

Everybody loves a healthy heart



On World Menopause Day this year the International Menopause Society produced cardiovascular health resources for women and also published a research paper to highlight the sex-specific risk factors for developing cardiovascular disease.

Breast cancer is often believed to be the number one cause of death and disability in women and is a serious disease. In reality though, the number one cause of death is cardiovascular disease. The number of cases of cardiovascular disease is high... and continuing to rise. But by understanding more about the causes and impacts of cardiovascular disease, you can take steps to reduce your risk.

The International Menopause Society (IMS) has published research to highlight female-specific cardiovascular disease (CVD) risk factors.

The research paper *Reproductive milestones across the lifespan and cardiovascular disease risk in women*, notes the growing number of recognised milestones during

a woman's life which are associated with increased risks for CVD. It also highlights the need for recognition of these risk factors so women and their healthcare providers can be informed and motivated to prevent cardiovascular disease developing.

How does this research help?

In publishing this research paper, the IMS aims to raise awareness of additional CVD risk factors which are sex-specific. They include conditions related to menstruation, adverse pregnancy outcomes and menopause.

The IMS Paper advises the assessment of women across their lifespan to reduce CVD risks in later life. Specifically, the identification of abnormal menstrual patterns in adolescence may improve early identification of potential adult health concerns. Menstrual cycle characteristics related to increased cardiovascular risk include a woman having a premature or late first menstrual period, polycystic ovarian syndrome, and menstrual cycle irregularity.

Adverse pregnancy outcomes can include preeclampsia, gestational diabetes, premature birth and low

What is CVD?

Cardiovascular disease (CVD) is a general term for conditions affecting the heart or blood vessels. It includes coronary heart disease, stroke and vascular dementia. In spite of advances in diagnosis and treatment, CVD remains the number one cause of death in women throughout the world.

Is it common?

According to the World Heart Federation, CVD is the most common non-communicable disease globally, responsible for nearly 20.5 million deaths per year. It's responsible for 35% of deaths in women each year – more than 13 times the rate of breast cancer and greater than all cancers combined.

In the UK, around 3.6 million women are living with heart and circulatory diseases, and heart disease kills more than twice as many women in the UK as breast cancer.

How big is the risk?

Despite these stark figures, the IMS paper notes that the perception of risk of CVD in women has declined in recent years.



In 2019, versus a decade earlier, women in the US were 74% less likely to identify heart disease as a leading cause of death. There are concerns that this is resulting in fewer preventative measures being taken to avoid developing the disease.

What are the risk factors?

Risk factors for CVD in women can include medical conditions such as hypertension, diabetes or lipid elevation (high levels of fats in the blood) along with lifestyle-related issues including obesity, unhealthy diet, sedentary lifestyle, smoking and exposure to air pollution.

Psychosocial factors such as depression and anxiety, abuse or intimate partner violence can also increase the risk of developing CVD.

birth weight. The IMS paper found that women with recurrent preeclampsia during pregnancy experienced a three-fold rise in the risk of developing heart failure.

High blood pressure or diabetes during pregnancy or menopause and experiencing premature menopause (before the age of 40) have all been recognised as CVD risk factors.

Health changes associated with menopause have also been associated with increased risk of CVD in women. These include alterations in muscle composition and metabolism, menopause symptoms (particularly hot flushes, sleep disturbances and depression).

What about women specifically?

Despite these well-documented risk factors, the IMS Paper voices concerns that sex-specific risks are rarely incorporated into medical interventions for minimising the risk of CVD in women.

By publishing the paper on World Menopause Day, the IMS aimed to raise awareness and encourage →

• **Having clear vision about your risk factors really can help minimise developing the disease in later life.**





• **Women can find CVD risk calculators online if they know all their 'numbers' – that is blood pressure, blood cholesterol, blood sugar, or ask their health provider to calculate their risk and then discuss the results.**



the consideration of sex-specific risk factors of CVD in women.

In particular it's encouraging healthcare systems and healthcare professionals all over the world to target female-specific and under-recognised CVD risk factors through screening, detection and early intervention.

“During midlife, there is a great opportunity for most women, with the support of their healthcare providers, to improve their cardiovascular health and their future quality of life...”



Dr Cynthia Stuenkel, author of the IMS paper and Clinical Professor of Medicine at the University of California, said: “Cardiovascular risk represents a lifetime of choices and experiences, but menopause offers the opportunity of a single point in time to step back, take stock, and do all you can toward promoting future cardiovascular health for the rest of your life.”

Professor Nick Panay, president of the International Menopause Society, added: “There is compelling and emerging evidence that the cardiovascular health of women at midlife and beyond reflects reproductive events over their lifespan. This includes issues related to the menstrual cycle, complications during pregnancy, and the effects of natural and premature menopause.

“During midlife, there is a great opportunity for most women, with the support of their healthcare providers, to improve their cardiovascular health and their future quality of life through healthy lifestyle choices such as following a well balanced diet, exercising, stopping smoking and moderating alcohol consumption.

“It's time to make women's cardiovascular health a priority.”

Sources

<https://www.bhf.org.uk/informationsupport/conditions/cardiovascular-heart-disease>
 World Health Organization: https://www.who.int/health-topics/cardiovascular-diseases#tab=tab_1
 World Heart Federation. What is cardiovascular disease? <https://world-heart-federation.org/what-is-cvd/>; accessed 6/24/23.
 [4] World Heart Federation. Women and CVD. <https://world-heart-federation.org/what-we-do/women-cvd/>; accessed 6/24/23.
 [5] British Heart Foundation: <https://www.bhf.org.uk/-/media/files/for-professionals/research/heart-statistics/bhf-cvd-statistics-uk-factsheet.pdf>
 [6] Cushman M, Shay CM, Howard VJ, et al. American Heart Association. Ten-Year Differences in Women and Awareness Related to Coronary Heart Disease: Results of the 2019 American Heart Association National Survey: A Special Report from the American Heart Association. *Circulation*. 2021 Feb 16;143(7): e239-e248. doi: 10.1161/CIR.0000000000000907.
 [7] Page 3 of IMS White Paper
 [8] Vogel B, Acevedo M, Appelman Y, et al. The Lancet women and cardiovascular disease Commission: reducing the global burden by 2030. *Lancet*. 2021 Jun 19;397(10292):2385-2438. doi: 10.1016/S0140-6736(21)00684-X.
 [9] Agarwala A, Michos ED, Samad Z, et al. The Use of Sex-Specific Factors in the Assessment of Women and Cardiovascular Risk. *Circulation*. 2020 Feb 18;141(7):592-599. doi: 10.1161/CIRCULATIONAHA.119.043429.
 [10] Okoth K, Chandan JS, Marshall T, et al. Association between the reproductive health of young women and cardiovascular disease in later life: umbrella review. *BMJ*. 2020 Oct 7;371:m3502. doi: 10.1136/bmj.m3502. Erratum in: *BMJ*. 2020 Oct 14;371:m3963.
 [11] World Heart Federation. Women and CVD. <https://world-heart-federation.org/what-we-do/women-cvd/>
 [12] Page 11 of IMS White Paper





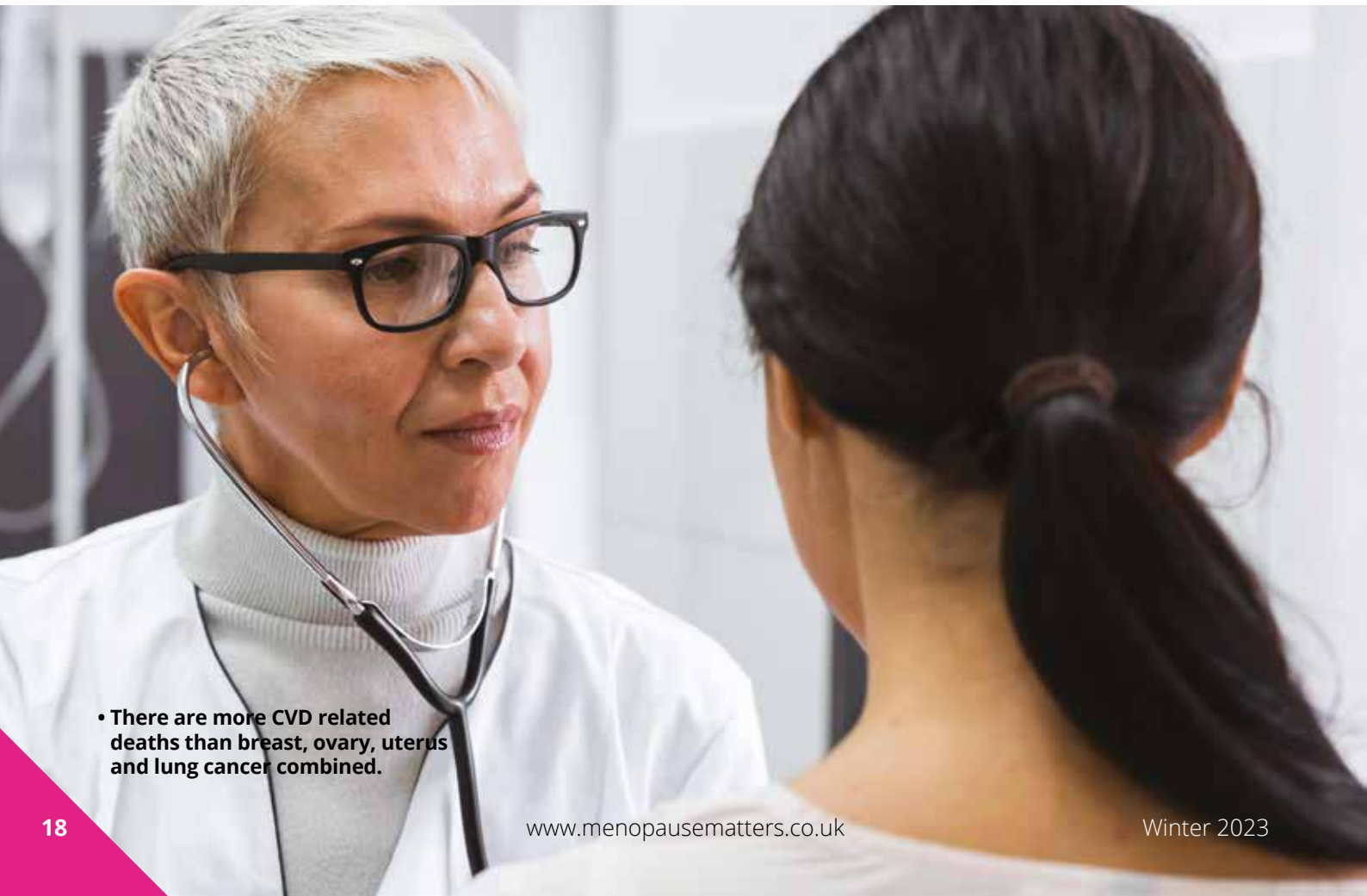
The heart of the matter

To delve a little deeper into how this kind of academic research can really help women in general Menopause Matters editor, Pam Brook, spoke with the IMS paper's author Dr Cynthia Stuenkel, Clinical Professor of Medicine at the University of California.



As women we all know women's health should not be a luxury but with so much information we are all bombarded with about risks, lifestyle, diet, weight many of us can be forgiven for not being able to give time to think about our own heart health. So, we asked Dr Cynthia Stuenkel why should heart health be a top priority for women and why do you think it's not at present?

"The simple facts are that 1 in 3 women will die of cardiovascular disease (CVD)—this includes diseases of the heart, stroke, and venous thromboembolic disease (blood clots in the legs (primarily) and lungs. This statistic is not just in the US, but it holds true internationally too."



• There are more CVD related deaths than breast, ovary, uterus and lung cancer combined.

“Cardiovascular risk represents a lifetime of choices and experiences, but menopause offers the opportunity of a single point in time to step back, take stock, and do all you can toward promoting future cardiovascular health for the rest of your life.”

Professor Cynthia Stuenkel
.....

So what do women worry about? The answer is somewhat surprising as Dr Stuenkel explained: “Ironically, the facts also show that women are more concerned about dying of breast cancer than CVD. In reality, more deaths are from CVD than those related to breast, ovary, uterus, and lung cancer combined.

“The World Heart Federation states that women who have CVD continue to be underdiagnosed and undertreated due to misconceptions and lack of awareness among patients and providers.

“So, women may misunderstand their risks, symptoms, and severity of disease, and therefore,

don't present themselves in a timely fashion for diagnosis and treatment.

“At the same time health providers may not emphasize heart health with their patients early on in life. In turn, they may not recognize the reproductive milestones along life's way that increase a woman's risk, so they might misinterpret symptoms that a woman complains about and potentially not consider or refer her for evaluation of possible CVD.”

Risk analysis

That sounds a tricky one. So, how can women know if they are at risk, particularly if there is no family medical history?

“The first point,” explained Dr Stuenkel, “is to be familiar with known risk factors.

“The well-established factors that are used in most CVD risk calculators include hypertension i.e. high blood pressure, dyslipidemia, that's too much of the bad LDL cholesterol or triglycerides or not enough of the good HDL. Then there's also diabetes, i.e. excess blood sugar, obesity, your body mass index is calculated based on height and weight, an unhealthy diet, a sedentary lifestyle or just not exercising enough and smoking. Many women are not aware that they have hypertension, and diabetes is often not diagnosed for many years.” →

• Even without a family history, most guidelines recommend that age 20 is not too early to start evaluating CVD risk.





Calculating your own risk factor

However, there are apparently opportunities for us to find out more for ourselves and you're never too young to start as Dr Stuenkel highlighted: "A woman can find CVD risk calculators online if they know all their 'numbers' – that is blood pressure, blood cholesterol, blood sugar, or better yet, she can ask her health provider to calculate her risk and then discuss the results. Even without a family history, most guidelines recommend that age 20 is not too early to start evaluating CVD risk!"

What's not so obvious

However, some of the factors that can have an impact on your heart health are not always in plain sight and may surprise some.

"Underrecognized risk factors," continued Dr Stuenkel, "include psychological risks such as depression, abuse and intimate partner violence inducing stress, socioeconomic deprivation which can mean a lack of access to healthcare, healthy food, and physical activity. Also there can be poor health literacy for those who have challenges with reading and understanding and so consequently have difficulty applying recommendations and then there are environmental risk factors too such as air pollution.

"Finally, sex-specific risk factors for women include premature menopause, hypertension and/or diabetes in pregnancy, preterm delivery, and systemic inflammatory and autoimmune disorders including lupus and rheumatoid arthritis. There are also correlations with menstrual disorders/irregularity such as polycystic ovarian syndrome, possibly infertility, and breast cancer treatments."

Perimenopause implications

For those women approaching perimenopause what would she be advising and why?

"It turns out that a number of changes in our bodies start at perimenopause and can negatively affect cardiovascular health.

"Interestingly, studies that follow the same women over many years from premenopause to postmenopause have enabled us to distinguish between effects due to ageing and effects due to menopause.

"Total and LDL cholesterol start to rise even a year before the menopause and continue to increase until a year after. Although HDL levels might get higher during this transition, it turns out HDL is less effective than it was before the transition.

"For about a third of women, blood pressure increases over the transition. This is news as we'd previously thought any blood pressure increase was simply due to age.

"Diabetes is more likely to increase in women who experience early [<age 45] and premature menopause [<age 40]. With increasing age, the risk of diabetes increases. The metabolic syndrome, a combination of risks such as elevated blood glucose, blood pressure, triglycerides, and waist circumference, measured with a tape measure, increases rapidly in the year before menopause and afterwards.

"Finally, redistribution of fat increases during the menopause transition with more visceral fat, involving the organs, such as the heart and the liver, and more abdominal fat - as most women notice! These fat deposits are metabolically active and can contribute to increased risk of heart disease.

"So, given all these changes that accelerate the risk of heart disease," said Dr Stuenkel, "I would advise women in their mid-late forties to play it forward, and if they are not eating well and exercising, to start NOW!"

"The Diabetes Prevention Programme has shown a fifty eight per cent reduction in new diabetes with diet and exercise. Another clinical trial called the Healthy Woman Study showed that women could prevent the shift in adipose, that's fat tissue, and maintain a healthy lipid, as



• If you're not exercising, Dr Stuenkel suggests starting NOW!





in cholesterol, profile by exercising and maintaining their weight. So, there is something positive women can do!

"For some women, it's a busy life, and they may not be on top of their 'numbers' and risk factors. No time like the present to get checked out if it's been a while so women can enter the menopause transition with factors related to cardiovascular health in good order. Take medications if necessary to meet guidelines and stay on top of risk factors."

Conversely for those women who are post menopause – is it too late for them to make a change and if not what can they do to help themselves look after their heart? Can they look to HRT in their 60s to help?

"Most would maintain that it is never too late to make changes toward a healthy lifestyle," said Dr Stuenkel. "In addition to diet, exercise, and maintaining a healthy weight, stop smoking and be certain to get a good night's sleep!

"There are clear cut guidelines, target levels, and medications, if necessary, to optimize risk factors. If bothered, women should enquire about treatments for hot flushes.

"There are a number of options available such as cognitive behavior therapy, hypnosis, prescription non-hormonal medications, and then hormone estrogen, and depending upon uterine status, progesterone therapies."



• Psychological risks such as depression or anxiety can often be overlooked in relation to CVD risk.

HRT

"Hormone therapy is safest when started in women ages fifty to fifty nine, primarily targeting relief of symptoms of menopause—hot flushes, sleep disruption, mood changes, and urinary/vaginal symptoms.

"There is interest in the 'timing hypothesis' that an early start on estrogen therapy after menopause will help prevent heart disease, but trials designed to evaluate this question have presented conflicting results.

"The group that is thought to stand to gain the most benefit regarding heart disease with estrogen therapy includes those with early or premature menopause, particularly with surgical [removal of ovaries] menopause. There is consensus that these women should consider estrogen therapy promptly after menopause unless they have contraindications such as estrogen sensitive cancers, a history of cardiovascular events or severe liver disease. More research is needed to confirm this potential cardiac benefit as it has largely been demonstrated in observational studies. Although groups such as the International Menopause Society consider that early initiation of hormone therapy could reduce heart disease, hormone therapy is not currently approved by regulatory bodies for CVD prevention."

So, is it still all about early education and lifestyle choices in our early years and what would Dr Stuenkel tell her younger self?

"Yes, that is true. As mentioned, guidelines recommend beginning identification of risk factors for CVD by age twenty, and earlier if a family history is present. So yes, early lifestyle choices can make a big difference in long-term health.

"What we have learned, especially within the past five years, is how important reproductive milestones are in a woman's life.

"Younger women need to be informed that their menstrual cycle is a 'vital sign' and that absence or irregularities need to be reported and evaluated. Younger women need to know that many pregnancy risks and complications have been shown to increase later heart and stroke risk by 2-3-fold.

"Premature menopause is also known to increase risk by about 1.5-fold. These experiences provide clues to increased risk of heart disease. Again, making changes early and following up carefully will hopefully enhance heart health in the years ahead!

"The good news is that interest in and awareness of these sex-specific risk factors for CVD has increased greatly! New collaborations including cardio-obstetrics and cardio-oncology help monitor heart health and risk in women who have experienced adverse pregnancy outcomes or breast cancer treatment."

What women need to know..

Recognise that heart health is a top priority for women...

Talk to your doctor and ask them to calculate your risk of CVD

To Lower your risk...

Make Positive Lifestyle Choices

- Give up cigarettes
- Move your body more
- Practice mindful eating
- Maintain or achieve a healthy weight
- Develop good sleep habits



Identify and Treat Recognised Medical Risks

- Alongside your doctor, take steps to improve
- Blood pressure
 - Blood sugar
 - Blood cholesterol



Tell Your Doctor About Your Reproductive History

- Letting them know about the following will help them to identify if you are at particularly high risk of cardiovascular disease:
- Irregular monthly menstrual cycles
 - Pregnancy complication
 - Breast cancer treatments
 - Age of menopause

With thanks to The International Menopause Society for producing this information. You can also find out more at imsociety.org and menopauseinfo.org