



A healthy heart for  
European women



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# introduction

On October 7th, 2004, a workshop was held on the topic 'Challenges for a healthy heart for European women' at the 7th European Health Policy Forum in Gastein, Austria. The objective of this workshop was to explore the breadth of issues facing the newly enlarged Europe in the promotion and management of cardiovascular health for Europe's 228 million women.

The event featured speakers from a wide array of perspectives from across Europe – the practicing cardiologist, the gynaecologist, the pharmaceutical industry, the EU policymaker, the patient advocacy group, the health economist, the health promotion organisation and the health management academic were all represented. The mix of speakers made for a lively discussion. Yet all speakers relayed similar strong messages: heart disease is the major killer of women in Europe, awareness of its importance is dismally low, and the time is ripe for focused efforts to reduce the burden that heart disease poses to women and society in general.

The workshop was organized jointly by the European Heart Network, the European Health Management Association and Bristol-Myers Squibb. This partnership, which builds upon key areas of work for all three organisations, is symbolic of the need to bridge across

different sectors of health to achieve best results and demonstrates the potential of such collaborations.

This report presents a synthesis of the workshop discussions. We hope that the messages it contains will be disseminated as widely as possible in order to stimulate further debate and lead to concrete actions to help secure healthy hearts for all European women.



# the issues

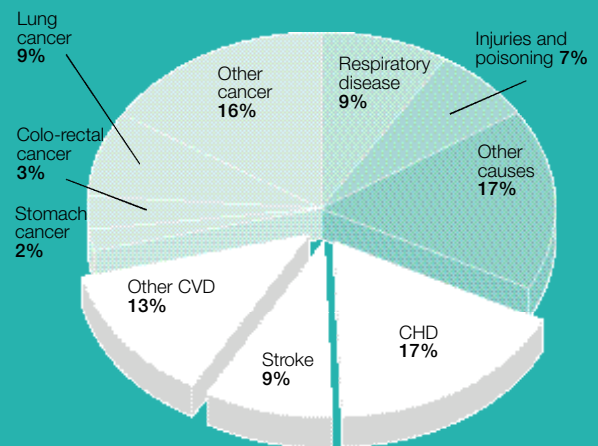
## 1. Facts and figures

There is a widespread misconception that heart disease is mostly a male disease. Diseases of the heart and circulatory system, or cardiovascular disease (CVD) are the main cause of death in both men and women in Europe, causing more deaths than all cancers combined<sup>1</sup>. CVD includes coronary heart disease (CHD) and stroke.

CVD is more frequent in men than in women below the age of 65, however the gap narrows after this age. With women living on average 5-6 years longer than men, the clinical and economic burden that CVD poses to society is bound to increase.

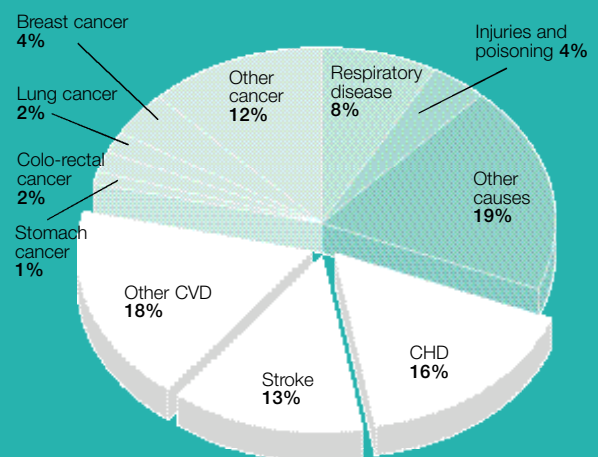
**Figure 1**

**Deaths by cause - Men latest available year, EU**



**Figure 2**

**Deaths by cause - Women latest available year, EU**



Source: European Cardiovascular Disease Statistics, 2005.  
Reprinted by kind permission from European Heart Network & The British Heart Foundation

## The figures, in fact, are staggering<sup>i</sup>:

- Cardiovascular disease is the main cause of death in all countries of Europe.
- **CVD accounts for 46% of all deaths in women, as compared to 39% of all deaths in men in the EU.**
- Stroke kills more women than men, although more men have strokes.
- **More women die of CVD than of all cancers combined.**
- Of women who survive a first heart attack:
  - 42% die within one year following a heart attack, compared to 24% of men.
  - 46% will be disabled by heart failure within 6 years. This is two times the rate in men.
  - More women will have a second heart attack or stroke compared to male survivors of heart attacks<sup>2</sup>.
- One in three women with heart disease between the ages of 55-64 is disabled, and this rate goes up to 1 in 2 in women over the age of 75<sup>3</sup>.

Death rates from CVD are falling in most Western European countries, however they are rising in many Central and Eastern European countries. Similar geographic differences exist in incidence rates. For example:

- death rates for women aged 35-74 living in Italy or the UK fell by 41% and 30% respectively between 1989-1999. In the Russian Federation, they rose by 25%.
- The death rate for women is 19 times higher in the Ukraine for women aged 35-74 than it is in France (it is 10 times higher for men).
- The incidence of coronary events<sup>ii</sup> in women aged 35-64 is four times higher in Warsaw, Poland than in Catalonia, Spain<sup>4</sup>.

**In countries where death rates from CVD have been falling, the decline has been slower in women than in men.**

**Figure 3**



Note: CHD represents only a portion of all cardiovascular disease.

Source: European Cardiovascular Disease Statistics, 2005.

Reprinted by kind permission from European Heart Network & The British Heart Foundation.

<sup>i</sup> Unless otherwise indicated, CVD statistics presented in this report are derived from the 2005 edition of European Cardiovascular Disease Statistics. Statistics are provided whenever possible for the EU-25, otherwise they refer to the European region as a whole.

<sup>ii</sup> Coronary events are defined as a likely or definite heart attack.

## 2. CVD in women: a neglected threat

Most people, including women, are unaware of the importance of heart disease in women. Low awareness of the risk of heart disease is compounded by an emotional detachment from heart disease amongst women, with most women more worried about getting breast cancer. In a US survey, half the women interviewed knew that heart disease was the leading cause of death in women, but only 13% considered it as their greatest personal health risk<sup>5</sup>. Similar findings emerged in Denmark:

**fewer than 10% of women thought that cardiovascular disease was their greatest health threat whereas two-thirds of women believed that cancer was the largest threat. Surveys of women in a number of other European countries revealed similar findings.**

Why this misconception? Heart disease appears later in life. Most 50-year olds may never have seen any women their age suffer a heart attack, whereas most women will have a relative or friend affected by breast cancer. This misconception is not helped by the fact that most physicians rarely broach the topic of heart disease with their female patients.

### The enrollment of women in cardiovascular trials

The enrollment of women in cardiovascular clinical trials came under scrutiny in the mid-1980s with the realization that less information about treatment was available on women with cardiovascular disease than on men. As a result, study findings are biased towards observed results in men, and conclusions that are drawn about appropriate doses, treatment practices and expected responses may not reflect the reality of treating female patients. Small numbers of women in trials may prevent proper subgroup analysis of treatment effects in women, or numbers may be too small to allow for any meaningful effects to be observed, leading to the erroneous conclusion that treatments are ineffective in women.

**A review of cardiovascular trials conducted in Europe between 1986-1997 is presented below.**

Trial	Enrolled patients	% females	Reference
GISSI-1	11 711	25	Lancet 1986; 1:397-402
ISIS-2	17 187	23	Lancet 1988; 2:349-360
GISSI-2	12 490	20	Lancet 1990; 336:65-71
GISSI-3	18 023	22	Lancet 1994; 343:1115-22
4S	4 444	19	Lancet 1994; 334:1383-89
ISIS-4	58 050	26	Lancet 1995; 345:669-685
SMILE	1 556	27	NEJM 1995; 332:80-85
EMIAT	1 486	16	Lancet 1997; 349:667-674
GISSI-P	11 324	15	Lancet 1999; 354:447-52
CIBIS-2	2 647	19	Lancet 1999; 353:9-13
CHARM	7 601	31	Lancet 2003; 362:759-766

Source: presented by S.G. Priori at the Gastein workshop, October 2004.

## Low awareness amongst women is matched by low awareness within the medical profession about the prevalence and manifestations of heart disease in women.

Most of the previous CVD research has been conducted on men, leaving a dearth of data on how prevention and treatment may differ for women. The lack of data on women, especially older women, leaves many questions unanswered. Indeed, women and older people of both sexes are often referred to as 'the understudied majority'<sup>6</sup>.

### 3. Women are different

Clinical and epidemiological studies have shown that women are different from men with CVD. Their physiology, disease processes, clinical presentation and outcomes all differ. **Therefore it is misleading to extrapolate results from male patients to women. Clinical decision making for women should be guided by data gathered in women.**

Some of these differences are outlined below:

- **Predisposition to disease:** Estrogen has a protective effect on women against heart disease before menopause, therefore CHD affects women about 10 years later than men. Still, this does not mean that heart disease cannot start developing earlier in life, and that preventive steps earlier during the lifecourse are not effective at preventing later disease.
- **Higher risk of death and disability:** A woman who has a stroke or a heart attack (especially an older woman) is more likely to

die than a man. Women also have a higher rate of repeat attack and heart failure, leading to important disability.

- **Different symptoms:** Everyone is familiar with the crushing chest pain image of someone suffering a heart attack. Yet this is not necessarily the experience of women.<sup>7</sup> Instead, women may feel extremely tired, often for periods of one month preceding the attack. Ischemia may be more often silent in women<sup>8</sup>. Unrecognized myocardial infarction (heart attack) is greater in women than in men<sup>9</sup>.

**Most doctors are poorly trained to recognise these symptoms and medical textbooks fail to underline the different prevalence of male and female symptoms.** Moreover, women are more likely to have co-morbidities that may mask symptoms of heart disease.

### Most common symptoms in women with a heart attack

#### One month before heart attack (prodromal phase)

Unusual fatigue	71%
Sleep disturbance	48%
Shortness of breath	42%
Indigestion	39%
Anxiety	36%
Heart racing	27%
Arms weak or heavy	25%

#### During heart attack (acute phase)

Shortness of breath	58%
Weakness	55%
Unusual fatigue	43%
Cold sweat	39%
Dizziness	39%
Nausea	36%
Arms weak or heavy	35%

Adapted from: McSweeney et al. Circulation 2003; 108: 2619-2623.



#### 4. Poor evidence leads to poor clinical decisions

As suggested above, most biomedical research continues to be based on the unstated assumption that women and men are physiologically similar in all respects apart from their reproductive systems. Other biological differences are ignored, as are the social/gender differences that have such a major impact on health.

**Poor evidence may lead to poor clinical decisions.** Clinicians may be reluctant to offer women certain treatments where clear evidence of their effectiveness in women is lacking, inconclusive, or (possibly wrongly) negative. Studies continue to show that women are treated less aggressively than men<sup>10,11</sup>. Some clinicians may be discouraged from treating women, as when they do treat women with 'male-based' treatment regimens, women may not respond in the manner they expected.

**This vicious circle of 'evidence breeds practice' can only be broken by producing solid evidence, based on sufficiently large groups of women, of treatment effectiveness in women.**

It is important to recognise that, in some areas, progress has been made in adapting practice standards to better serve women's needs. For example, the creation of smaller stents and catheters has made a huge difference in allowing women to have access to key procedures such as angiography, angioplasty and coronary bypass surgery.

#### 5. CVD is mostly preventable

One of the most striking features of cardiovascular disease is that most risk factors are known and are amenable to population-wide prevention approaches. Primary prevention is thus both possible and effective. This is evidenced by significant decreases in CVD mortality in several EU countries over the past 20 years.

Risk factors include cholesterol, smoking, high blood pressure, obesity and physical inactivity. They are similar in both sexes but they may differ in relative importance.

#### The importance of good diagnosis

The exercise stress test, commonly used to diagnose ischemic heart disease, may be less accurate in women<sup>12</sup>. In young women with a low likelihood of CHD, an exercise stress test may give a false positive result<sup>13</sup>. In contrast, routine exercise tests often fail to pick up single-vessel heart disease, which is more common in women than in men<sup>14</sup>. Because of these differences, physicians may avoid using these diagnostic tests in women. **Thus a heart attack or stroke may not be detected in women until later, when it has already progressed to a more serious stage, leading to greater complications and poorer outcomes.**<sup>15</sup>





A successful TV and poster campaign run by the British Heart Foundation in 2004. Reprinted courtesy of the British Heart Foundation.

### **Smoking:**

Cigarette smoke is a major risk factor in all circulatory diseases. Smoking increases a woman's risk of having a heart attack by a factor of 3. Women who smoke more than 40 cigarettes a day increase their risk of heart disease 20-fold. Even smoking 1-4 cigarettes per day doubles their risk of disease<sup>16</sup>.

**Women who smoke are twice as likely as male smokers to have a heart attack. If a woman smokes while taking the contraceptive pill, her risk of CHD can be increased substantially.**

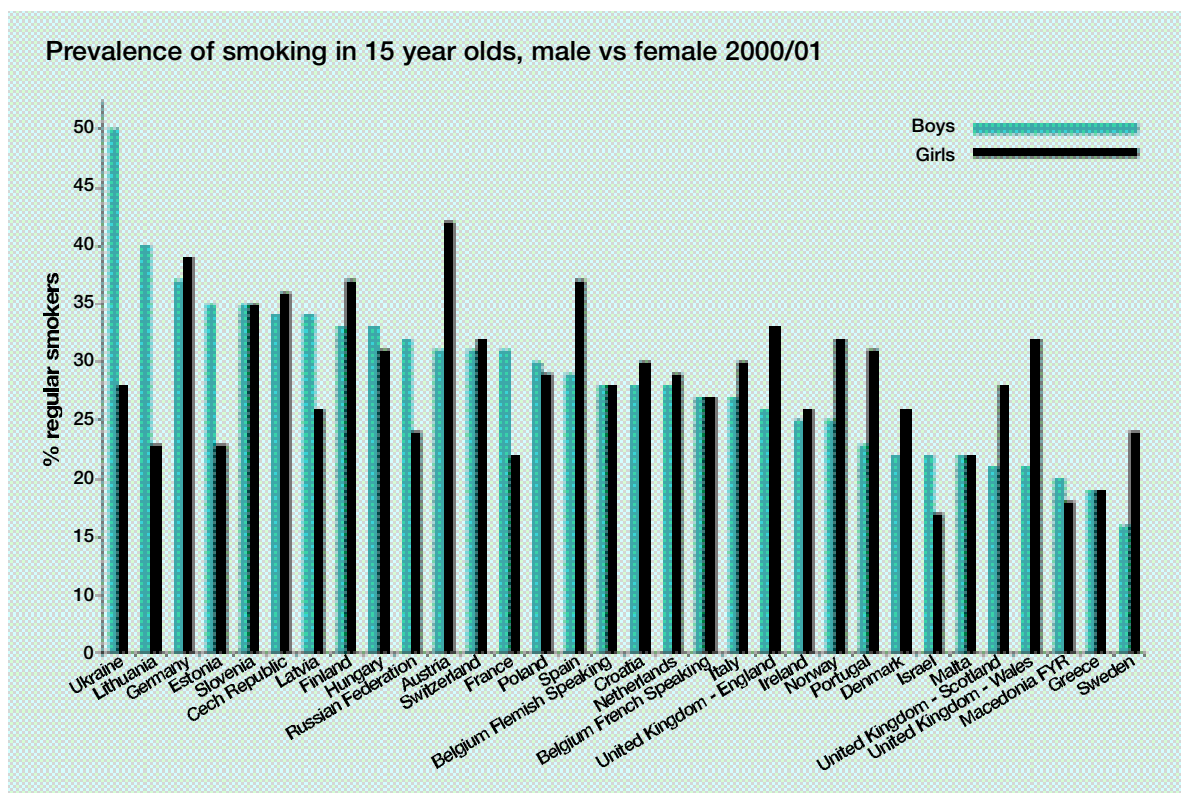
Within 2 years of giving up smoking, women are able to decrease their risk of mortality by nearly 25%.

### **Hormonal changes, cholesterol and triglyceride levels:**

Before menopause, women are somewhat protected against heart disease by estrogen, which increases 'good' (HDL) and decreases 'bad' (LDL) cholesterol levels. This advantage disappears with menopause however, and cholesterol levels are higher in postmenopausal women than men at similar ages. The incidence of CHD increases dramatically in middle age.

Evidence is growing that lowering blood cholesterol levels can reduce the incidence of major heart attacks in women with heart disease and improve survival in older patients. **Yet guidelines on when and how to reduce cholesterol levels in healthy women have not yet been established.**

**Figure 4**



Source: European Cardiovascular Disease Statistics, 2005.  
Reprinted by kind permission from European Heart Network & The British Heart Foundation

**Diabetes:**

Diabetes increases the risk of heart disease more in women than it does in men. Women who have already had a heart attack have double the risk of a second attack if they are diabetic. Reasons for these gender differences are thought to include greater prevalence of risk factors such as obesity and hypertension in diabetic women.

**Obesity and high blood pressure:**

The benefits of treating severe hypertension have been demonstrated in both men and women, however evidence of long-term benefits of treating mild to moderate hypertension in women is still lacking due to low rates of inclusion of women in clinical trials.

**Lack of exercise:**

Most of the studies of the relationship between exercise and heart disease have been conducted on men, however there is growing evidence that low physical activity is also an important risk factor for women. Exercise is also thought to reduce some of the other risk factors for CHD such as obesity, high blood pressure and cholesterol.

**Stress:**

Stress is another important risk factor in women for cardiovascular disease. Women, particularly those juggling work with family duties, are thought to experience a 'double stress' (workplace plus home) compared to men.

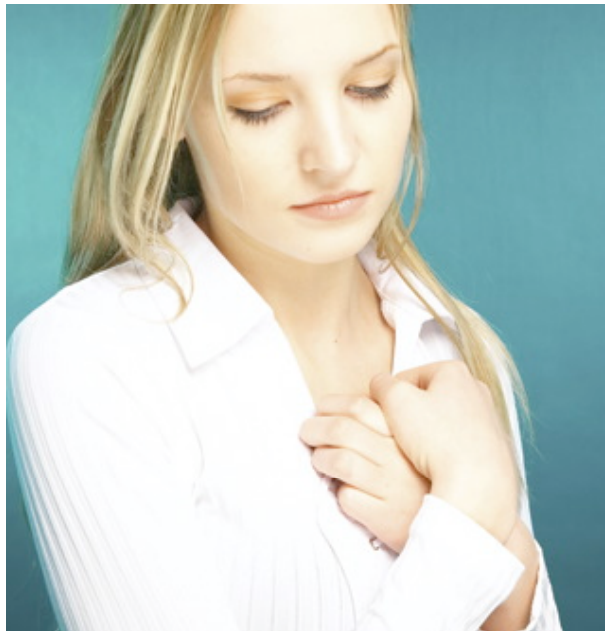
## 6. A considerable economic burden

The sickness and disability associated with CVD pose a tremendous burden to women, health care systems and society in general. This burden may be measured in terms of medical costs of care, disability and lost productivity and the impact on the quality of life of women and their families. CVD accounts for nearly one-third of disability-adjusted years of life lost in the EU for both sexes combined<sup>17</sup>.

CVD costs the EU approximately 169 billion euros per year. Around 62% of these costs are due to direct health care costs, 21% to productivity losses and 17% to the informal care of people with CVD.<sup>1</sup>

Cost estimates of CVD by gender are scarce and much of the most recent data comes from the United States. A recent American study suggests that CVD costs society \$227 billion per year in direct costs (medical costs of treatment), and \$142 billion in indirect costs (lost productivity due to premature death and disability from disease).<sup>18</sup>

When one looks at the excess costs per stroke, costs for women are consistently higher at all ages than for men. The presence of vascular complications increases per patient costs by a factor of 3.5.





# the challenges

## 1. Raising awareness

Raising the profile of heart disease in women must mean that women are encouraged to take their risk of cardiovascular disease seriously.

**Messages about heart disease must break through to women who may be struggling with the competing demands of children, ageing parents, and demanding careers.**

**Physicians treating women -- gynaecologists, general practitioners, internists, geriatricians and other specialists – have a key part to play in ensuring that women are made aware of cardiovascular care risk factors, symptoms and outcomes.**

**Women need to receive appropriate and culturally-sensitive information about their risks.** Information and communication channels that are specific to different groups of women, for example immigrant women, should be privileged.



As part of its 'Go Red for Women' awareness-raising campaign, the American Heart Association asked fashion designers to design 19 unique red dresses, featured above. They also have an annual National Wear Red Day for Women. [www.americanheart.org](http://www.americanheart.org).

**Information must be timely and account for possible changes in the evidence base.**

For example, the recent findings that postmenopausal use of hormone replacement therapy (HRT) may not decrease the relative risk of heart disease but may actually increase risk caused significant confusion amongst the millions of European women who use HRT. This situation brought to light the critical importance of providing women with up-to-date and comprehensive information to enable them to make the best decisions to protect their health.<sup>19</sup>

**Many risk factors for heart disease are rising among women.**

**Smoking rates** have declined more rapidly amongst men than amongst women in the past decade. Women are less likely to be successful at quitting smoking than men. In Finland, France, Norway and Spain, smoking rates have been stable or even increased in women in recent years. **A worrying trend is the increase in smoking in younger women, especially in poor communities, in several European countries.**

**Physical exercise** rates are lower in young girls than they are in boys in many European countries.<sup>20</sup> Italian data suggest that obesity rates in women are either higher or equal to rates in men (Istituto Superiore di Sanita, 2003).



**Women can make changes to their lifestyles and habits to reduce their risk of heart disease. But one cannot simply assume that women will learn from campaigns targeted to males. Specific public health campaigns aimed at women are needed.**

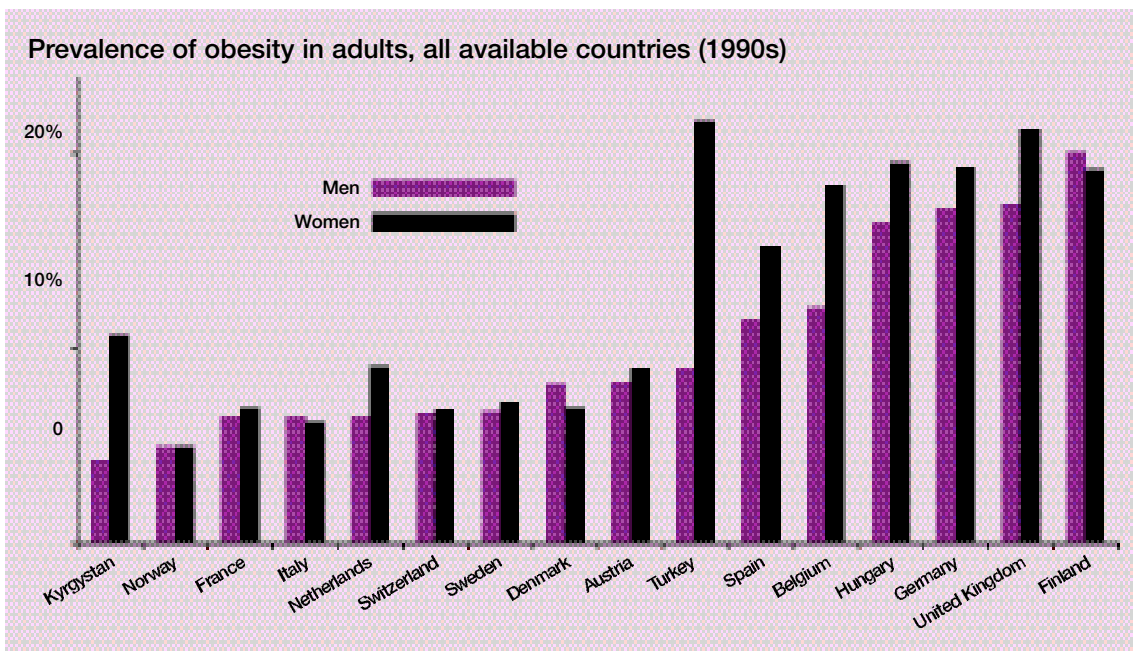
## 2. Improving the evidence base

Too many epidemiological studies and clinical trials continue to be done on male-dominated samples. As a result, there are still major gaps in our knowledge about the differences between disease processes in males and females. **Both preventive and therapeutic strategies are too often applied to women when they have mainly been tested on men.**

The lack of data on women, especially older women, leaves many questions unanswered, such as:

- how female hormones affect cholesterol levels
- whether aspirin is as effective for women as it appears to be for men
- when blood pressure medicines should be prescribed

**Figure 5**



Source: European Cardiovascular Disease Statistics, 2005.  
Reprinted by kind permission from European Heart Network & The British Heart Foundation

## the challenges cont'd

- which ones and what doses should be recommended
- how dietary recommendations might differ
- how to motivate lifestyle changes among women most effectively.

### **There is an urgent need to conduct studies specifically designed to answer relevant questions for women and to determine what constitutes best practice.**

The starting point for collecting this evidence is in clinical research. **Funding agencies may play a key role in challenging traditional exclusion criteria on the basis of gender in clinical trials.**<sup>21</sup> In the United States for example, since 1993 the National Institutes of Health (NIH) Revitalization Act specifically requires the inclusion of women in every clinical trial involving a disorder that affects women. The objective is to: “ensure that the trial is designed and carried out in a manner sufficient to provide for a valid analysis of whether the variables being studied in the trial affect women [and men] differently.”

In EU funded studies and trials, proposals must aim for 40% representation of each gender unless there is a good scientific reason to do otherwise. The requirement to balance gender representation in trials must, however, be addressed in conjunction with age.

Because most clinical trials include small numbers of women, they may lack the statistical power to prove clinical benefits with any certainty in women. Yet cost-effectiveness data rely on strong effectiveness data. **Health economic analyses thus often have poor clinical material to go on to determine whether a treatment is cost-effective in women or not. This may have serious implications for resource allocation decisions in health care.** Those making such decisions are more and more requiring clear demonstration of clinical and cost-effectiveness to guide funding decisions. For example, **economic studies have helped demonstrate that lipid-lowering drugs and statins can be cost-effective for treating cardiovascular disease in women.**

### **The importance of gender-specific evidence for clinical guidelines**

**Treatment and prevention decisions need to take into consideration gender-specific risk profiles by age.** In the past, guidelines were usually based on absolute risk figures that did not account for the fact that women and men have different levels of risk at different ages. **If treatment decisions were based on these intervention thresholds, many women and many young people would have been excluded from treatment.** Recent European guidelines have modified their approach to assessing risk. As a result, more gender-specific recommendations are offered to guide practice.<sup>22,23</sup>



### 3. Raising standards of care

Management challenges for cardiovascular care cover the spectrum from primary prevention to delivery of high quality health services. Cardiovascular disease needs to be treated urgently and effectively in the acute setting. It also brings with it the requirements of a chronic condition. Continuous care that is patient-centred and allows full integration between primary, secondary and rehabilitation services is needed.

Cardiac networks of care have been created in an attempt to break down institutional barriers between different clinicians (nurses, GPs, hospital general physicians, cardiologists, physiotherapists) who all play some part in the care of the cardiac patient. This collaborative approach to chronic disease management has been adopted in many countries.

There have been concerted efforts in several European countries to raise the standards of cardiovascular care. In England, the National Service Framework (NSF) for coronary heart disease was developed to ensure consistent standards of care or CHD across the country. This ambitious strategic plan sets out a broad list of objectives to achieve better care. These include better prevention in high-risk groups, prompt care following heart attacks, better revascularisation services and improved rehabilitation.

Do these care strategies work for women?

**There is reason to believe that some of the current changes in service provision may not address the needs of female cardiac patients.**



A simple way to help people understand portion control. This can be ordered from [www.thedietplate.com](http://www.thedietplate.com)

For example, the drive to improve access by decreasing waiting times in the English NSF aims to allow more people to be treated more quickly. However, this increased flow of patients puts huge pressure on already strained staff. Time to communicate with the patient, to do detailed medical histories assessing co-morbidities, may get lost. **Women, particularly older women, often allow themselves to be processed in the passive patient role and may be particularly poorly served in such a system.**

**Women typically do not allow themselves time to convalesce in the same way as men.**

Shorter hospital stays, if not coupled with appropriate rehabilitation services, will thus not allow them the needed recuperation time to return to full health.<sup>24</sup> Also, if adequate social services or community health services are not available, prevention and follow-up care may be inadequate.

#### 4. European level action

Several European initiatives have played a critical role in raising political awareness of the importance of heart disease over the past decade. From 1998 to 2002, the EU co-funded the European Heart Health Initiative, which aimed to improve heart health promotion in the European region by building networks and exchanging experiences.

During the Irish Presidency of the EU in 2004, the EU Council of Ministers adopted conclusions on promoting cardiovascular health recognising that cardiovascular disease is the greatest killer of men and women in the European Union. Two high level Ministerial Conferences were organised in Cork in partnership with the European Commission, the European Heart Network, the European



The Irish Heart Foundation's walking routes idea has now been exported to 12 countries worldwide. Reprinted courtesy of the Irish Heart Foundation.

Society of Cardiology with the participation of the World Health Organisation and the United States Department of Health and Human Services, which focused attention on this issue.

**The EU has also played an important role in raising heart disease in women to the political agenda.** In 1997, a European Commission report identified gender differences in the diagnosis and treatment of CVD and called for better woman-based evidence of treatment outcomes. The European Heart Network devoted a 2002 issue of *Heart Matters*<sup>25</sup> to the topic of cardiovascular disease in women. This issue sparked off a number of national campaigns aimed at fighting heart disease in women.

The EU is also helping to build a stronger evidence base on heart disease through the EUROCISS Project (European Cardiovascular Indicators Surveillance Set). Initiated in 2000, the project aims to develop health indicators and recommendations for the monitoring of cardiovascular diseases. Results will permit cross-country comparisons and may help improve prevention and control of CVD.<sup>26</sup>

Finally, the EU has a vital role to play in health promotion. **The Public Health Programme presents a unique opportunity for Europe to adopt a strategic focus on key priorities which are integrated and mutually reinforcing.** The recent WHO Framework Convention on Tobacco Control will hopefully encourage further European policy developments aimed at setting high public health standards across all European countries.

## 5. National level action

European policies and programmes may provide a helpful lead in raising awareness, however they must be accompanied by highly visible national campaigns to reach and sensitise the female population.

Grassroots initiatives aimed at promoting healthy hearts for women have been implemented in a number of European countries. In addition, the introduction of bans on smoking in the workplace in several countries has the potential to lead to long-term improvements in the heart health of women.

### Example of a national campaign: the Danish Heart Foundation

Denmark has a very high percentage of women at work (71%). It also has one of the highest rates of smoking in Europe (around 30% in women aged 35-65).

In 2003, the Danish Heart Foundation launched a campaign to raise awareness of the risks of heart disease amongst Danish women.

The campaign was underpinned by the slogan **'Mind yourself, woman!'**. It was targeted at working mothers who are subject to the double stress of work and home. The aim was to encourage them to take control of their risk factors, namely stress, poor diet, lack of exercise and smoking.

The April edition of the Foundation's member magazine (circulation 80,000) was devoted to CVD in women. 'Heart tips' were provided on websites. Anyone could arrange for tips to be e-mailed to them daily. Collaboration

with third parties, for example one of Denmark's largest trade unions, had a very positive impact on awareness. Local committees organised a series of events, including a skipping session for the Members of Parliament health committee.



The 'Mind yourself, woman!' campaign.  
Reprinted courtesy of the Danish Heart Foundation.



## Tips for campaign planners

Useful experience has already been gathered by several organisations campaigning about CVD among women. Here are the main learnings:

- People will listen to the logical arguments only if their emotions are engaged first.
- Campaigns should be created for a specific audience. This audience needs to be clearly defined.
- Changing behaviour is difficult, so choosing the right tone is crucial. For instance the Danish Heart Foundation's advertising campaign used humour, because women would have rejected an authoritarian 'finger-pointing' approach.
- Using relevant celebrities can make a strong impact on the audience and also helps interest the media.
- Awareness and credibility are increased if the campaign associates with organisations familiar to the audience (eg the Danish Heart Foundation's collaboration with major trade unions).
- The campaign should engage policymakers to create awareness of the need for policy solutions.
- Healthcare professionals, families and volunteers can all help make sure the benefits outlive the campaign -- but only if the campaign has informed and motivated them.



September 2003: The Italian Heart Foundation's interpretation of World Heart Day.  
Reprinted courtesy of the Italian Heart Foundation.



A campaign by the Northern Ireland Chest, Heart and Stroke Association gets straight to the point.  
Reprinted courtesy of the Northern Ireland Chest, Heart and Stroke Association.

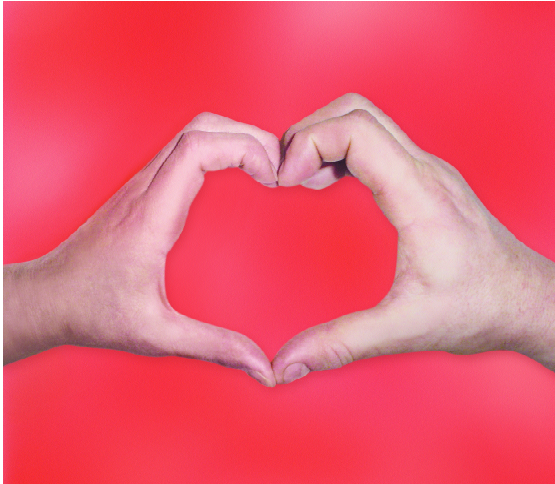
# conclusions

- **Cardiovascular disease is the largest killer of women in Europe. Yet awareness of its importance remains dismally low, both amongst women themselves as well as amongst the medical profession.**
- CVD is largely preventable. By altering their lifestyles, women can reduce their risk of CVD dramatically.
- Evidence of the effectiveness of preventive and therapeutic approaches to target CVD is still lacking in women. There is an urgent need to build strong evidence derived from women to guide future practice.
- Cardiovascular services for women need to be culturally accessible, patient-centred, evidence-based and responsive to patient needs.
- The challenges of addressing the needs of very diverse epidemiological, cultural and political contexts in the 25 member states must not be underestimated. Sensitivity to potential cultural differences across EU states is key if European policies and programmes are to be equally effective across the region.



- It is also important to recognise challenges in the implementation of health policies. Workforce shortages, insufficient resources, lack of integration between primary and secondary care all plague health care systems to a greater or lesser extent. Strategic plans to improve the management of cardiovascular disease in women need to address these hurdles in proposals going forward.
- **This report has been intended as a ‘call to action’ to women, policy-makers, physicians and society in general. All have a role to raise awareness of the importance of cardiovascular disease in women and to reduce the burden it is posing on women and society in general.**

# calls to action



## To women:

- It is essential that women become better aware of the risks of cardiovascular disease. Cardiovascular disease is the major cause of death for women. More women die of CVD than of all cancers combined.
- Risk factors for cardiovascular disease are known and most of cardiovascular disease is preventable. By taking control of their lifestyles and habits, women may reduce their risk of cardiovascular disease significantly.
- Women should discuss possible risk factors with their physician.

## To clinicians:

- Physicians treating women – gynaecologists, general practitioners, internists, geriatricians and other specialists – have an essential part to play in ensuring that women are made aware of cardiovascular disease risk factors, symptoms and outcomes.

- Physicians and medical students need training and education on gender and other diversity issues related to research, diagnosis, treatment, prevention and rehabilitation. It is for example counterproductive to have medical textbooks showing exclusively male heart disease patients.
- All clinicians should recognise the importance of cardiovascular disease for women and raise awareness of its importance within the medical and social care community.
- All clinicians should be attuned to the differences in pathophysiology in cardiovascular disease between men and women. They should ensure that their female patients receive gender-sensitive information and are presented with appropriate treatment options.
- It is important for treating physicians to recognize the limitations of the existing evidence base on cardiovascular disease in women and the implications of these gaps for clinical practice. Whenever possible, they should aim to base clinical decisions for their female patients on direct findings in women. It may be misleading to extrapolate results from male patients to women.
- A gender impact assessment should be part of all clinical programmes. For example, cardiac rehabilitation programmes should be specifically tailored to the needs of women, as their adherence to these programmes is poor compared that of men.

### **To the research community:**

- The research community may help raise awareness of the urgent need to conduct studies specifically designed to answer relevant questions for women. More studies that explicitly search for innovative and better treatments for women are also needed. Only these findings will allow us to determine what constitutes best practice for women.
- The research community needs to embrace and actively support more female scientists in research, clinical and public health programmes in order to avoid an unbalanced and male-centred view.
- Funding agencies may play an important role in making funding of clinical studies conditional on appropriate recruitment of women.
- Clinical guidelines should continue to strive to account for differences in presentation and response profiles between men and women in order to provide the most specific guidance possible to practicing clinicians.

### **To public health officials:**

- Every effort should be made to target public health campaign messages directly at women. Only gender-sensitive campaigns may help achieve the same decreases in heart disease in women as have been observed in men.
- One cannot simply assume that women will learn from campaigns targeted to men. Every effort should be made to involve women in the design and delivery of these campaigns.

### **To EU policymakers:**

- The EU has a growing role to play in setting standards for prevention, health promotion, and care for women at risk of cardiovascular disease throughout the EU.
- The EU also may help by supporting research efforts to build the information base and in creating a network to share and exchange best practice between countries.

### **To national health policymakers and managers:**

- Ultimately, it is at the national health system level that dedicated efforts and strategies are needed. It is essential to recognise that raising the standards of care for women with CVD will undoubtedly have short-term cost implications, however long-term costs of disability and premature mortality may be significantly reduced
- Redressing existing inequalities will thus require dedicated strategies and policies, significant training and education, and adequate resources.
- Finally, for any strategy aimed at improving women's heart health to be effective, its goals need to be clear, working practices need to be aligned with these goals and services need to be developed which fit with, are sensitive to and learn from women's lives as they are actually lived.



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A healthy heart for  
European women

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