously, until thickened and smooth. Simmer for two minutes, stirring.

- Stir the cooked vegetables and flaked salmon into the white sauce. Heat gently until the sauce is piping hot throughout, stirring occasionally.
- Meanwhile, cook the pasta in a separate pan of boiling water according to instructions on packet. Drain thoroughly.
- Divide the pasta between two serving bowls. Spoon the sauce over the pasta and toss gently to mix. Serve immediately.

Butternut squash soup

INGREDIENTS, SERVES 4

- 1 butternut squash, peeled, deseeded and chopped into large cubes
- 2 tbsp olive oil
- 1 onion, chopped
- 1 garlic clove, crushed
- 2 mild red chillies, deseeded and thinly sliced (optional)
- 850ml very low-salt veg stock
- 150ml of semi-skimmed milk
- Crème fraîche to serve

METHOD

- Heat the oven to 200C/180C fan/gas 6. Toss the cubes of butternut squash in 1 tbsp olive oil. Roast for around 30 minutes until soft, turning once after 15 minutes.
- Meanwhile heat the remaining oil in a pan, then add the onion, garlic and the chillies, if using. Cover and cook



on a low heat for 15 minutes until the onion is completely soft.

- Add the cooked squash to the onions, then add the stock and milk and whizz with a stick blender until smooth. Serve the soup with a dollop of crème fraîche.



Shepherd's pie

INGREDIENTS, SERVES 6

- 300g potatoes, peeled and chopped
- 200g swede, peeled and roughly chopped
- 300g cauliflower, chopped
- 2 tsp rapeseed oil
- 1 large onion, finely chopped
- 250g lean minced lamb
- 130g carrot, finely chopped
- 150g mushrooms, finely chopped
- 150g leeks, finely chopped
- 2 heaped tsp wholemeal flour
- 400g tin green lentils (with no added salt)
- 1 heaped tbsp tomato puree
- pinch of dried thyme
- a few grinds of black pepper
- 1 tbsp Worcestershire sauce

METHODS

- Preheat the oven to 180°C/gas 4. Boil the potatoes and swede for 10 minutes, then add the cauliflower and cook until tender.
- Drain, saving the water, and mash the vegetables. Beat with a wooden spoon to break up any lumps and to add air to make the mash lighter.
- Meanwhile, add the oil to a pan, add the onion and cook over a low to medium heat for 10

minutes, stirring regularly until well browned.

- Stir in the lean minced lamb. Cook for five minutes, stirring regularly, then add the carrot, mushrooms and leeks and cook for another five minutes, stirring regularly.
- Sprinkle over the wholemeal flour and mix. Add the tin of green lentils, including the water they come in. Stir in the tomato purée, a good pinch of dried thyme, a few grinds of black pepper, the Worcestershire sauce and 250ml water from the boiled vegetables.
- Stir well, bring to a gentle boil, cover and simmer gently for 10 minutes. Add the mince to an ovenproof dish, top with the mash and bake for 25-35 minutes.

Healthier fish and chips

INGREDIENTS, SERVES 2

- For the baked potato wedges
- 400g medium-sized potatoes, washed
- 2 tsp olive oil
- Freshly ground black pepper, to taste
- For the oven-baked fish and crushed peas**
- 25g fresh breadcrumbs
- 1 tsp finely grated lemon zest
- 1 tbsp chopped fresh parsley
- Freshly ground black pepper, to taste
- 2 thick-cut sustainable white fish fillets, 140g each
- 12 cherry tomatoes on the vine
- 2 tsp olive oil
- 175-200g frozen peas
- A little chopped fresh mint

METHOD

- Preheat oven to 220°C/fan 200°C/gas mark 7. For the potato wedges, cut each potato into eight even wedges and pat dry. Place in a bowl, add the olive oil and black pepper, and mix well.
- Spread the wedges out in a single layer in a shallow, non-stick roasting tin. Bake in the oven for about 40 minutes, turning once or twice, until cooked.
- For the fish, combine the breadcrumbs, lemon zest, parsley and black pepper; spoon the mixture over the top of fish fillets, dividing evenly. Put the fish in a separate non-stick roasting tin with the cherry tomatoes alongside. Drizzle the olive oil over the fish.
- Bake the fish and tomatoes in the oven for the final 10 minutes of wedges' cooking time, or until cooked. Meanwhile, cook peas in a pan of boiling water for three minutes; drain and return to the pan. Crush peas lightly; season with black pepper and chopped mint.



With special thanks to Diabetes UK for the shepherd's pie recipe, and the BHF for the fish and chips, pasta, pâté and chowder recipes.

When the drugs don't work



Dr Manish Saxena is a hypertension specialist at Barts Health and the William Harvey Heart Centre, Queen Mary University of London. He and the team at St Barts are researching the options for people who can't tolerate traditional blood pressure medications in standard doses. He explains what they've learned so far.



A common reason why people have high blood pressure that isn't under control is that they're not taking their medications as prescribed, often because of the side effects. When people avoid taking their medications they're more at risk of heart disease and stroke, leaving them living in fear.

I often see patients who have struggled to explain their side effects and how much they're affecting their lives to their GP, especially as sometimes the side effects have no obvious explanation, making them difficult for both patient and doctor to understand.

It can be difficult for the doctor to know what else to try, as there are no guidelines after they've worked through several different medications. It can seem like the only options are to live with the side effects or to live with uncontrolled high blood pressure, but we wanted to find a solution.

In 2015 we began a study to try to find ways to lower blood pressure when the usual medications in standard doses aren't working well. We worked with 80 patients who had tried as many as eight blood pressure medications but had side effects with all of them and had to stop taking them, leaving them with uncontrolled blood pressure.

We developed a step-by-step treatment plan

We developed a step-by-step plan to find the best treatment for each person. With each step, if the patient still had side effects or their blood pressure wasn't controlled, we moved onto the next. By following the steps in turn, we were able to bring down patients' blood pressures by an average of 17/9mmHg, and showed that it's possible to improve blood pressure control while minimising side effects.

The steps meant that we could use combinations of drugs at lower doses,

It can seem like the only options are to live with the side effects or to live with uncontrolled high blood pressure, but we wanted to find a solution

THE STEP-BY-STEP PLAN

<p>STEP 1</p> <p>Smaller doses (called fractions) of standard medications We halved or quartered tablets, as many side effects are caused by the dose</p>	<p>STEP 2</p> <p>Liquid forms of standard medications Liquid medications, often contain a much smaller dose than tablets and don't contain any of the additives, avoiding side effects</p>	<p>STEP 3</p> <p>Skin patches These contain drugs called glyceryl trinitrate or clonidine. They avoid contact with the stomach as well as the quick rise of a drug in the blood</p>	<p>STEP 4</p> <p>Drugs usually used for other illnesses 5-PDE inhibitors (5-phosphodiesterase inhibitors), which are usually used to treat erectile dysfunction, and long-acting nitrates, can help</p>
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THE WAY THE PLAN WORKS CAN BE DEMONSTRATED NICELY WITH THE STORIES OF FOUR INDIVIDUALS

STEP 1 **Walter**
A good example of how step 1 can work brilliantly was with 71-year-old Walter. His home blood pressure reading was 190/85mmHg and his usual medications had made him feel generally unwell. By simply lowering the dose and changing the combination of drugs slightly, his blood pressure is under much better control – his home readings are now 130/70mmHg.

STEP 2 **Jack**
In a slightly more complex case, 61-year-old Jack had a reading of 208/131mmHg and a skin condition known as pustular psoriasis. He had to come off his blood pressure medications as they were giving him skin problems as well as cold hands and feet and making him feel tired and dizzy. We tried

lowering the doses but he still had side effects so we moved onto Step 2.

A low dose of a medication called nifedipine, given as a liquid, didn't cause any side effects, so we gradually raised the dose and added another medication called spironolactone, also as a liquid. These brought his blood pressure down to 142/88mmHg.

STEP 3 **Ellen**
80-year-old Ellen came to us with a reading in clinic of 182/91mmHg. She had had a stroke in the past and had other health problems including poor blood flow in the feet, asthma, high cholesterol, reflux, and a heart problem called atrial flutter. She had tried numerous medications but always had side effects such as nausea, tiredness and lethargy.

It wasn't safe to give her anticoagulation for the atrial flutter, the usual treatment, because her high blood pressure would put her at risk of bleeding, and she lived in fear of further strokes. She still had side effects with

which can work better than one drug at a high dose, and avoid side effects caused by additives and big changes of medications in the blood stream.

Can this plan be used in practice?

There are a number of obstacles to overcome so that these options can be available on the NHS in future. For example: working through these steps requires numerous consultations and clinic visits; it can be difficult to halve or quarter tablets evenly, especially for people with arthritis in their hands; and liquid medications and skin patches are more expensive than tablets so we will need large studies to prove how well they really work before they can be routinely used.

I recommend that doctors focus more on unacceptable side effects as a

major reason why people don't take their medications, so that everyone is treated to their target blood pressure, lowering their chances of having a stroke or a heart attack.

Don't suffer in silence

If your medications are giving you side

effects, don't suffer in silence. Start by discussing them with your GP so you can explore other treatment options. Your GP will be able to consider lowering your dose, and for the other steps in the four-step plan, you will need to be referred to a specialist centre.



step 1 and 2 so we tried step 3, a skin patch. A very low dose of a drug called clonidine brought her blood pressure down a little, so we raised the dose and added another patch containing a drug called glyceryl trinitrate. Together these brought her blood pressure down to 155/85mmHg and she's since been able to start taking anticoagulation for the atrial flutter, leaving her feeling much happier.

STEP 4

Chris

In our final example, 47-year-old Chris came to us with a number of health problems, including type 1 diabetes, asthma and high cholesterol. We knew he had white coat syndrome, but with a clinic reading of 160/100mmHg, his blood pressure was still higher than it should be, and his medications caused him laboured breathing, coughing and poor control of his blood sugar.

Step 1, 2 and 3 all caused side effects, but a low daily dose of a PDE5 inhibitor called tadalafil brought his blood pressure down to 137/84mmHg without any side effects.

New ways of treating high blood pressure

Researchers at William Harvey Research Institute and other centres are looking at possible alternatives to the traditional medications for those who don't respond well to them

The RADIANCE-HTN Study

This study is testing a procedure called renal denervation. Renal denervation aims to reduce activity in the nerves around the arteries leading to the kidneys, as these nerves are involved in blood pressure control and tend to be overactive in people with high blood pressure. In the procedure, a narrow catheter or wire is passed through an artery in the groin into the artery leading to the kidney. The catheter is then used to treat the tissue around the artery with ultrasonic energy, and this calms the activity in the nerves.

Find out more by visiting highbptrial.com/#question

The CALM trials

The CALM trials are privately-funded studies looking at a small implant, The MobiusHD® device, which is implanted inside part of the carotid artery in the neck called the

carotid sinus. The device causes the baroreceptors, which are in the walls of the artery, to increase their signals to the brain. Upon receipt of these amplified signals, the brain perceives blood pressure to be much higher than it actually is. In response, the brain signals the peripheral vascular system (the arteries and veins in the arms and legs) to dilate the blood vessels and thereby reduce blood pressure.

Find out more and if you could take part at vasculardynamics.com click on 'I am a patient'.

You can find out more about both of these studies and if you could take part by contacting William Harvey Research Institute on Whri-clinical-trials@qmul.ac.uk or call 02078825657 and ask to speak to Manish Saxena. You can find out more about clinical trials from NHS Choices at www.nhs.uk



Mr David Churchill

Prof Gareth Beevers

RAISED BLOOD PRESSURE IN PREGNANCY

Picture a young woman booking in at the ante-natal clinic in the early stages of her first pregnancy. She is nervous. The clinic is busy and noisy. After a half hour's wait she is called in to see a rather harassed midwife. After asking many routine questions the midwife takes her left arm and applies a blood pressure cuff. But our patient has never had her blood pressure checked before and doesn't know quite what to

expect. She thought blood pressure was a problem confined to older people like her mother and grandmother. She winces slightly at the unexpected discomfort. The pressure is 151/85mmHg. A second reading is still raised at 145/82mmHg. It should be around 130/70mmHg in a woman of her age. "Hmm," says the midwife, "it's a bit up. You'll need to attend the special blood pressure clinic".

Professor Gareth Beevers is an Emeritus Professor of Medicine and Trustee for Blood Pressure UK, and Mr David Churchill is a consultant obstetrician at New Cross Hospital, Wolverhampton. Here they discuss how raised blood pressure before becoming pregnant can affect the mother and baby's health and what the team looking after her will do to help.

Raised blood pressure in early pregnancy

About half of all women are found to have a blood pressure of 140/80mmHg or more before reaching 20 weeks of pregnancy – the usual cut-off for diagnosing high blood pressure. In around half of these the pressure falls to normal with repeated measures, for example by wearing a cuff which measures blood pressure automatically over 24 hours. If it remains normal throughout the pregnancy, the initial high reading will be put down to "white

coat hypertension” or “isolated clinic hypertension” – which is related to the stress of being in clinic in unfamiliar surroundings. This is an entirely innocent condition and is more common when the pressure is measured in a hurry or with the use of obsolete mercury machines.

If the blood pressure does not settle to below 140/80mmHg after repeated measures it is assumed that the patient has

longstanding hypertension (high blood pressure). With the rising prevalence of obesity and the tendency of women to start their family later on, this problem is

becoming more widespread. A small minority of women are found to have an underlying kidney disease, but most are diagnosed with “essential hypertension” – where the specific cause of the raised blood pressure is unknown. All women with high blood pressure in pregnancy need to be referred to a specialist clinic for careful follow-up and, where it’s very high, antihypertensive drugs may be recommended.

Raised blood pressure after 20 weeks of pregnancy

Pre-existing hypertension may settle a bit but will generally persist throughout pregnancy. Pregnant women should not go on a rigorous diet while pregnant, but should take regular gentle exercise and avoid notoriously salty food and sugary drinks. As women of childbearing age have a very minor risk of developing a stroke or heart attack whilst pregnant, antihypertensive drugs are avoided unless absolutely necessary, but they will be carefully monitored.

Pre-eclampsia

This is a serious condition which carries a risk to the health of the mother and the unborn child. It occurs in up to 10% of all pregnancies. It is more common in first pregnancies, teenage

pregnancies and mothers who are older, diabetic or very overweight. Most importantly it also develops in up to half of women with longstanding hypertension. The cause remains a mystery but it seems to be a disease of the placenta which fails to attach itself correctly to the inside wall of the womb.

In the mother, pre-eclampsia is characterised by a rise in blood pressure, the development of protein in the urine and abnormal tests for liver, blood and kidney function. In severe cases she may have headaches, blurred vision, restlessness and, very rarely, strokes, kidney disease and heart failure.

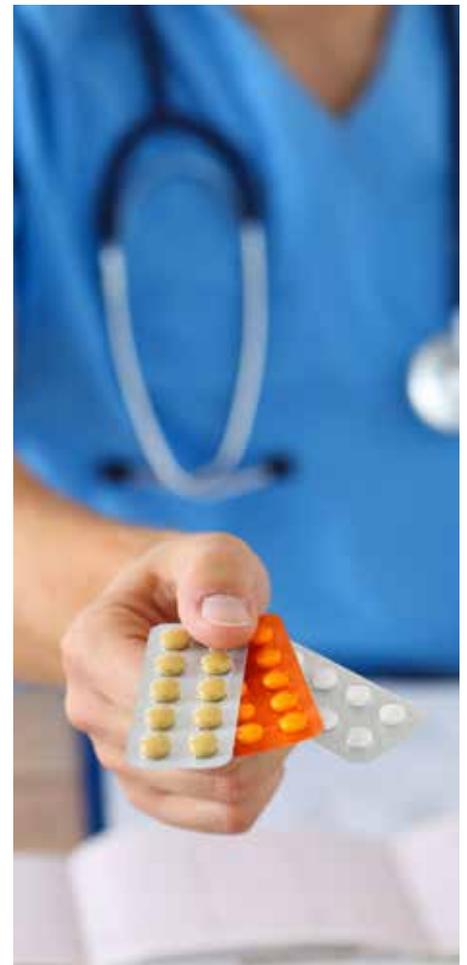
In the unborn child there can be poor placental blood flow leading to growth restriction, evidence of distress in the unborn baby and, in the worst cases, stillbirth.

Whilst there is no doubt that women with longstanding raised blood pressure have a higher risk of developing pre-eclampsia, there is no evidence that lowering blood pressure prevents it. The only drug which modestly reduces the risk is aspirin in a low dose, and all women with raised blood pressure should be given aspirin at first booking into the ante-natal clinic.

All women with pre-eclampsia should be referred to a specialist obstetric unit with high technology monitoring, a maternity special care unit and high-quality baby care. If pre-eclampsia develops after 37 weeks the best thing is to deliver the baby, either by induction of labour and in very severe cases emergency caesarean section. In all cases blood pressure control is mandatory with daily monitoring of the baby’s heart rate. This is a highly specialised topic

Women of childbearing age have a very minor risk of developing a stroke or heart attack whilst pregnant

All women with raised blood pressure should be given aspirin at first booking into the ante-natal clinic



and the management means expert 24 hour care.

Antihypertensive drugs in pregnancy

All clinicians and their patients are keen to avoid using any form of drug therapy in pregnancy other than aspirin. This is entirely understandable.

Antihypertensive drugs are really only given to reduce the risk of heart attacks or strokes in the mother, which are extremely rare, but all doctors want to make sure their patient is safe. Heart disease and strokes are devastating at all ages and there is abundant evidence that lowering blood pressure prevents them.

Most clinicians would only recommend drugs to lower blood pressure if the systolic pressure is consistently above 160mmHg and some obstetricians may opt to treat lower levels if the pregnancy is in the early stages.

You will understand why the doctor in this case has a dilemma – they don't want to risk a heart attack or stroke, but they don't want to give medications unnecessarily. Her blood pressure is raised, but not as high as 160mmHg.



Women who have had pre-eclampsia are at greater risk of developing heart attacks and strokes in later life

The choice of blood pressure-lowering drugs is another dilemma. Labetalol, amlodipine, methyldopa and hydralazine are thought safe, while there are some anxieties that the beta-blockers, like bisoprolol, could affect the baby's growth. There are reports that the angiotensin blocking drugs, like perindopril and losartan, could have a serious effect on the baby's development so the precautionary

principle is to avoid these drugs in all women who are pregnant or likely to become pregnant.

Long-term outlook

Women who have had pre-eclampsia are at greater risk of developing heart attacks and strokes in later life, even if they had normal blood pressure before and even if it returned to normal afterwards. All such women should have a blood pressure check every five years by their GP.

And our patient? Well her pressure did not settle but it never exceeded 150mmHg so antihypertensive drugs were withheld even though she had longstanding hypertension, for which she has a family history. She was however, given aspirin (75mg). Her blood pressure went up at 37 weeks and she developed protein in the urine. Labour was induced and she gave birth to a bonny bouncing baby girl now aged seven months. She is being regularly followed up by her GP and has been advised, in the event of a future pregnancy, to attend the ante-natal clinic as early as possible.

WOMEN WITH HIGH BLOOD PRESSURE DISORDERS DURING PREGNANCY SHOULD HAVE ONGOING CARE

There are a number of blood pressure disorders which can appear during pregnancy in women who had normal blood pressure before becoming pregnant. These include pre-eclampsia (see previous page) and gestational or pregnancy induced hypertension, where high blood pressure develops after 20 weeks of pregnancy but is generally thought to be an innocent condition.

This summer the *BMJ* (*British Medical Journal*) published two major new studies showing that these disorders put women at risk of blood pressure problems later in life, giving health care professionals new opportunities to prevent heart disease and stroke.

A Danish study of 1 million women

This study found that women who

had a hypertension disorder during pregnancy were up to three times more likely to have high blood pressure 10 years after giving birth than women who didn't. Their risk was at its highest in the first year after giving birth and was still twice as high up to 20 years later. This gives a clearer picture of how blood pressure changes over time after a disorder in pregnancy, and that blood pressure monitoring should begin soon after pregnancy and continue in the long-term.

The Nurses' Health Study II

This study of over 50,000 nurses in the US found that being overweight raised the risk of long-term high blood pressure in women who had had a hypertensive disorder in pregnancy. It showed that the combination of being

overweight and having a disorder in pregnancy had more impact than either one alone. Diabetes during pregnancy also had an impact. It suggests that living a healthy lifestyle to maintain a healthy weight is even more important in women who have had a blood pressure disorder in pregnancy than in the general population.

Prof Beevers explains: "The medical profession has long suspected that high blood pressure disorders during pregnancy put women at risk of high blood pressure and its related diseases later on in life. These studies clarify things for us, showing the importance of a healthy lifestyle and that their blood pressure should be carefully monitored throughout their lives so they can get the support they need."

Meet the Trustees

Dr Rebecca Suckling is a Consultant Nephrologist and Associate Medical Director at Epsom and St Helier University Hospital NHS Trust and we're delighted to welcome her to Blood Pressure UK as our new Trustee



Q How did you become interested in blood pressure?

After finishing my medical training and exploring a number of different specialities, I moved to London to work at St George's Hospital as a nephrologist. I was working with Dr Pauline Swift, who spent four years researching hypertension (high blood pressure). I learnt about the research and decided it was something I wanted to be involved in, so I took some time out to study for a PhD with Professor Graham MacGregor, Chairman of Blood Pressure UK.

Q What did you find in your research?

We found that when people in the early stages of diabetes eat less salt, their blood pressure falls. We also found that even when eating just a small amount of salt, the amount of salt in their blood rose immediately and this can change their blood pressure. We think these changes in salt levels might cause changes in the blood vessels and that over time these lead to high blood pressure.

Q How are the kidneys related to blood pressure?

The kidneys are very important in blood pressure control. If your kidneys are healthy and working normally, over time, untreated high blood pressure can damage them. An underlying kidney condition can also lead to high blood pressure – it works both ways.

High blood pressure can lead to atherosclerosis, which is furring in the blood vessels, and this can affect the blood flow to the kidneys – making high blood pressure worse as well as damaging the kidney through a lack of blood supply.

Q What does a day look like in the life of a nephrologist?

My job is to look after people with kidney disease. I look after people on dialysis and those who may need to go on dialysis, and help people prepare for a kidney transplant. A big part of my job is treating the disease to try and prevent it from progressing to this stage.

Once a week I see patients in the blood pressure clinic I started with Dr Swift four years ago. It's wonderful to be working with one of the people who inspired me originally. I'm also continuing my research into high blood pressure.

Q What are you working on now?

I'm trying to find out if high sodium levels in the blood lead to a higher risk of heart disease or stroke in the future. I'm also looking into whether lowering salt intake helps to lower blood pressure in people who've had a kidney transplant.

Q What's your favourite part of your job?

My patients are inspirational. They often have very complex illnesses,

some are on dialysis three times a week, but they're managing to be parents and grandparents and do their jobs despite their symptoms.

Q What attracted you to Blood Pressure UK?

I've always been a big supporter of the charity. I've written for *Positive Pressure* before and I've been on hand to comment on new research in the media. The charity is a very important link between what's happening in medicine and people who have high blood pressure, so I was delighted when I was invited to be a Trustee.

Q What's your vision for the charity?

I'm a big supporter of Know Your Numbers! Week, the charity's flagship campaign, and I'd like to make it even bigger. There are a lot of people with undiagnosed high blood pressure, particularly men, as they're less likely to visit their GP. I think we need to engage with whole families and encourage more opportunistic blood pressure testing.

Q And finally, what do you like to do when you're not busy working?

I have a three-year-old son and we like to go biking and swimming and I love catching up with family and friends.

Bring on 2018

Get ready for the New Year with our favourite healthy living tips



HEALTHY LIVING TIPS ♥



Kay, Editor

"I buy individual snacks so that I'm not tempted to eat a whole packet, and I brush my teeth after dinner so I don't snack afterwards. But my top tip ever – don't go shopping hungry"



Hemini, Marketing Manager

"I find ways to fit exercise into my day, so it doesn't take up too much time. I often get off the tube a stop early and walk to work for example."

Shefalee, Nutritionist

"I exercise first thing in the morning so that it's done and I don't have the whole day to talk myself out of it. I get my gym kit ready the night before so it's ready and waiting for me."



Katharine, CEO

Having a young child is great for exercise, but it does impact on how much sleep I get. So to make sure every hour I sleep is at least good quality, I put all technology away and go to bed in a cool, dark room, at the same time every night, regardless of how good the latest TV offering is!



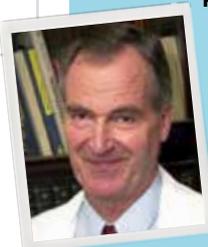
JP, Marathon runner

"I make feel-good playlists of songs to get me in the mood for running. I have happy, energetic songs for short runs, and more melodic songs for long ones."



June, Personal Assistant

"I don't keep chocolate, crisps and cakes in the house – if they're there I'm tempted, but I never want them enough go out to the shop to buy them."



Professor MacGregor, Chairman

"The trick to eating very little salt is to cook meals from scratch, and when you go to a restaurant you can ask the chef to cook your meal without any salt and they're often very happy to oblige."

FEEL LIKE A HERO AT THE LONDON MARATHON

If you've ever wondered if you could run the London Marathon, this could be your perfect chance. We have charity places available for 2018, and we'll be on hand to support you every step of the way. If you're interested in taking part, call us on 020 7882 6255 to find out more.



JP, WHO RAN IT THIS YEAR TOLD US: "IT WAS AN AMAZING ATMOSPHERE. AFTER THE RACE I FELT LIKE A BIT OF A HERO WITH PEOPLE CONGRATULATING ME WHEREVER I WENT ACROSS LONDON."

Helping others with High Blood Pressure

Have you thought of Blood Pressure UK in your Will?

Finding out that you have high blood pressure is traumatic, particularly if you are young. Most people don't know anything about the condition and worry about how it will affect themselves and those around them. But Blood Pressure UK is here to help, and with our

information packs, range of leaflets and our helpline, we provide reassurance and support to sufferers and their families. But all of this work is expensive and while membership subscriptions and general donations help enormously, leaving a gift in your Will can help us make a bigger difference.

It isn't as complicated as you might think, doesn't have to be a large amount, and will give you the reassurance that our work helping fellow sufferers will continue once you have gone.

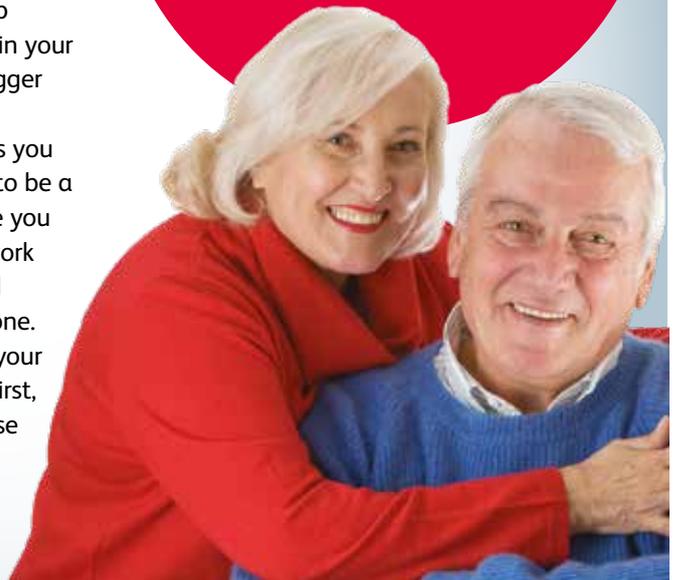
Obviously, providing for your family and friends comes first, but once that is done please consider a gift to Blood Pressure UK in your Will.



Blood Pressure UK

Helping you to lower your blood pressure

We have put together a simple leaflet to guide you through the process and you can get a copy by telephoning: (020) 7882 6255, visiting the website: www.bloodpressureuk.org, or by writing to: Blood Pressure UK, Wolfson Institute, Charterhouse Square, London, EC1M 6BQ.



Looking to reduce your salt intake without compromising on taste?

...try switching to the original and best reduced sodium salt

Excess dietary salt is one of the most important modifiable risk factors for high blood pressure. **Switching to LoSalt**, the UK's number 1 reduced sodium salt will help you to maintain normal blood pressure.

So what is LoSalt?

The perfect blend of 2 natural mineral salts, LoSalt is the healthier alternative for seasoning, cooking and baking without compromising on flavour.

And its simple to use...if your recipe requires 1tsp salt, use 1tsp LoSalt: it does the same, **tastes the same and has 66% less sodium!**

LoSalt, the natural choice for your table and kitchen cupboard

For more information and delicious recipes to try at home, visit losalt.com





Information & publications

LOTTERY FUNDED

We have a range of booklets and fact sheets giving valuable information about living with high blood pressure to help you understand it, lower it and manage it.

With great thanks to the Big Lottery Fund, we have been able to translate our award winning 'Introducing high blood pressure' leaflet into 32 languages.



Introducing high blood pressure

This booklet explains what high blood pressure is, who gets it and why. It gives basic information on lifestyle changes to lower blood pressure, and about measuring your own blood pressure at home.



Blood Pressure UK

Helping you to lower your blood pressure

All these publications and more are free to Blood Pressure UK members.

Visit www.bloodpressureuk.org