

the magazine of the Blood Pressure Association

ISSUE 30 > Winter 2011

POSITIVE

pressure

**The new NICE
guidelines explained**

We take a glimpse
into the future of
home monitoring

OPEN YOUR EYES

**A LOOK AT HIGH BLOOD
PRESSURE AND EYE HEALTH**

PLUS
Meet some of our
remarkable fundraisers



**Blood Pressure
Association**
the blood pressure charity

pressure is the magazine of UK charity, the Blood Pressure Association. 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 the BPA. The information in this magazine is designed to support and supplement your relationship with your doctor, not to replace it.

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Captiv8UK 01892 611500

Company number: 3251531

Company Limited by Guarantee

Registered charity in England and Wales (1058944) and in Scotland (SC040230)

Positive about your blood pressure



Welcome

From Paul Newman, Chief Executive Officer

Welcome to the Winter edition of Positive Pressure.

We've had a busy six months at BPA Headquarters.

The new NICE guidelines governing the diagnosis and treatment of high blood pressure came into effect in August. Involving the biggest changes to high blood pressure diagnosis in over a century, they were the focus of much media attention. BPA Trustee, Bryan Williams who was Chair of the Guidelines Working Group had more than his fifteen minutes of fame as television, radio and print media all wanted to know what the new guidelines were and their implications. In this issue of Positive Pressure, we take you through them and explain how they could affect you.

September saw our eleventh Know your Numbers! Week take place. We had even more Pressure Stations than last year, from The Orkneys to St Austell and just about everywhere in between and as a result, around 100,000 people know their blood pressure and how to get it and keep it to a healthy level.

Controversial headlines about salt have made the newspapers a few times, with one newspaper proclaiming 'Now salt is safe to eat'. We report the truth about the health benefits of keeping to a low salt diet and we also give you a sneak preview of our 'Pioneers of low salt foods' campaign which will start soon.

We feature the relationship between blood pressure and eye health and look at more than one condition that can arise in our major blood vessel, the aorta, due to high blood pressure, explaining what to look out for and what to do if you are concerned.

Our work is of paramount importance to the nation's health, both in raising awareness about high blood pressure and in supporting those who have it. We simply couldn't do it without the continued support of our membership and our fundraisers. In this issue, we follow the progress of pan-European cyclist, Steve Primrose-Smith and introduce two other inspiring individuals prepared to go that extra mile to raise money for us.

Thank you for supporting the Blood Pressure Association through your membership. In our online member survey, 90% of you said that membership of the BPA had helped you lower and manage your blood pressure. Please spread the word to family and friends who might also benefit from BPA membership and help us to help them too.

With best wishes,

Paul Newman

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Blood pressure news

Discovery could help to unravel the biological mechanisms behind swellings in arteries

An international team of medical scientists led by vascular surgeon Mr Matt Bown from the University of Leicester have identified a gene mutation that they believe raises the risk of aneurysms.

An aneurysm is where a section of an artery wall that is weaker than normal balloons out under the pressure of the blood within the artery. In extreme cases, they can burst.

They can occur in any artery but they are most common in the aorta, particularly in the section that passes through the abdomen. Known as abdominal aortic aneurysms (AAAs), they threaten the lives of thousands of people in the UK every year, often going unnoticed until they burst and cause dangerous internal bleeding.

Commonly affecting the older population, AAAs can only be treated by surgery. Risk factors include age, male gender, high blood pressure and smoking, but the problem can also be hereditary and these new findings could help to unravel why some people are more at risk than others.

The team identified a gene that is linked to their development but not to other cardiovascular diseases suggesting that it is specific to AAA.

The University of Leicester led the study which also involved institutions from New Zealand, Australia, Denmark, Iceland, The Netherlands, Sweden, the USA and the UK.

Mr Bown, Senior Lecturer in Surgery in the Department of Cardiovascular Sciences at the University, said, 'The study involved over 2,000 people from Leicestershire as well as many more from around the globe.

'Since AAAs can run in families, the research team compared the genes of people with them to those without and discovered that one gene, known as LRP1, was associated with the condition.



"We can't change our genes but we can change our lifestyle."

'Further investigation of the function of this gene in relation to AAA could help us understand more about the disease and how to treat it without resorting to operations.'

Over the age of 60, around 12% of people with high blood pressure have an AAA which need to be screened for by abdominal ultrasound. If an aneurysm is discovered that is dangerously large, surgery is required.

If an undiagnosed AAA ruptures the outlook is usually poor.

In early 2013, the NHS expects to start screening all 65 year old men for aortic aneurysms using a 20 minute ultrasound scan. Doctors will monitor the size of any aneurysms they find and operate if they grow to around 5.5cm, the size at which they are at risk of bursting.

This new scientific discovery will not currently help in screening for risk of aortic aneurysms, but could help to shed light on the biological mechanisms that cause them to form.

BPA trustee Professor Gareth Beevers says,

"We fully support the plans to screen all people over a certain age for AAA. The screening test is simple and there is consensus about what to do.

"As with most medical conditions, the causation is likely to be due to a combination of genes and lifestyle.

"Those worried about the risk of an AAA need to give up smoking and maintain accurate control of their blood pressure. People with high blood pressure and an AAA of any size should try to get their blood pressure down to 130/80 mmHg or less.

"We can't change our genes but we can change our lifestyle."

Some 4,000 people a year in the UK have surgery to treat aortic aneurysms, but the condition still kills an estimated 7,000 people a year.

The new research was published in The American Journal of Human Genetics.

Blood pressure drugs offer hope for aortic stenosis

A team of researchers in Vancouver, Canada believe that angiotensin receptor blockers, drugs normally used to lower blood pressure, could save the lives of people suffering from a type of heart disease called aortic stenosis (AS).



Aortic stenosis is a narrowing of the aortic valve in the heart which restricts blood flow through the valve meaning that the heart needs to contract harder to pump blood into the aorta. Although mild narrowing may not cause symptoms, more severe narrowing can lead to heart failure.

Up to now, there has not been a drug therapy to treat AS, only surgery, often to replace the valve when the condition has become severe.

AS is considered to be a degenerative condition related to ageing in which wear and tear and calcium deposits that build up on the affected valve cause it to stiffen and narrow. Recently however, some studies have also indicated that its development could also be dependent upon genetics and lifestyle.

As a result, several trials looked into whether statins, a class of drugs used to lower cholesterol levels, would be effective against AS but the results were not promising.

The team in Canada, led by Dr Philippe Pibarot, a Professor at Laval University and Canada Research Chair in Valvular Heart Diseases at the Quebec Heart & Lung Institute, decided to take a different approach. They looked at the effect of drugs that are normally used to lower blood pressure.

Over a three year period they studied the development rate of arterial stenosis in AS patients, three quarters of whom also had high blood pressure and were taking either an ACE inhibitor or an ARB.

Compared to the individuals taking no antihypertensive medication, the

patients taking ACE inhibitors had less rapid narrowing of their valve, but the biggest difference was seen in the group taking ARBs. Progression was markedly slower in these individuals.

These findings, which were presented at The Canadian Cardiovascular Congress 2011 in October, could suggest that a medical means of managing AS may one day be available as an alternative for those patients unable to undergo surgery.

With the prevalence of valvular heart disease expected to drastically increase as the population ages (there will be an estimated 4 million people aged between 75 and 84 in the UK by 2018, and the population beyond the age of 85 is set to double by 2028) this could be of immense clinical importance.

Daily beetroot juice boosts stamina

Drinking beetroot juice could boost stamina and enable people to exercise for longer, according to a study from the UK.

The study suggests that drinking beetroot juice could help you exercise for 16% longer because the nitrate it contains reduces oxygen uptake which makes exercise less tiring.

The research was led by Professor Andrew Jones, Professor of Applied Physiology and leader of the 'Bioenergetics and Human Performance' Research Group at the University of Exeter.

Many of Andy's volunteers were fellow scientists who, after they had consumed 500 ml beetroot juice per day for six days, they were able to cycle significantly longer than when they had been drinking a placebo before they got tired.

They also had lower resting blood pressure during the time they were drinking the beetroot juice which supports the earlier findings of London-based researchers who reported blood pressure reductions on consuming the juice.

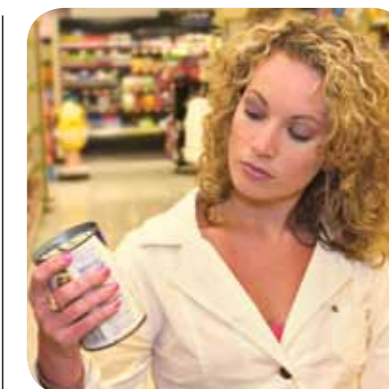


BPA PIONEERING FOR LOW SALT FOODS

This winter the Blood Pressure Association (BPA) is launching a new salt campaign, with the aim of getting supermarkets to highlight and sell a wider range of low salt products, designed for people with high blood pressure. As lowering salt intake is one of the best ways to lower your blood pressure, the BPA is going to begin the campaign highlighting 'pioneering companies' who are leading the way in developing products to help people to reduce their salt content.

Every day millions of people in the UK visit supermarkets and buy products that are laden with salt. As well as highlighting which products are low salt, we'll be giving people practical advice and tips to help people make a healthier low-salt choice when doing their shopping.

We'll also be asking for your help with the campaign by asking you to forward letters/emails to your MPs and to supermarkets. To find out more about the campaign and how you can get involved, please visit www.bpassoc.org.uk/microsites/salt/Home



Salt is NOT good for you

Misleading claims by leading UK newspapers that 'salt is good for you' have been refuted by re-analysis of the data which led to false headlines and stories being published.

Results of a trial published in both the Cochrane Review and the American Journal of Hypertension claimed that salt reduction had no effect on the incidence of cardiovascular disease and led to newspaper headlines such as 'Now salt is safe to eat'.

Blood Pressure Association Chair Professor Graham MacGregor and colleagues from the British Hypertension Society painstakingly reanalysed the data and reported the correct conclusion in medical journal The Lancet.

An accurate analysis of the same data actually showed a significant decrease in cardiovascular events with decreased salt intake of only 2 g per day - the incidence of both stroke and heart attacks fell by 20%.

This backs up what is already overwhelming evidence to support the benefits of salt reduction on blood pressure and overall cardiovascular health.

ARBs may cut risk of Alzheimer's

Doctors and scientists have long been aware of a link between high blood pressure and Alzheimer's disease and other forms of dementia including vascular dementia, and a significant amount of research has looked at the effects of antihypertensive drugs in preventing the development and progression of these diseases.

A recent study by researchers at the University of Bristol has focused on ACE inhibitors and ARBs to see whether having ever taken these classes of antihypertensives is more effective in reducing the occurrence of Alzheimer's disease, vascular dementia and other dementias compared to other antihypertensive drugs such as calcium-channel blockers, beta blockers or thiazide diuretics.

The researchers observed that patients who had been prescribed either ARBs or ACE inhibitors were less likely to develop Alzheimer's disease, vascular dementia or other dementias than patients who had been prescribed other antihypertensive medications. The associations were stronger for ARBs than for ACE inhibitors.

The study found the risk of Alzheimer's disease in those prescribed an ARB to be approximately half that compared with those prescribed other antihypertensive agents, and 24% lower in those prescribed an ACE inhibitor.

Dr Patrick G Kehoe and colleagues reported the results of their study in the

October 2011 issue of the Journal of Alzheimer's Disease.

It involved the analysis of 9,197 adults aged 60 and older who had dementia and almost 40,000 similarly aged people with no dementia.

As well as protecting the brain by reducing blood pressure, it has been suggested that ARBs may also preserve brain function by a mechanism that is independent of their antihypertensive effect. Future research into this could bring good news for those with Alzheimer's disease, other types of dementia and high blood pressure.

Dr Kehoe says, 'These findings certainly lend some credence to previous studies implicating the angiotensin system, which is targeted by these drugs, in the development and progression of some forms of dementia. Our findings now require proper validation in clinical trials but in the meantime one thing remains clear - people monitoring and making sure their blood pressure is properly managed, along with generally trying to stay healthy, is one way of reducing the chances of developing dementia in later life.'

Pre-hypertension linked to increased risk of stroke

Recent research has linked pre-hypertension to an increased risk of stroke.

High blood pressure is responsible for around 60% of strokes and researchers have long observed that people with normal blood pressure have about half the risk of having a stroke over the course of their lives as those who have high blood pressure.

Pre-hypertension is defined as a systolic blood pressure of 120 – 139 mmHg and a diastolic blood pressure of 80 – 89 mmHg and less is known about what this could mean for heart and blood vessel health.

The research was a review of 12 studies involving 518,520 participants of middle age or older in the United States, Japan and China.

Overall, it found that adults with pre-hypertension had an increased risk of having a stroke compared to adults with normal blood pressure, with pre-hypertensive adults younger than 65 having a 68% increased risk of stroke.

However, 7 of the 12 studies made a distinction between low and high pre-hypertension, defining the higher end as 130 – 139 mmHg systolic, 85 – 89 mmHg diastolic and the lower end as 120 – 129 mmHg systolic, 80 – 84 mmHg diastolic.

In these studies, the increase in risk was limited to those individuals within the higher pre-hypertensive range

who had a nearly 80% increased risk of stroke. Participants with pressures in the lower pre-hypertensive range had no greater stroke risk than normotensive individuals.

Pre-hypertension didn't increase the risk of stroke in seniors. This may be because many adults who reach that age have other risk factors, including age and related health conditions that come into play.

Currently, patients with a blood pressure between 121/80 and 139/89 are given lifestyle advice to manage their pre-hypertension. Further research into pre-hypertension and stroke risk could determine whether individuals with pre-hypertension in the higher range should be offered an enhanced level of care.

The study was carried out by Dr Bruce Ovbiagele from the Department of Neuroscience, University of California and colleagues and is published in the journal *Neurology*.

New ultrasound scanner uses maths to determine blood pressure

Scientists at Eindhoven University of technology in the Netherlands led by Professor Frans van de Vosse have developed a new non-invasive method of measuring blood pressure.

The new method uses ultrasound to precisely measure blood flow and the movement of blood vessel walls and to get a picture of the variation of blood pressure and flow with time as the heart beats.

Ultrasound travels freely through fluid and soft tissues, but is reflected back as a kind of echo when it hits a more dense surface. Ultrasound is already used to gain information about blood flow in some patients and is known as a Doppler scan, but this new machine goes a stage further. After performing the ultrasound scan, the researchers found they could accurately extrapolate blood pressure by applying a mathematical model to the results.

The technique is some years from becoming mainstream, but could

provide a valuable new tool in preventative diagnostics by giving a very clear picture of the condition of a person's heart and blood vessels.

It could allow physicians to carry out preventive investigations of the cardiovascular system and monitor blood pressure at specific points around the body without having to insert a catheter with a pressure sensor, gaining an early warning of the development of any cardiovascular problems.

The research is part of a new direction for the research group led by Professor Frans van de Vosse (pictured) focusing on making mathematical models of the vascular system. It was recently published in the journal *Ultrasound in Medicine and Biology*.



Photo: TU/e, Bart van Overbeke

Try sprinkling seaweed on your chips instead of salt

If you are looking for a tasty seasoning to replace salt, you might want to try seaweed granules.

Seaweed granules have a strong flavour but are low in salt, and seaweed has loads of other health benefits too. It is full of vital micronutrients - vitamins, minerals, fatty acids and amino acids - making it nutritional and healthy. It is easy to digest and it is claimed that eating it makes you feel full, so it could help in weight loss too.

A study discovered that consumers find it almost impossible to tell when seaweed granules replaced salt in baked goods.

Two of the UK's five major supermarkets are considering using it in breads following taste tests and research confirming its safety.

Processed foods provide about 75% of our daily salt intake and an average adult has 50% more salt per day than the recommended value of 6g.

Scientists at Sheffield Hallam University have been working with commercial suppliers to produce granules from Arctic wrack seaweed which is found off the coast of Norway and the UK.

The idea is that the granules could be used to replace salt in supermarket ready meals, sausages and even cheese.

Their research has also suggested seaweed granules can help keep food fresh for longer; like a natural antibiotic.

Seaweed has long featured in the diets of families in China and Japan and with a sodium content of less than a tenth of table salt, perhaps that will soon extend to the UK.

Pharmacies aim to cut cost of wasted medicines

A new NHS pharmacy service is now being provided free through community pharmacies in England to help reduce the cost of wasted medicines and improve patient health.

Launched in October, the New Medicine Service (NMS) offers three consultations with a pharmacist over a period of four weeks to anyone who starts a new medicine for high blood pressure, asthma, chronic obstructive pulmonary disease or type 2 diabetes, or is given a blood-thinning medicine.

The costs of poor medicine-taking are both economic and human, leading to wasted NHS resources and poor health for patients.

The New Medicine Service will support patients from day one by increasing their understanding of both their medicine and their condition, helping them get maximum benefit from their treatment and saving money at the same time.

Until now though there has been little structured ongoing support for patients to ensure they take their medicines correctly and it is hoped that this new level of patient support will ensure patients understand their medicines and take them as prescribed. This will save lives and the NHS hundreds of millions each year in medicines wastage, and will also reduce GP consultations and hospital readmissions.

The NHS spends about £11 billion a year on medicines, making them the biggest single expenditure after staff costs. Around £300 million is lost each year in medicine wastage and on top of this the cost to the NHS of people not taking their medicines properly and not getting the full benefits to their health is estimated at over £500 million a year.



Although it won't immediately be available in all pharmacies, Pharmacy Minister Earl Howe has called for the New Medicine Service to become "mainstreamed within community pharmacy".

Zul Mamon, Director of Retail Operations and Member Services at Avicenna said,

"It is estimated that up to 50% of medicines for long term conditions are not taken as directed resulting in poor treatment and wastage of medication. Studies have shown that pharmacists guiding patients closely on how to take their medicines improves the success rate of their treatment.

"Patients will be offered the free service when they present a prescription for a new medicine or may be referred to the service by their prescriber."

The NMS will help to involve patients more in their own care and collaborate in the decision making process governing their care ensuring they understand their new medicine and how to take it effectively.

Seeing is believing

Your eyes give you information about the world around you from the moment you wake up: information about shapes, colours, movement, distance and more. This information passes to your brain via the optic nerve where it is processed to show you what is going on around you; for as far as you can see.



Your eyes don't just provide information about what is going on around you though. Incredibly, they can also provide information about what is going on inside you. This information could even save your life.

Your eyes can tell you more than you think. Examining the retina can give an optometrist valuable information about blood vessel health.

The relationship between high blood pressure and eye health is a close one and research into this association in the 1970s and 80s gave the medical profession a greater insight into and understanding of the dangers of hypertension and also a new diagnostic tool.

The effects of hypertension on our eyes are largely due to its effect on the eye's blood vessels. These vessels however are the only ones in our body that can actually be observed and any problems here are likely to be repeated in the small blood vessels in places that can't be seen, such as in the kidneys – not so much a window to the soul, but certainly a window to the circulation.

With the use of an ophthalmoscope, a doctor or optometrist can see the vessels that supply blood to the eye's retina, the light-sensitive layer of tissue at the back of the inner eye.

The retina acts like the film in a camera. Images come through the eye's lens and are focused on the retina which converts them into electric signals and sends them via the optic nerve to the brain. It has a rich blood supply and for this reason is normally red.

If the doctor or optometrist sees any changes in the colour or appearance of the retina or if the small vessels (called capillaries) appear to have thickened, narrowed or even burst or there are

signs that fluid has leaked from them then this could indicate a problem, and that problem could be due to high blood pressure.

Some people only find out they have high blood pressure as a result of having a routine eye test. Other patients are sent for an eye examination after being diagnosed to see if their raised blood pressure has caused any damage to their eyes.

Some people only find out they have high blood pressure as a result of having a routine eye test.

The effect of uncontrolled high blood pressure on the eyes is called hypertensive retinopathy, and the only way to treat it is to control your blood pressure.

The degree of retinopathy is graded on a scale of 1 to 4 and for the most part, when the blood pressure is under control, the retina will recover. Severe retinopathy resulting from sustained,

uncontrolled high blood pressure or malignant hypertension can cause irreversible damage to the eyes however and may result in a permanent partial loss of sight.

Malignant hypertension is a rare condition where blood pressure suddenly becomes very high. This rapid increase in blood pressure can cause more severe changes in the eye as well as vessel damage, such as swelling of the optic nerve and the macula (the visual centre of the retina). The degree of retinopathy is considered to be grade 4 and can result in the sudden onset of visual disturbances and headaches. An optometrist who spots this during an eye examination will send their patient immediately to their GP or to hospital.

The take home message is simple. Maintaining a healthy blood pressure protects your eyes as well as your overall health. If you are concerned about your eye health, visit an optometrist for an eye examination. It only takes half an hour, and these days many optometrists use a retinal examination machine that doesn't require dilation drops first, so you can go straight back to work and even drive safely immediately afterwards.

The new NICE guidelines explained

August saw the launch by the National Institute for Health and Clinical Excellence (NICE) of new updated guidelines governing the diagnosis and treatment of high blood pressure.

In what is arguably the biggest change to the diagnosis of high blood pressure in over 100 years, the new guidelines recommend the use of ambulatory blood pressure monitoring (ABPM) to confirm a diagnosis. This means that if measurements taken in a clinical setting imply possible high blood pressure, patients will be fitted with a non-invasive ABPM monitor for a period of 24 hours to confirm or refute a diagnosis of high blood pressure.

The new guidelines will mitigate against incorrect diagnoses due to the white coat effect, ensuring that only those with genuine high blood pressure are treated with drug therapy.

The NICE Guideline Development Group (GDG) which was chaired by BPA trustee Professor Bryan Williams spent some 18 months examining every aspect of blood pressure care, from diagnosis to long-term treatment in all patient groups before making their recommendations to improve patient care.

They reviewed the accuracy of diagnostic methods, the clinical

effectiveness of the most widely used drugs as single and combination therapies and also the cost effectiveness of these therapies with respect to their ability to enhance a patient's quality of life.

ABPM Monitoring

Some of you may have had 24 hour monitoring through an ABPM when you were diagnosed with high blood pressure. ABPM has the advantage of giving a much broader and more natural picture of a patient's blood pressure profile as blood pressure readings are taken as someone goes about their everyday life. This is in contrast to using readings taken in a GPs clinic and will ensure that patients suffering white coat hypertension, a condition in which the clinical setting causes them anxiety and a subsequent increase in blood pressure, but who otherwise have a normal blood pressure will not end up being treated unnecessarily with antihypertensive drugs.

Patients who are concerned that they may have been misdiagnosed due to

"Updating the guidelines is great news for patients. It is all about getting the diagnosis right and treating those who need treatment and not those who don't."

**Professor Bryan Williams,
Chair of the NICE Guidelines
Development Group**

the white coat effect can discuss this at their next review and be re-checked using ABPM if there were/are no other indicators of high blood pressure.

A few patients may discover they were being unnecessarily treated and these patients need to be assured that the medicines they took will not have caused them any harm whatsoever.

Sufferers of 'white coat hypertension' should also continue to have their blood pressure monitored as they grow older, as they are highly likely to develop real hypertension.

The change won't take place overnight. Some GP surgeries do already offer ABPM, but others will have to acquire ABPM devices.

We should however expect to see all surgeries offering ABPM within a year or so as the new equipment is gradually introduced across England and Wales.



Changes to treatment

For patients over the age of 55 and people of African or Caribbean origin of any age the recommended early drug treatment is now a calcium channel blocker (CCB).

If a further medication is required, an angiotensin converting enzyme inhibitor (ACEi) or angiotensin-II receptor blocker (ARB) will be added.

These changes do not mean that patients will necessarily have their medicines altered. Patients who are happy on their medication may not need to change it unless it isn't working for them.

Newly diagnosed patients who require medication will however be

prescribed their treatment in line with the new recommendations.

The new guidelines also recommend the introduction of drug treatment for the over 80s which is good news in a society where we can expect to live longer than ever before. Treatment will be the same as for patients over the age of 55 taking into account any other conditions.

All these changes have been introduced to put the welfare of

patients first. Research into high blood pressure and the development of new therapies is continuously ongoing and new discoveries are being made all the time.

Periodically looking at these advances and reviewing the treatment of high blood pressure ensures patients receive the best care possible. Patients unsure of how the guidelines might affect them should talk to their GP.



2011 Know your Numbers!

Health professionals from across the UK armed themselves with blood pressure monitors and hit the nations streets and workplaces as we warned the UK that 'Ignorance isn't always bliss' during this year's Know your Numbers! Week.

We released new research that showed that nearly 75% of people with hypertension have the condition either uncontrolled or have not been diagnosed and so urged every adult to go and get their free blood pressure check during our eleventh Know your Numbers! Week.

Know your Numbers! Week plays a key role in us raising awareness about the dangers of high blood pressure to help reduce the thousands of preventable strokes and heart attacks it causes every year. This year more than 1,500 Pressure Stations helped test the nation's blood pressure and let each person tested know what their important blood pressure numbers were.

From as far north as the Orkney Islands, to St Austell in Cornwall in the south, via the Isle of Skye, Belfast, Denbighshire, Yorkshire, Lancashire, Norfolk, Birmingham and London, no part of the UK was without its share of Pressure Stations.

Supermarkets, Shopping Centre's, Farmer's Markets, Churches, Mosque's, Community Pharmacies, Gyms and Occupational Health departments turned themselves

into Pressure Stations and ensured the week was, once again, a run-away success.

NHS Highland set up nearly a dozen Pressure Stations, one of which tested shoppers in the Co-operative Superstore in Portree on the Isle of Skye, while in Wales Prestatyn Town Council opened its headquarters to the public. Police in Norfolk were among those to learn their blood pressure numbers by Total Health Pharmacy who set up one of their Pressure Stations in Watton Farmer's Market. Local MP George Freeman also

popped into the pharmacy to have his blood pressure checked too and said,

"This is a great initiative and one that I am delighted to see being taken up in Norfolk. Total Health Pharmacy is doing a fantastic job in promoting Know Your Numbers and conveying the message that 'out of sight out of mind' can be a devastating attitude to take.

"I was shocked to hear that despite such high levels of stroke and heart attacks in this country, almost three quarters of UK adults do not know their blood pressure numbers. I urge everyone to Know Their Numbers."

In Yorkshire, NHS Bradford and Airedale offered blood pressure checks at a whopping eight venues located in an indoor market, two shopping centres, three banks, a disabled people's centre and a mosque.

They chose venues that could enable people who might not have the opportunity to go to their GP for a test to have one, and that meant that a total of 411 people took up the opportunity for a free blood pressure check.



Mohammed Bostan gets his blood pressure checked by Atiq Siddique from Olive Pharmacy.

The Midlands saw the BPA team up with West Midlands volunteer emergency response team FastAid who set up their Pressure Station in Touchwood Shopping Centre. Touchwood Shopping Centre provided the space, furniture and advertising for the event with traders providing extra balloons and lunches for the FastAid volunteers. Local Solihull MP Lorely Burt lent her support by having her own blood pressure checked.

FastAid is a group of volunteers who are trained clinically to a national standard to enable them to respond to 999 calls in the community.

They had a tremendous response, testing around 500 people and are planning to continue running similar days offering blood pressure tests in the local community and to take part in Know your Numbers! Week next year.

Richard Jay from FastAid said,

"FastAid was really pleased to take part in the BPA's Know your Numbers campaign. A large number of calls we respond to are cardiac related which gives us a common link. The BPA is working hard to make people aware of the risks associated with high blood pressure and reduce the number of people suffering from the results of hypertension by giving them an opportunity to get checked.

"As responders to 999 calls we regularly see these people with cardiac disease when it's a problem and sometimes when it's too late. This was a great

opportunity for the two charities to work together and we are already looking forward to next year's Know your Numbers! Week."

In the wake of the newly launched NICE guidelines surrounding its diagnosis and treatment, high blood pressure was topical and messages of support were received from London Mayor Boris Johnson, MP Charles Kennedy and MP David Jones while newspapers and local radio stations spread the message about the campaign and its importance.

BPA Chief Executive Paul Newman said,

"We are really pleased with this year's campaign. To have Pressure Stations located literally the length and breadth of the UK offering potentially life saving checks to so many people is something to be proud of.

"I would like to thank everyone who took part and helped to make Know your Numbers! Week 2011 such a success."



Charles Kennedy, MP for Ross, Skye and Lochaber.

"The Blood Pressure Association plays an important role in combating the increasingly prevalent blood pressure-related health problems affecting the UK. The Know your Numbers! campaign is an excellent event that consistently manages to raise awareness of the dangers of high blood pressure, this essential work saves lives. Blood pressure problems are a creeping threat to millions of people in the UK. Thanks to the efforts of the Blood Pressure Association we can catch high blood pressure before it threatens lives, and often successfully manage the problem with only a handful of changes to our weekly shop."

David Jones, MP for Clwyd West.

"I strongly support the campaign. Having your blood pressure checked is a very quick and easy procedure and I would encourage everyone to take part."

MEET SOME OF OUR

fundraisers



Members and other supporters of the BPA are the backbone of the charity. Without your support we could not carry out the work that we do. There are lots of ways to get involved. Here are the stories of three of our remarkable fundraisers.

On March 31, Steven Primrose-Smith set off on a challenge that will take him three years to complete.

Raising money for the Blood Pressure Association, Steven is cycling to fifty European capital cities while simultaneously undertaking two Open University degrees - a BSc in Mathematics and a BSc in Physical Science, hoping to meet as many Open University students as possible along the way and to learn a little of as many languages as possible.

Steven, who nearly died in 2009 as a result of a brain haemorrhage caused by high blood pressure, is well on target. His journey began on the Isle of Man, and since Douglas, he has pedalled his way to some 16 capital cities, including London, Lisbon, Bratislava, Bern, Vaduz and Prague.

Having completed his planned first year, Steven will now take a break until March 2012.

To follow Steven's progress and learn more about his story, visit www.unicycle50.com

"The first stage of my twenty thousand mile bike ride is over. Since March this year, I've cycled six thousand miles, visited seventeen countries and sixteen capitals, spoken bits of ten languages and I've even eaten a marmot.

"Looking back now, there are almost too many memories to

process. I keep getting flashbacks: Britain's terrible, driving rain and terrible driving, beautifully sunny spring days in the Low Countries, middle-aged locals dancing drunkenly in Berlin's Kreuzberg, a very personal Prague city tour by a pretty local guide, meeting up with old friends in Graz, tea and cakes with an Open University student in Kitzbühel, cooling off in a Swiss lake, freewheeling for an hour down the Andorran side of a 2,400 metre pass, weeks of head-meltingly hot August weather in Spain and Portugal, and finally heaving my sweating, filthy self into Nerja on the Costa del Sol - this year's endpoint - for a three day-long party.

"Best of all, the studying went well. I'm still awaiting some results but those I've had so far are good. University cycling - or UniCycling - is the best idea I've ever had. It's certainly much better than the idea of eating that marmot."

If you would like to
fundraise for the
BPA, please visit
www.bpassoc.org.uk/HelpingUs
to find out
how.

BPA member Eliza Gwynne was just 20 when she was told she had high blood pressure and has now been on blood pressure medication for more than half her life.

Her father too had high blood pressure and suffered a fatal heart attack as a result when Eliza was just five years old.

Although her blood pressure is well controlled, Eliza wants to lose weight and has set herself a goal of losing 28 pounds (2 stone).

"I set myself a challenge to lose 28lbs in 14 weeks. Amazingly I appear to be on track and have now lost 21 lbs in 9 weeks and have raised almost £2,500. It is getting harder but with so much support from friends and family I know that I have got to keep going, not only for the benefit of the charity but also for my own health.

"Since losing the weight I am certainly feeling better and have already been taken off one of my daily blood pressure pills - which is as big an incentive as anything to keep going. Probably the biggest impact I have noticed is the ability to run faster and actually get to drop shots in tennis whereas before I would have assumed that there would be no chance of reaching them!

"Although I set myself a cut off point as the 9th December to reach my two stone goal I know that I will go on as I really would like to lose one more stone and feel that it is possible in time.

"I chose the Blood Pressure Association to support as it directly affects me - I have been a member for several years and have found the magazines very informative over the years with advice on everything from different types of medication available, to small changes in diet as well as many other information bits - all of which have been useful to myself and I'm sure lots of others as well."



Mark Edwards ran the 2011 London Marathon for the BPA back in March. Mark had a family history of high blood pressure and was told that he himself was pre-hypertensive while still in his forties.

He had an added incentive for potential sponsors. Anyone who sponsored him £10 to run the grueling 26.2 mile course had a chance of winning a shirt signed by the entire 2011 England football squad by guessing his finishing time. The closest guess won.

"I had been applying for a ballot place in the London Marathon for 4 years. Whilst I have always enjoyed attending the gym and keeping fit, distance running had never been an interest of mine, although I did want to take part and contribute to this iconic event.

"When I got confirmation of my position I was filled with excitement and trepidation. The training had to start and the weather in October/November was hardly inspiring. Nevertheless I downloaded a training programme and began pounding the street almost daily. Soon I began to actually enjoy the

process, willing myself to run harder and faster and recording my runs and routes on my phone I could see how well I was improving. I decided to run for the BPA as my family has a history of hypertension and it seemed ideal when my training would decrease my chances of developing the condition.

"When the day arrived I was prepared but still very nervous. The day turned out to be unseasonably warm so not the ideal conditions for a marathon. The response from the crowds along the route will remain with me for the rest of my life. I've never experienced such warmth and encouragement from strangers before. Secretly I had a hope of finishing in around 3:40:00 but made 3:56:59. I was determined to finish within 4:00:00 so I was very pleased that goal was achieved.

"All in all, it was an amazing experience and thoroughly worthwhile. Would, I do it again? Yes, but I will leave it a year or two before I try again. It has turned me into an occasional runner so it has left a lasting impression on me, equally so has its impression been left on my lowered blood pressure."

TOP 5 IDEAS To raise money for the BPA

Sign up to Everclick - Thousands of stores will donate to your favourite charity when you shop with them online. See our website for details or visit www.everyclick.com/fundraising/everyclick-search

Get sporty - Whether it's running, skydiving, hula hooping, cycling or simply walking, sponsored sports are always a popular way to raise money for charity



Lose pounds - Lose pounds to gain pounds. Try a sponsored slim like Eliza.

Car washing - Car wash fundraisers are a great money-maker. All you need are a few willing volunteers, a safe location with lots of passing traffic and some attention grabbing signs.

Car boot or garage sale - Get rid of unwanted items and raise money doing a car boot or garage sale.



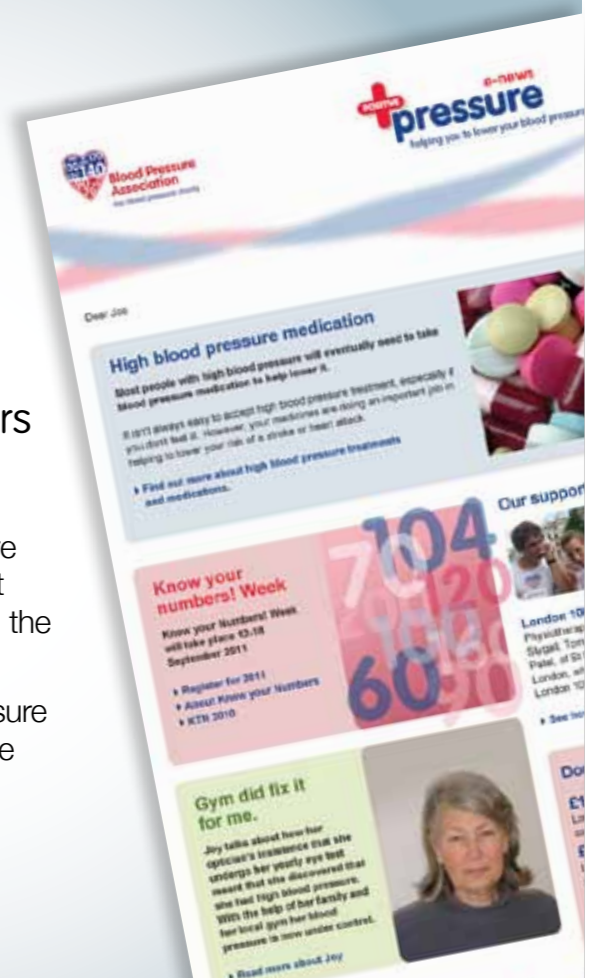
POSITIVE pressure E-newsletters

The BPA now offers 6 e-newsletters exclusively to all BPA members.

E-newsletter highlights so far have included an edition that looked at Salt and another that focused on the update to the NICE guidelines.

To receive the next Positive Pressure E-newsletter to your inbox, please email your name, membership number and email address to

info@bpassoc.org.uk



SWITCH on to ...and still get all the flavour of regular salts!

Eating too much salt (sodium chloride) can raise your blood pressure, tripling the risk of developing heart disease*. The Blood Pressure Association estimate that if the UK reduced its salt intake to 6g per person each day - a teaspoonful - 23,000 stroke and heart attack deaths could be prevented every year.

Can't do without salt, especially with certain foods?

That's why using **LoSalt**® is such a positive step - it has all the flavour of regular salt, but has 66% less sodium than table, sea and rock salt. It is also rich in natural potassium, a mineral vital for basic body function.

So switch on to LoSalt® today - the great tasting way to a healthier lifestyle

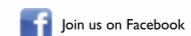
SPECIAL OFFER

To get the NEW **LoSalt**® Switch Salt and Pepper Shaker for the special price of £1.50 go to **our website or call us on 01355 238 464**

Love life ...Love **LoSalt**® www.losalt.com/switch



* Food Standards Agency



Blood pressure monitoring - A glimpse into the future



10 years ago the widespread use of home blood pressure monitors would have been unthinkable to many. So what will the future hold for blood pressure monitoring? We take a peak to see how and what we may be using to take our all important blood pressure numbers soon and in the future.



Isn't there an app for that?

Taking your blood pressure with the aid of a mobile phone is something most of us would not have imagined five years ago. However, the introduction of health monitoring gadgets and accompanying application software (apps) that enable us to monitor our health via our mobile phone is available to people today and is likely to become more widespread in the future.

Apps can be written to run on computers or on smartphones and with more than half the world's population (around 60%) now owning a mobile phone, the app is most certainly here to stay.

Smartphones run mobile operating systems such as Apple's iOS and Google's Android which enables them to function like a computer.

They can run third-party applications using advanced application programming interfaces (APIs) which means that an iPhone for example

can run an application developed by a health monitoring device company such as iHealth or Withings to accompany one of their gadgets.

One such device that is already available in the UK to help patients monitor their blood pressure is the iHealth Blood Pressure Dock, an attachment for iOS devices that can measure and record heart rate and blood pressure. The unit comes with a blood pressure cuff and a battery-powered dock that can also be used as a charging station for the iPhone, iPod Touch or iPad. It needs a mobile app to log the results which is free through iTunes or the iHealth website.

The competition for this device comes from the Withings BP Monitor which is also available in the UK. Unlike the iHealth model, the Withings monitor does not include a docking base. Instead the unit has an iPhone cable directly attached to the blood pressure cuff and simply plugs into an iPhone, iPod Touch or iPad.

With the added portability and convenience these monitors offer, they could soon provide a new means of personal health monitoring. At the moment, though, they are not clinically validated and users need to understand their limitations.

BPA Trustee, Professor Gareth Beevers says,

"The arrival of new technologies to monitor blood pressure is of great interest, and it will be interesting to see which ones will endure. The management of raised blood pressure is the responsibility of a partnership of the patient and his or her general practitioner, and any system which can facilitate this is to be welcomed. The time will come when patients will be able to transmit their BP readings to their GP electronically and the GP will be able to respond by the same route, thus minimising the need for time-consuming and costly visits to the health centre. Research will be needed to assess whether

such systems are accurate, cost effective and generally acceptable. Time will tell."

A health drive

The development of health monitoring gadgetry isn't confined to mobile phones though.

Leading car manufacturers such as Ford and Toyota are teaming up with health technology experts to develop new ways of monitoring a driver's health while he or she is behind the wheel, using technology even Knight Rider would be proud of.

Japanese manufacturer, Toyota has developed a steering wheel with built-in sensors that are able to detect and record the driver's heart rate and its electrical activity. It transmits the findings to the car's satellite navigation system via a microchip that is also built into the wheel. If the driver's cardiac signs appear unhealthy, the system sounds an alarm to warn the driver and can even slow the car down.

Motor giant, Ford, has taken a slightly different approach. They have developed a prototype driver's seat containing six electrodes sewn into the seat fabric where it makes contact with the driver's back.

They act like an electrocardiogram machine and can detect any abnormality in the heart's electrical activity that could signal a problem. A recorded message then alerts the driver to pull over and seek medical attention.

Ford says that a similar system could be developed to detect high blood pressure and it could even be possible to incorporate into the system a means of automatically calling 999 and guiding paramedics to its location.

With nearly one quarter of Europeans expected to be 65 years or older by 2025, the idea of these kinds of

in-car safety systems is to help prevent accidents caused by drivers collapsing behind the wheel, keeping the roads safe for all users.

Whether it's using a miniature health monitoring device or employing a sophisticated in-car sensor to help in accident prevention, one day we may all be taking part in this technological revolution.





My story

Mark Curtis-Jenno was just 47 years old when high blood pressure devastated his family.

Mark loved working out, was a keen weightlifter and loved his motorbike. He was hugely family orientated and adored his wife and best friend, Kaz Curtis-Jenno. Me.

Mark seemed well and although he was aware that his blood pressure was possibly higher than it should be, neither he nor we knew how tragic the effects of high blood pressure could be. We thought it was only a problem for older people, not us in our forties. Nor had he been offered any treatment to lower it.

It was while out on his motorbike one day that Mark suddenly and without warning, became very ill; so ill that an ambulance had to be called.

As a result of his raised blood pressure, Mark had suffered an aortic dissection; a dangerous tear in the inner wall of the aorta, the main blood vessel taking blood from the heart.

The tear in Mark's aorta was in the chest area of the vessel where it leaves the heart, and he needed emergency surgery to give him any chance of surviving.

Although in a lot of pain and very frightened, Mark was awake and able to talk as he was rushed for surgery at the John Radcliffe Hospital in Oxford. Because he was so lucid, I had no idea how seriously ill he really was.

Surgery for an aortic dissection is complex and not without risk, but Mark's operation was thought to be a success. His aorta was mended.

After his surgery, Mark was taken to the Cardiothoracic Critical Care Unit at John Radcliffe to recover. Here he remained in a coma as a dedicated team of doctors and nurses worked tirelessly to support him, me and the rest of our large family over the following two weeks as we waited for him to come round.

Tragically, too much damage had been done and Mark never did wake up.

His heart failed and despite attempts to resuscitate him, the medical team eventually had to concede defeat and on August 4th 2010 Mark Anthony Curtis-Jenno passed away, with his parents, sisters and me by his side.

Since then, I have set up the Mark Curtis-Jenno Charity to try and warn others about the dangers of high blood pressure. The charity has a website which links directly to the Blood Pressure Association's website and I run events to raise money and awareness.

Through doing this, I feel that I am helping to prevent other needless deaths due to high blood pressure and feel that Mark's death wasn't completely in vain.

Visit the Mark Curtis-Jenno Charity at <http://markcurtisjenno.co.uk/>

Interview with Kaz Curtis-Jenno

What is the aim of your charity?

I had more than one reason for setting it up. Partly it was a way to keep Mark's memory alive, but I also wanted to try and prevent other families from going through what we have. If we had known the effects of high blood pressure before, Mark's death could have been prevented and I would still have my husband.

What will the charity do?

The website provides information about the dangers of high blood pressure and links through to the Blood Pressure Association's website. We also organise sponsored events like bike rides and walks to raise money. At these events we provide information about high blood pressure and its dangers and try to spread the word about the importance of getting it checked.

How do you want the charity to develop in the future?

Obviously, we want to continue to help to raise awareness about high blood pressure and raise as much money as we can. Some people are wary of donating to a charity that isn't a registered charity though, so ideally I would like it to become a registered charity. To do this we need to raise at least £5000.00 a year, so getting known now is really important.

Will you be promoting cardiovascular health to any group of people in particular?

To anyone and everyone. To anyone who will listen. Everyone needs to understand how vulnerable they are to cardiovascular disease and how to take care of themselves. Most people don't learn about it until it is actually too late. We want to change that and make a difference. We want to reach the young so they don't make the mistakes most of us do and those older who may need support in managing a condition.

What kind of events have you run and what do you have planned for the future?

Earlier this year we had an event at the Willow Tree pub in Langley which was Mark's local. It was to celebrate what would have been his 48th birthday. Many of his family and friends cycled the last route which Mark rode on the day he became ill, from Windsor to Henley. We dressed as superheroes and got sponsored to do it.

Our next sponsored event is a dog walk, but everyone is welcome even if you don't have a dog.

If you had one piece of advice for readers, what would it be?

Never underestimate how dangerous your condition can be if it isn't controlled. High blood pressure took my Mark from me. Even if he had woken up from his coma, he would have been brain damaged and paralysed as a result of what happened to him. I would have lost him either way, and he would have hated being so badly disabled. Keep supporting the Blood Pressure Association with your membership so they can keep helping people to take control of their blood pressure and live longer and healthier lives.



What is an aortic dissection?

The aorta is the major artery carrying blood from the heart.

When it leaves the heart, the aorta first moves up through the chest toward the head. It then bends or arches, and finally moves down through the chest and abdomen.

Aortic dissection is a very serious, potentially life-threatening condition in which a tear in the inner wall of the aorta means that blood can flow between the layers of the vessel wall and force them apart.

If the dissection tears the vessel completely open, this is known as a rupture and can result in massive internal bleeding.

An aortic dissection usually occurs in the chest portion of the artery, but may also occur in the abdominal portion.

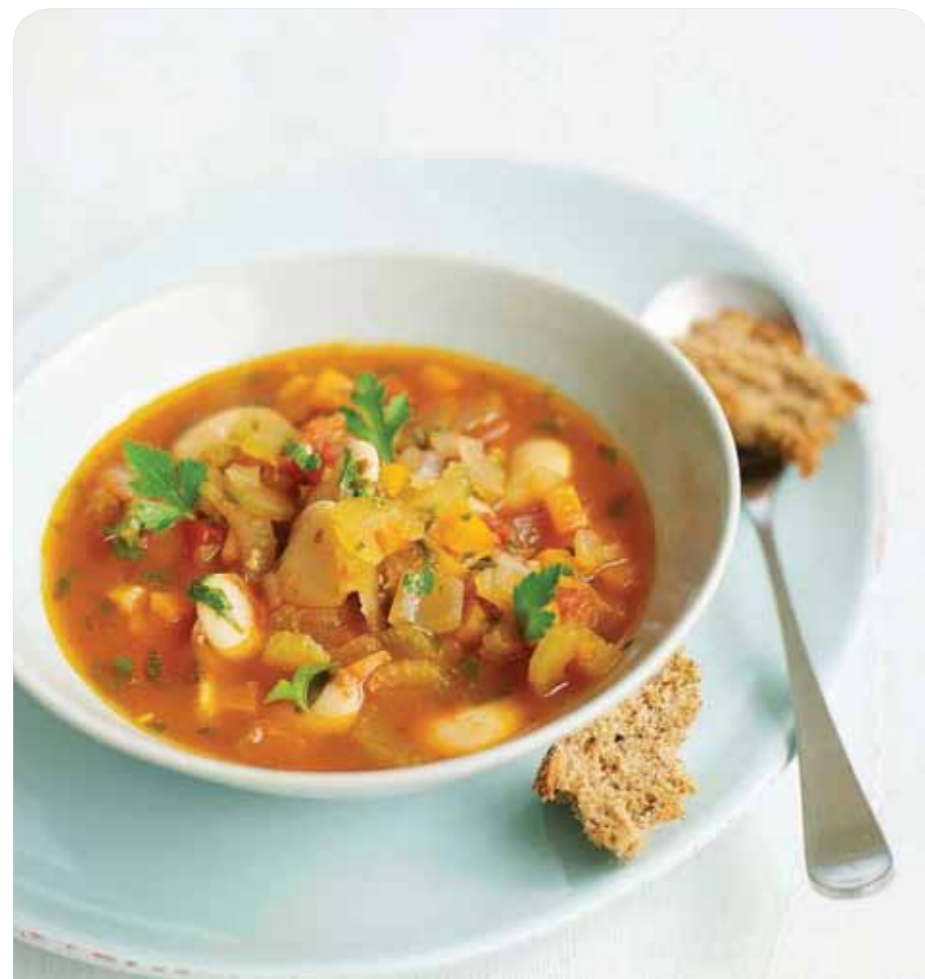
Aortic dissection occurs in approximately 2 out of every 10,000 people. It can affect anyone, but is most often seen in men aged 40 to 70.

Traumatic injury is a major cause of aortic dissection e.g. hitting the steering wheel of a car in an accident, but other causes include atherosclerosis (hardening of the arteries) and high blood pressure.

It can be managed with surgery if it is done before the aorta ruptures, but less than half of patients with a ruptured aorta survive.

butterbean goulash soup

Although this soup is vegetarian-inspired, you can easily add 250g of lean minced beef to the vegetables, making it more hearty. I often like to serve this soup with some pieces of torn wholemeal bread toasted until golden in the oven or under the grill and drizzled with olive oil.



Ingredients

- 1 tablespoon olive oil
- 1 onion, peeled and chopped
- 2 carrots, peeled and cut into 5mm dice
- 2 sticks celery, peeled and thinly sliced
- 1 garlic clove, crushed
- 1 teaspoon caraway seeds, coarsely crushed
- 1 tablespoon Hungarian sweet paprika
- 1 x 200g can no-added-salt tomatoes
- 1 tablespoon no-added-salt tomato purée
- good pinch of sugar
- 300g cooked butter beans
- 800ml vegetable stock (if using ready-made products or stock cubes use 'low-salt' varieties)
- 2 tablespoons chopped fresh flat-leaf parsley
- freshly ground black pepper

Serves 4

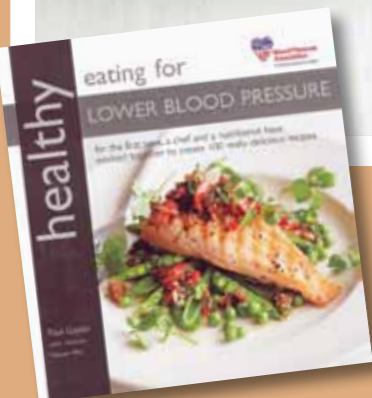
Heat the olive oil in a heavy-based saucepan. Add the onions, carrots, celery and garlic and caraway seeds and cook for 4–5 minutes until lightly softened but not coloured. Add the paprika and cook for a further 2 minutes.

Add the tomatoes, tomato purée and sugar, then add the butter beans. Pour on the stock, bring to the boil, reduce the heat and simmer for 20–25 minutes until the vegetables are tender. Add the chopped parsley, season to taste with black pepper and serve.

4 PORTIONS:

KCALS	143
PROTEIN	8G
FAT	4G
SATURATED FAT	0.4G
CARBOHYDRATE	20G
SUGAR	7.9G
FIBRE	5.7G
SALT	0.26G
SODIUM	104MG

Order your copy of 'Healthy eating for lower blood pressure' today for just £14.99 through our webshop www.bpassoc-shop.org.uk or call 020 8772 4994



Christmas Shop

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Support our work and choose from three festive designs 'Three Kings', 'Snowman' or 'Christmas Trees', with 100 per cent of profits going to the Blood Pressure Association (10 cards in each pack).

Hypertension – Fast facts £13.99

Written by BPA Chairman, Professor Graham MacGregor and Professor Norman M Kaplan.

Online Christmas shopping?

Remember to use The Giving Machine this Christmas to generate free cash donations for the Blood Pressure Association every time you buy online. It will not cost you anything extra - the online shop pays the donation on your behalf. SIMPLY go to

www.thegivingmachine.co.uk

JOIN as a shopper/giver
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POSITIVE pressure

Sign up for your copy

If you've enjoyed this magazine but this isn't your own copy, then why not sign up to become a BPA supporter and have your own Positive Pressure delivered direct to your door? You'll receive two issues of Positive Pressure a year and a host of other benefits, including:

- Our jargon-busting 'A-Z of blood pressure'
- Optional e-mail news and information updates
- Special offers with partner organisations
- An opportunity to take part in our research and help develop future resources for the charity.

You'll also be supporting our charity to help us raise awareness of high blood pressure and support those living with the condition.

Blood Pressure Association
the blood pressure charity



Call us on 020 8772 4994 or visit www.bpassoc.org.uk/Supportingyou



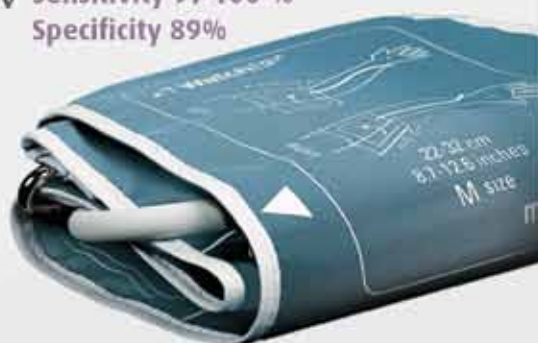
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