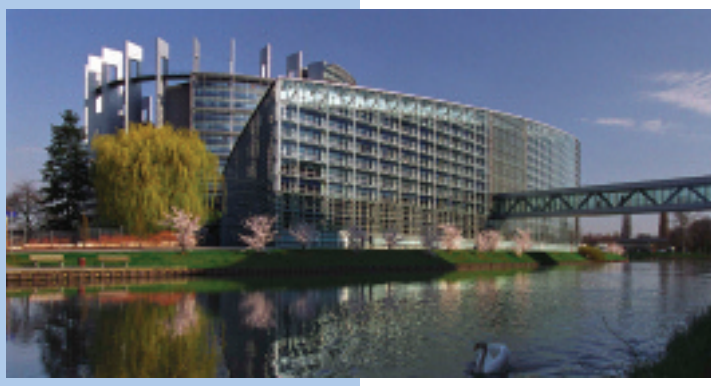
S T R O K E

A Preventable Catastrophe

The Need for European Action



Co-Hosts
Richard Balfe, MEP
Minerva Malliori, MEP

European Parliament
19 June 2003

The **European Federation of Neurological Associations (EFNA)** brings together European umbrella organizations of neurological patient advocacy groups, to work with other associations in the field of neurology, including the European Federation of Neurological Societies (EFNS), in what has been termed as a "Partnership for Progress."
In October 2001, EFNA was officially launched at the European Parliament in Strasbourg in an event hosted by John Bowis, Member of the European Parliament for London. The initiative was warmly welcomed by Commissioner David Byrne (Health and Consumer Protection DG), who met the EFNA Board to discuss further collaboration.

The Federation engages in activities, which contribute to the advancement of neurology and related areas with a view to improving the quality of life of people living with neurological conditions, their families and carers.

Concern about the severe disability caused by stroke is EFNA's reason for getting involved. Although the disease has its origin in the cardiovascular area, the devastating consequences cause avoidable neurological misfortune. To avoid loss of quality of life and the heavy burden of disability, we strongly recommend the timely prevention and treatment of hypertension.

For more information about the European Federation of Neurological Associations, please visit:
http://www.efna.net/index.htm

The **European Institute of Women's Health (EIWH)** is a non-governmental organization working to make the health and well-being of women a priority for the European Commission and Member States of the European Union.

The EIWH is working to achieve its objective by:

- Undertaking research at European level on women's health issues and disseminating results as widely as possible.
- Promoting gender equity in treatment and care.
- Making information available to politicians, policy makers, media/health professionals, NGOs, organizations and individuals with an interest in women's and family health.
- Presenting specific recommendations to Members of the European Parliament on women's health issues.
- Raising awareness of their own health and their role in education about healthy lifestyles, by providing information on the prevention of disease, risk factors, early detection and early treatment.
- Encouraging women to become more involved in deciding policies that affect their benefits.
- Promoting the teaching of gender health issues in medical and health curricula.
- Highlighting the need to increase the number of women leadership positions in the health professions to include scientists and researchers.
- Liaising at international, European and national level with professional voluntary, government and non-governmental bodies, with similar interests to the EIWH.

For more information about the European Institute of Women's Health, please visit:
http://www.eurohealth.ie/

The **European Society of Hypertension (ESH)** is a Scientific Society registered in Switzerland, whose members are experts in the clinical and experimental aspects of hypertension in all countries of Europe. Its aims are helping the progress of our understanding of hypertension, improving management and control of high blood pressure. Among its goals is spreading of information and facilitating education for prevention of the cardiovascular and neural consequences of hypertension. ESH also certifies hypertension specialists in European countries. ESH holds annual scientific meetings. Its official scientific journal is the Journal of Hypertension.

For more information about the European Society of Hypertension, please visit: **http://www.eshonline.org/**

Cover photo provided by the European Parliament

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Executive Summary

In June 2003, a strategic workshop in the European Parliament stressed the urgency of tackling the prevention of stroke at the European and national level to avoid unnecessary deaths and disability. Hosted by two prominent European Parliament members, the workshop, involving a panel of internationally recognized researchers, medical experts, European health-policy makers, and patient groups, asserted that European governments must act immediately to prevent stroke, especially in patients with hypertension.

Currently, stroke is the third leading cause of death throughout Europe and is strongly linked to high blood pressure. Proven preventive treatment is now available to reduce stroke in hypertensive patients to a greater degree than that previously obtained with standard treatment. However, many Europeans do not have that choice, as access to such treatments is a lottery based not on numbers, but rather the country in which they live. EU governments must ensure that European citizens reap the benefits of scientific advances, by making such therapies available to all patients.

To help the European Union and its member governments combat the menace of stroke, the workshop tabled a 10-point action plan. The goals of the plan are to raise political awareness of the link between hypertension and stroke and to encourage the effective treatment of individuals with high blood pressure to reduce the risk of stroke. The action plan calls for swift implementation of the new (2003) European Society of Hypertension/ European Society of Cardiology Guidelines, which are designed to help physicians make treatment decisions for their hypertensive patients. The European Union must now join forces with Member State governments to muster the political will to act on these 10 key points to prevent stroke-related death and disability throughout Europe.

Introduction

Hypertension afflicts approximately 60 million people worldwide and represents the number one modifiable risk factor for stroke. Currently, stroke is the third leading cause of death throughout Europe. The link between hypertension and stroke is well established, as evidenced by a strong correlation between the prevalence of hypertension and stroke incidence.[1]

Medical experts attending the workshop agreed that stroke is a catastrophic disease that could largely be prevented with appropriate measures for preventing and treating hypertension.

What Is Hypertension?

Hypertension (or consistently raised blood pressure) is a risk factor for a wide range of diseases, including stroke and heart disease. If inadequately treated, hypertension leads to stress and trauma of the blood vessel walls, which can give rise to bleeding and blood clots within the vessels. The risk of stroke increases the longer a person has been exposed to high blood pressure and the higher his or her blood pressure has climbed.

While hypertension plays a central role in the development of many strokes, it also represents the risk factor most susceptible to treatment. Even a modest reduction in blood pressure pays large dividends — as many as 4 in 10 strokes can be prevented.[2]

What Is Stroke?

Stroke is a vascular disease characterized by the sudden death of brain cells resulting from impaired or damaged blood flow to the brain. The global impact of stroke is staggering, with more than 5.5 million deaths from stroke worldwide in 1999.[3] While often considered a disease of aging, approximately one third of strokes occur in patients under 65 years of age.

A recent article published in the Journal of American Medical Association compared the occurrence of hypertension and stroke in Europe with the United States.[4] This article highlighted the direct correlation between the prevalence of hypertension and stroke mortality, and, significantly, showed that the prevalence of hypertension is 60% higher in Europe than in the United States and Canada.[4]

In addition to causing death, stroke is the second leading cause of neurological disability in Europe. This means that surviving stroke victims place enormous financial, emotional and social burdens on their family members, who are frequently left responsible for their care.[3] Stroke can produce a number of disabling problems, including difficulties in movement, balance, swallowing, walking, speaking, dressing, feeding, control of bladder or bowel movements, vision and mood. Stroke survivors also experience much higher rates of depression than non-stroke patients.[5]

Hypertensive patients with diabetes mellitus are especially at high risk of experiencing a stroke. Diabetics are two to four times more likely to develop cardiovascular disease than other patient groups. Heart disease and stroke are major causes of premature death in this patient population.

The predicted escalation of the number of individuals with diabetes in the future is likely to contribute to an epidemic of cardiovascular diseases.[6] In many countries, costs related to managing diabetes complications account for about 5% of the total national healthcare budgets.

Over the long term, investing in health education and primary prevention strategies to guard against obesity, diabetes, hypertension, and stroke may be the most effective measure to prevent these conditions. However, in the short term, more immediate medical intervention, especially effective treatment of hypertension, is critical for those at risk of stroke. This assertion concurs with the conclusions of the European Parliament strategic workshop: *stroke is a preventable catastrophe!*

Occurrence of hypertension in adults in European and North American Countries

Country	Percentage of Adults Aged Between 35-74 with Hypertension (Blood Pressure at or above 140/90-mm)
Europe	44.2%
1. Germany	55.3%
2. Finland	48.7%
3. Spain	46.8%
4. England	41.7%
5. Sweden	38.4%
6. Italy	37.7%
North America	27.6%
7. US	27.8%
8. Canada	27.4%

Data extracted from Wolf-Maier K et al JAMA. 2003 May 14; 289(18):2363-9.[4]

Stroke: A European Catastrophe

The European Parliament workshop addressed the urgency of tackling the prevention of stroke at the European and national level to avoid further unnecessary death and disability. Hosted by two prominent members of the Parliament, **Richard Balfe (UK) and Minerva Malliori (Greece)**, the meeting tapped into the wealth of experience of numerous internationally recognized researchers, medical experts, European Commission officials and patient groups. It concluded that European governments must act immediately to ensure that the latest scientific developments are translated into clinical practice to prevent stroke.

To this end, the participants developed a 10-point action plan for the European Union and its member governments to combat stroke. Members of the European Parliament volunteered to be the standard bearers for stroke prevention throughout Europe.

Workshop Speakers

- **Richard Balfe, MEP** (British Conservative) workshop host
- **Minerva Malliori, MEP** (Greek Socialist) workshop host
- **Professor Alberto Zanchetti,** past President of the European Society of Hypertension
- **Jean Georges,** Secretary General of the European Federation of Neurological Associations and workshop chair
- **Professor Björn Dahlöf,** Associate Professor of Medicine, Department of Medicine, Sahlgrenska University Hospital, Gothenburg
- **Professor Peter Brücke,** Heart Surgeon and stroke survivor
- **Dr Tapani Piha,** European Commission, Public Health and Consumer Protection Directorate-General

Setting the Scene

Panel of Speakers, from L-R, Prof. Peter Brücke, Richard Balfe MEP, Jean Georges, Minerva Malliori MEP, Prof. Alberto Zanchetti, Dr Tapani Piha

Jean Georges, Secretary General of the European Federation of Neurological Associations (EFNA): "It's very important to stress that prevention is possible."

Professor Zanchetti, past President of the European Society of Hypertension (ESH), emphasized the enormous burden that stroke places on our society. 1999 estimates indicate that stroke resulted in more than 5.5 million deaths worldwide.[3] He also noted that the law of thirds applies to stroke patients: a third die within a year, a third are permanently disabled, and a third recover.

The incidence of stroke is closely related to age, with 70% of strokes occurring in people over the age of 65 years. Stroke events are more common among low income groups. Men have nearly always a higher mortality rate than women except for older age groups and this may be due to women's greater longevity.

Main Risk Factors for Stroke

High blood pressure and smoking represent two of the chief risk factors for stroke. Since 60% of the populations of many countries have high blood pressure, this suggests that a staggering number of individuals are at increased risk of developing a stroke. Other risk factors include high cholesterol, obesity, diabetes, and irregular heartbeat (atrial fibrillation). Diabetics, many of whom also suffer from hypertension, are especially vulnerable to developing a stroke.

Professor Zanchetti said that medical research clearly demonstrates the very strict correlation between blood pressure and stroke. He noted that, alongside screening for hypertension, public health education, particularly promoting lifestyle changes, is a key area that we must address to impact the enormous burden of stroke. Currently, however, lifestyle changes tend to receive lip service but little else.

Europe Lags Far behind North America in Preventing Stroke

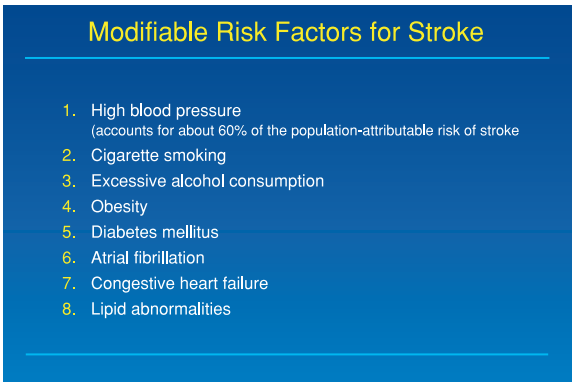
Professor Zanchetti referred to a recent report reviewing the prevalence of hypertension and stroke in Europe compared to United States and Canada.[4] Hypertension is 60% more common in Europe than on the North American continent and Stroke is also about 60% more common in Europe. The article published in JAMA concludes that these findings have implications for national prevention strategies and should be vigorously explored.[4]

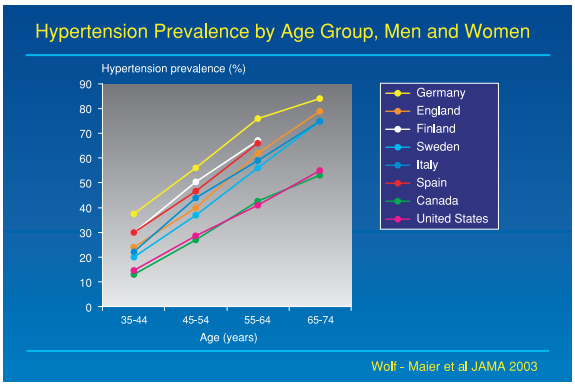
In **Professor Zanchetti**'s view, these startling findings are due to the medical profession in Europe being generally less alert to the need to screen regularly for high blood pressure, one of the leading risk factors for stroke, and to adopt life-saving strategies in hypertensive patients. European Union Member States lag far behind the USA and Canada in recognising the scale of the hypertension problem in public health planning.

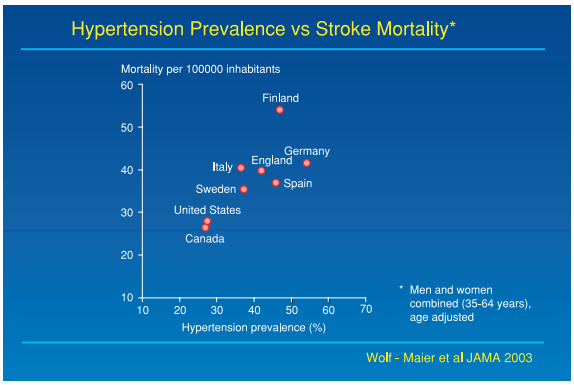
Treatment

Although side effects were once a major barrier to using blood pressure-lowering drugs, this is no longer the case. Most of the current anti-hypertensive drugs are safe and well tolerated, and the most recent among them, the angiotensin receptor antagonists, have no more side effects than a placebo.

Professor Zanchetti informed the audience that the European Society of Hypertension and the European Society of Cardiology (ESH/ESC) have recently published Guidelines on hypertension management.[7] These Guidelines are designed to help







Extracts from Prof. Zanchetti's presentation

physicians make treatment decisions for their hypertensive patients, and **Professor Zanchetti**, urged the medical community to adopt these guidelines swiftly.

The new ESH/ESC Guidelines now recognise recent clinical trial evidence that benefits of anti-hypertensive therapy are largely due to the effective reduction of blood pressure, whatever the drugs employed are, but that angiotensin receptor antagonists, in addition to reducing the risk of Stroke also slow the progression of several diseases in diabetic patients.

Position Statement:
Purpose of the Guidelines

- ***The Guidelines have been prepared by an Expert Committee appointed by the European Society of Hypertension and the European Society of Cardiology, and have been endorsed by the International Society of Hypertension.***

- ***These have been prepared on the basis of the best available evidence on all issues deserving recommendations, and with the consideration that Guidelines should have an educational purpose more than a prescriptive one.***

- ***Although large randomized controlled trials and their meta-analyses provide the strongest evidence about several aspects of therapy, scientific evidence is drawn from many sources and, where necessary, all sources have been used.***

Extract from Prof. Zanchetti's presentation Reproduced from the 2003 ESH/ESC Guidelines for the management of arterial hypertension. J Hypertens 2003;21: 1011-1053.[7]

Professor Zanchetti: ***"Treatment is needed now for those at risk. It is possible to measure the failure of prevention in Europe, simply by looking at the current prevalence of stroke."***

Personal Account of a Stroke Survivor

Retired heart surgeon and stroke survivor **Professor Peter Brücke** delivered a moving personal account of his experience as a stroke victim. During a period of enormous pressure at work, he experienced a stroke whilst performing a multiple by-pass operation on a patient. Professor Brücke exhibited the typical symptoms of a stroke, and he was forced to let his surgical associate finish the operation. Since he was in a major hospital at the time, he was treated immediately. Professor Brücke pointed out that he had been previously diagnosed with high blood pressure but unfortunately had not started antihypertensive treatment.

Professor Brücke described his feelings and emotions as he abruptly changed from a respected hospital doctor to a stroke patient. He recounted his three-month journey to recovery and the adoption of a less work-laden lifestyle.

Professor Brücke

Professor Brücke: ***"My own experience shows that it is possible to survive a stroke if one has immediate medical attention and treatment. However, it should be emphasized that prevention is the most important way of getting this terrible affliction under control."***

The Link Between Hypertension and Stroke

Professor Björn Dahlöf, a leading hypertension expert from Sahlgrenska University Hospital, Gothenburg, Sweden, emphasized the relative public unconcern about the consequences of high blood pressure. According to a WHO project in Sweden, approximately one third of the population with high blood pressure were receiving therapy and, of these, only one third actually received optimal treatment and were cured.[8] This study illustrates the fact that many hypertensive patients receive sub optimal treatment. The link between hypertension and stroke has been well established, and even a modest reduction in blood pressure would pay big dividends.

Professor Dahlöf

Professor Dahlöf: ***"Stroke is an enormous burden on public health and there are excessive costs linked to this. But the good news is that stroke is dependent on modifiable risk factors. We can do something about it. When effective means to lower high blood pressure are available, just use them."***

Future trends in terms of stroke prevalence are bleak, **Professor Dahlöf** said. The problem of increasing numbers of diabetics and hypertensive patients is compounded by mounting numbers of older people. Eastern and Central European countries have higher stroke rates, and this will swell the numbers once these countries join the European Union.

Professor Dahlöf: ***"It is a disgrace that so many strokes are due to uncontrolled blood pressure. Stroke is a preventable catastrophe and, because of its severe, long-term, disabling consequences, it should be feared more than a heart attack."***

Our modern lifestyle, particularly a lack of physical activity, plays an important role in the increase of stroke. It can be said of the modern epidemic that we now rest ourselves to death. Inactivity is an equivalent risk to smoking. If individuals stopped smoking and started to take moderate exercise, we would have really achieved something.

Professor Dahlöf pointed out that there is hope to reverse these trends if the right efforts are undertaken now.

New Treatment Approaches

The LIFE study, published in The Lancet in 2002, demonstrates that a new hypertension medicine, an angiotensin receptor antagonist, compared to standard treatment, significantly reduced the combined risk of cardiovascular death, heart attack and stroke in patients with hypertension and left ventricular hypertrophy (a thickening of wall of the heart's left chamber, usually due to long-standing high blood pressure) by 13%. The risk of stroke alone was reduced by 25%.[9]

Even greater benefits were seen among patients with diabetes: in comparison to standard treatment, the new onset of diabetes was reduced by 25% with the new treatment. In patients with pre-existing diabetes, cardiovascular illness and mortality were reduced by 24% and cardiovascular death by 37%. This is a particularly encouraging finding given the potential explosion of diabetes in the years ahead.

The LIFE study was one of the largest hypertension trials of its kind, looking at over 9000 people between the ages of 55 and 80 years old, of which over 54% were women.

What is Currently Being Done at EU Level to Address Stroke?

Dr Tapani Piha from the European Commission's Public Health Directorate provided an overview of the European Community's current strategy to improve public health. Under Article 152, the European Union has the Treaty obligation to ensure a high level of health protection for Europe's citizens. The 2003-2008 Public Health Action Programme mentions cardiovascular diseases as one of the main burdens on society.[10]

Many of the health problems facing European Union citizens are interrelated. Accordingly, the European Union needs to find an integrated public health formula that addresses the core issues central to all of the problems. **Dr. Piha** welcomed the new ESH/ESC Guidelines, which call for earlier intervention to reduce the blood pressure levels and noted that the recommendations represent a good start. These Guidelines can be a vector to redress the devastating damage caused by untreated high blood pressure.

Dr Tapani Piha: ***"The selection of public health approach within Europe is a political decision taken by the European Parliament and Member States. A workshop like this is therefore of double importance as it provides decision-makers with the necessary information to speak up about the need to tackle the disease, and it brings together decision-makers and opinion-leaders necessary to generate the political will to find solutions to address cardiovascular diseases and hypertension."***

Key to Stroke Reduction

Summarising the discussion that followed the presentations, meeting Chairman **Jean Georges** concluded that the number of European citizens falling victim to stroke could be significantly reduced if timely preventive action were taken. The onus is on national governments to pay greater attention to what is a critically neglected disease area. The challenge to European institutions is to encourage national governments to summon the political will to act.

Mary Banotti, MEP (front) and John Bowis, MEP (back)

Mary Banotti, MEP: ***"We must be present in Brussels pushing our agenda if we want to achieve tangible results. As a nurse, I appreciate the efforts taken by the workshop organisers to address stroke at the European Parliament. This event provides the platform to start interaction between the medical community, patients, and MEPs to effectively address Stroke and reduce its prevalence in Europe. The link between diabetes and hypertension needs to be highlighted."***

A 10-Point Action Plan to Tackle Stroke

1. **Update the 1994 Council Resolution on Cardiovascular Disease.**
   The 1994 Council Resolution on Cardiovascular Disease is an excellent basis for focusing on health policy and tackling stroke prevention. The Resolution should be updated, in line with the Public Health Framework Programme, which has identified cardiovascular disease as one of the 5 major burdens of disease on society and to take the situation in the 10 new Member States into account.

2. **Insist on proven preventive treatment and alert health policy makers to the "real" cost of inaction.**
   Health education is the key to long-term prevention; but effective preventive treatment must be made available for those at immediate risk. Inaction in treating hypertension will increase the burden of stroke and disability, including the associated cost of long-term care and loss of quality of life.

M. Malliori, MEP: ***"Health education must include both the long-term and the short term perspective. It should start at school and be continued throughout life to ensure all citizens are aware of the damaging effects of stroke and know about preventive measures.***
The message that the deadly and disabling consequences of stroke are preventable through medical treatment must be reinforced with the medical community. Also, timely education about the new medical developments to tackle stroke must be strengthened."

3. **Raise awareness on the part of the medical community and general public on the link between stroke and hypertension as well as other contributing risk factors for stroke.**
   Under the European Union Public Health Framework, education programmes for the public could and should be developed to secure forceful action. For instance education could begin in schools, stressing the benefit of diet, exercise, and the disastrous effect of smoking. For those at immediate risk of stroke, it is important to know that medical interventions such as screening and medications are available.

Peggy Maguire (EIWH) European Institute of Women's Health

Peggy Maguire, ***Director General European Institute of Women's Health "There is an abundance of evidence linking stroke and hypertension. It is sitting on the shelf. Now is the time for action."***

4. **Ensure the clinical application of available scientific evidence by implementing the ESH/ESC Hypertension Guidelines.**
   The new ESH/ESC Guidelines have been prepared on the best available evidence. Often there is a gap in continued medical training of physicians. Swift adoption of the guidelines would not only bring long-term savings for healthcare and social services budgets: it would also save lives and reduce disability and the consequent burden placed on families and care-takers.

John Bowis MEP: ***"Clearly, one part of the answer is the health promotion policy which the EU has been embarking on to persuade people to change their lifestyles and follow medical advice. It is also partly, I suspect, a question of medical training, increased continuity of care and cross-over knowledge."***

5. **Support patient groups and consider launching a European Patient Group for Stroke Prevention.**
   Patient groups are playing an ever more important role in health policy and national healthcare decision-making. To coordinate and strengthen action to prevent stroke across Europe, patient groups are eager to establish a European Patient network against stroke.

Jean Georges: ***"I fully support the formation of a dedicated European Patient Group on Stroke Prevention and Hypertension and am sure that the EFNA would be very interested to join forces with such a group in order to effectively address health risks."***

6. **Facilitate sharing of information and best practices between Member States to develop prevention programmes.**
   Under Article 152 of the Treaty, the European Union could significantly improve the health of European citizens by identifying and promoting best practice in stroke prevention.

7. **Set realistic, time-based health targets for stroke reduction and measure progress.**
   The European Commission aims to produce comparable information on health and health-related behaviour of the population, on diseases and on health systems. This is based on commonly agreed upon indicators with regard to their definition, collection, and use. The purpose is to make stroke prevention a priority under the new health monitoring scheme so that appropriate age and gender-specific statistics of prevalence, incidence, and disability are gathered. This will provide a full European picture, allow benchmarking and measuring progress.

8. **Ensure new preventive treatment is made available to those at risk and that healthcare budgets are allocated accordingly.**
   There must be a better translation of up-to-date knowledge into clinical practice. Governments must ensure that their limited budget resources are spent effectively and there where a difference can demonstrably be made.

9. **Ensure stroke and hypertension are priority disease areas within the European Health Portal.**
   As part of the new Public Health Framework programme and the G10 Communication, the Commission is developing a European Health Portal intended to disseminate information concerning all aspects of public health to health professionals, citizens and patients alike. To ensure that such an information system is user-friendly for patients and the general public, patient groups should be involved in the creation of the Health Portal.

10. **Explore the possibility of a European Parliament Own-Initiative Report on Hypertension and Stroke to make stroke prevention a political priority.** Members of the European Parliament understand the importance of addressing cardiovascular risk for those constituents they represent. They therefore should be willing to initiate European programme effectively to reduce tobacco consumption, encourage healthy diets and greater physical activity, and to encourage appropriate preventive treatment. An own-initiative report, including the 10 new Member States, would rekindle broad political interest and action in Europe.

Richard Balfe, MEP: ***"The challenge exists now for the European Union to hammer home the 10 key points on stroke prevention that emerged from the workshop and to use all the powers at its disposal to pressure European governments to introduce measures to prevent people from dying and from being disabled when they need not be."***

10-Point Action Plan. Summary

1. Update the 1994 Council Resolution on Cardiovascular Diseases
2. Insist on proven preventive treatment and alert health policy makers to the "real" cost of inaction
3. Raise awareness on the part of the medical community and general public on the link between stroke and hypertension as well as other contributing risk factors for stroke
4. Ensure the clinical application of available scientific evidence by implementing the ESH/ESC Hypertension Guidelines
5. Support patient groups and consider launching a European Patient Group for Stroke Prevention
6. Facilitate sharing of information and best practices between Member States to develop prevention programmes
7. Set realistic, time-based health targets for stroke reduction and measure progress
8. Ensure new preventive treatment is made available to those at risk and that healthcare budgets are allocated accordingly
9. Ensure stroke and hypertension are priority disease areas within the European Health Portal
10. Explore the possibility of a European Parliament own initiative report on hypertension and stroke to make stroke prevention a political priority

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