

# VITA

The breast cancer magazine  
Issue 41 Spring 2020

**BREAST  
CANCER  
NOW** The research  
& care charity

**Coping with  
hot flushes**

**'I started chemo  
a week after  
giving birth'**

**Podcasts to  
get hooked on**

**Everyday tips for  
healthy bones**

**Lymphoedema  
reducing your risk**

**My confidence was  
at rock bottom**

**How a Moving Forward  
course helped after treatment**







**BREAST  
CANCER  
NOW** The research  
& care charity

# IT'S MORE THAN A WALK IN THE PARK

**Taking on a walking event as part of Team Now isn't about how fast you can go.** It's about creating a future where everyone who develops breast cancer lives – and is supported to live well.

Whether it's a walk with friends in unique locations, an iconic mountain trek or an overseas adventure you're looking for – we have a challenge to suit all.



[breastcancernow.org/walking](https://breastcancernow.org/walking)

Breast Cancer Now is a company limited by guarantee registered in England (9347608) and a charity registered in England and Wales (1160558), Scotland (SC045584) and Isle of Man (1200). Registered Office: Fifth Floor, Ibex House, 42–47 Minories, London EC3N 1DY.



# Welcome to Vita

If there's one thing I've learnt from interviewing people for Vita magazine, it's that there are few areas of life that a breast cancer diagnosis doesn't touch in some way.

From first hearing the words 'You have breast cancer' to the physical and emotional effects of treatment and beyond, few people would say life didn't change after their diagnosis.

Sometimes, though, good changes can come too.

For this issue, I spoke to two women who made big changes in their life after their cancer diagnosis.

Our cover star Stella had wanted to retrain as a life coach for a while. But she found a lack of belief in herself meant she kept putting off the training.

After she was diagnosed with breast cancer, Stella decided there was no time like the present.

'Cancer opened my eyes to the fact that I couldn't sit around waiting for the right time,' she says. You can read her story on page 6.

Laura, who was diagnosed with breast cancer in 2016, had always dreamed of being an author. But despite coming close had never managed to find a publisher for her novels.

A year after finishing hospital treatment, Laura's dream became a reality.

'It's what I'd always wanted,' she says. 'I had to make it happen.' Turn to page 12 to read more.

**Gareth Fletcher**  
**Editor**  
[vita@breastcancernow.org](mailto:vita@breastcancernow.org)

## In this issue

### REAL LIVES

- 6 My confidence was at rock bottom
- 10 I'm learning to cope with hot flushes
- 12 I started chemo a week after giving birth

### FEATURES

- 8 Going swimmingly
- 14 The healthy bone zone
- 18 Lymphoedema: reducing your risk
- 19 Five podcasts to get hooked on in 2020
- 20 Immunotherapy explained

### REGULARS

- 4 Your letters and emails
- 5 News
- 16 Your questions answered
- 22 Recipes
- 24 Support for you
- 25 Get involved



Vita Editor: Gareth Fletcher; Design: Henry Ireland. Breast Cancer Now is a company limited by guarantee registered in England (9347608) and a charity registered in England and Wales (1160558), Scotland (SC045584) and Isle of Man (1200). Registered Office: Fifth Floor, Ibex House, 42-47 Minories, London EC3N 1DY. Find out more at [breastcancernow.org](http://breastcancernow.org)

ISSN 1751-3081 © April 2020 Breast Cancer Now. All rights reserved. Vita is a FREE magazine. It is not to be sold, hired out, or otherwise reproduced or transmitted in any form or by any means without the written permission of the copyright holder.

Cover photo: Sarah Page

# Inbox

## Your letters and emails

### Dear Vita

July 2014. No one is ever prepared to hear those words: 'You have breast cancer'. It is totally overwhelming and life-changing.

It was during the lonely sleepless nights that I found the Forum. Being able to share how I was feeling got me through the dark months of surgery, chemo and radiotherapy.

We continued to post, albeit not so often.

In September 2019 seven of us met up in Bath.



**Gill**

Star  
letter

### Dear Vita

Your article on returning to work after breast cancer was most interesting.

I returned to work after my treatment and was given a phased return. But the managers in my department had no idea how to deal with my return and made life very difficult.

Thankfully my specialist nurse was wonderful and supported me through this difficult time. But life was never the same in the office so I decided to take early retirement. I have never regretted that decision.

**Lin**

### Dear Vita

I was interested in reading the Star letter in Issue 40 by Cecelia regarding the holidays she has been able to take. I have had secondary breast cancer since 2005 and have had no luck in finding a reasonable holiday insurance policy. I would love to know how other people with secondaries manage to get insurance.

**Jean**

### Vita says

While it's not impossible to find travel insurance if you have secondary breast cancer, you'll probably have to pay a higher premium. Insurers base their decision on individual circumstances, so while one person may be offered cover, another may not.

You can find tips on looking for travel insurance with secondary breast cancer at [breastcancernow.org/insurance](https://www.breastcancernow.org/insurance)

You can also find other people's tips on the Forum:  
[forum.breastcancernow.org](https://forum.breastcancernow.org)

## What's on your mind?

**Email** [vita@breastcancernow.org](mailto:vita@breastcancernow.org)

**Write** Fifth Floor, Ibex House, 42-47 Minories, London EC3N 1DY

This issue's star letter wins a gift worth **£110** from our friends at **ELEMIS**



# News

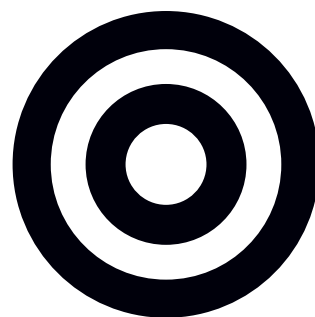
## Wear something important this April

Breast Cancer Now's Fashion Targets Breast Cancer, in collaboration with retailers River Island and Simply Be, launches on 7 April 2020.

This year's campaign puts women with breast cancer centre stage, shining a light on what it's really like to be affected by breast cancer.

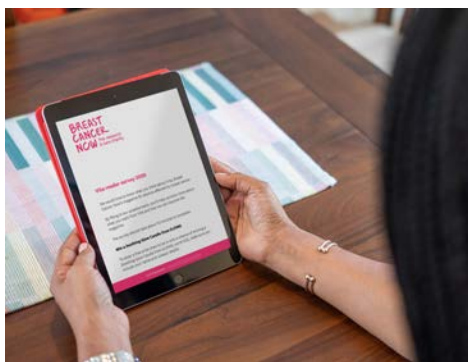
You can get involved by shopping the Fashion Targets Breast Cancer range at River Island and Simply Be.

This year 30% of all purchases from the range will go to Breast Cancer Now, helping fund life-changing care and world-class research.



**FASHION TARGETS  
BREAST CANCER**

BY BREAST CANCER NOW



## Tell us what you really think

The 2020 Vita reader survey is here, and we really want to know what you think about Vita.

By taking part in the survey, you'll help us make sure we give you the information you want in the most appropriate way.

The best way to complete the survey is online. Go to [surveymonkey.co.uk/r/vita20](https://surveymonkey.co.uk/r/vita20)

Alternatively, if you prefer good old pen and paper, you'll find a questionnaire in the centre of this issue.

Don't forget to include your name and contact details if you'd like to enter a free prize draw to win a gorgeous ELEMIS candle.

## New booklet for younger women

Breast Cancer Now has updated its information for younger women with breast cancer.

While breast cancer is not common in younger women, an estimated 6,000 women are diagnosed aged 45 or under in the UK each year.

**Breast cancer in younger women: coping with a diagnosis at 45 or under** covers issues commonly faced by women diagnosed at a younger age, from relationships and body image to fertility and pregnancy.

The booklet contains quotes from younger women who have had breast cancer.

To find out more or order a copy, visit [breastcancernow.org/publications](https://breastcancernow.org/publications) or call the Helpline on **0808 800 6000**.





# My confidence was at *rock bottom*

**Stella Maher was feeling very low after her treatment ended, but a Moving Forward course helped her make sense of what she was going through.**

**S**tella was diagnosed with breast cancer after discovering a lump in her breast, although the lump she found was in fact harmless. Her cancer, it turned out, was in her other breast.

‘My husband found a lump and kept telling me to go to the GP to get it checked,’ says Stella, 55 from London.

It turned out to be a cyst. But during investigations at the breast clinic, something was seen in her other breast.

A biopsy confirmed it was cancer.

‘It was a huge shock and the last thing I was expecting,’ says Stella, who was 50 when she was diagnosed on 12 June 2014.

A lumpectomy, then further surgery a month later, was followed by ‘three gruelling months of chemotherapy’ and radiotherapy, which ended in March 2015.

## Upside down

The end of hospital treatment was a challenging time for Stella.

‘I was an emotional mess,’ she says.

‘After treatment I was feeling really low and in a bad place mentally.’

Stella’s confidence had taken a knock partly due to the physical changes caused by treatment, which left her without hair, eyelashes or eyebrows, as well as damage to her fingernails and toenails.

‘I was convinced I looked like a freak,’ she says, ‘and my confidence was at rock bottom.’

‘You can stick a wig on and wear a bit of makeup and look “normal” to everyone else, and they tell you, “You look great!” But on the inside, you’re just not yourself. Everything is so upside down.’

## Coping

Stella’s oncologist, who could see she was struggling, recommended a Moving Forward course.

Run in partnership with NHS hospitals and delivered by a range of expert speakers, these courses provide

information and support to help people adjust to life after treatment. They’re also an opportunity to meet other people going through the same thing.

‘On the Moving Forward course, I was brought into contact with women going through exactly what I was going through,’ says Stella.

‘It helped me realise I wasn’t mad or alone, and that it was perfectly normal to go through that phase.’

Stella also got useful information from the course, which covered topics from diet and exercise to intimacy and relationships.

‘There was a lot of information about how to manage your feelings, how to manage your sex life, how to manage your emotions about your family,’ she says.

‘I also learned how to use mindfulness and to look after myself.’

**Stella, before she was diagnosed with breast cancer**



## Sharing

In 2018, inspired by her own experience, Stella became a face of the Care After Breast Cancer campaign, calling for improvements in support after treatment.

‘I met MPs at their offices and spent time chatting to them to give them first-hand knowledge of the issues,’ says Stella. ‘It got a great response.’

‘It was important for me because of my experience as someone who had difficulties moving forward. The physical recovery is only one part of the journey.’

‘Going through treatment gives you something to do. As soon as you stop seeing your doctors, you can feel lost and deflated. That’s why it’s so important that care after cancer continues.’

Stella has also become a volunteer speaker for Breast Cancer Now.

‘I go into organisations to encourage breast awareness,’ she says. ‘I recently spoke at West Ham United Women’s football club.’

‘I try to remove their fear that you need special training to check your breasts.’

Becoming a speaker meant Stella has had to overcome her natural shyness.

‘Being naturally shy and reserved, it wasn’t easy at

first,’ she says. ‘But I felt I had an important message to share.’

## Growing

When she was diagnosed, Stella was running a small business marketing health and wellbeing products.

‘Building the business exposed me to a lot of training and personal development,’ she says.

‘My passion for self-development and helping others led me to realise that I wanted to be a life coach.’

‘But I struggled with self-doubt and a lack of belief in myself, so I kept putting off the training.’

Stella says her breast cancer experience was the catalyst for achieving this ambition.

‘Cancer opened my eyes to the fact that I couldn’t sit around waiting for the right time,’ she says.


‘After treatment finished, I qualified as a personal performance coach in January 2018.’

Stella, who was bullied as a child because of her appearance, set up her own company last year. She now helps young women who feel insecure about their bodies to be more self-assured.

‘I did it to grow as a person but also to help people who were struggling like myself,’ she says.

‘It’s one of the good things that has come out of being diagnosed with and having treatment for cancer.’

‘It has its challenges. But you can’t grow without challenge.’



Today, five years after finishing treatment

To find out more about Breast Cancer Now’s Moving Forward courses, call **0808 800 6000** or visit **[breastcancernow.org](https://breastcancernow.org)**



During chemotherapy, with husband Liam



# Going swimmingly

Rosie Bick looks at the benefits of swimming, how to get started and where to find the right swimwear.

**S**wimming is a great all-round exercise. Not only can it help increase your fitness, but regular swimming, a few times a week, can also improve flexibility, strength, mobility and even emotional wellbeing.

It may also help with ongoing side effects of treatment, such as fatigue and joint pain.

While swimming is suitable for most people, if you're still going through treatment, check with your treatment team or GP that it's OK to start.

## Dip a toe in

As with any type of exercise, it's best to build up gradually.

You might start by swimming a few lengths at a time, slowly increasing the number until you can swim continuously for around 30 minutes.

Picking set times and days to go swimming can help you get in the habit.

Arranging a regular swim session with a friend can be a great motivator.

Don't worry if some days you don't increase the amount you're swimming. Recovery from breast cancer treatment takes time and you are likely to have days when you need to rest, but even small amounts of physical activity will have benefits.

## Take the plunge

If you can't swim or want to improve your confidence in the water, your local pool may offer swimming lessons. Some have women-only classes or classes tailored to different abilities.

Many pools offer non-swimming activities such as aquafit, which can get you used to being in the water.

Find your local pool at [swimming.org](http://swimming.org)





## Make a splash

Many high-street or specialist retailers sell swimwear that's suitable for women who've had breast surgery. Specialist swimwear experts Nicola Jane ([nicolajane.com](http://nicolajane.com)) give some top tips for finding the perfect swimwear.

A key decision when selecting swimwear is choosing which neckline is best for you:

- V-neck: gives a flattering neckline, ideal if you like a lower neckline but still want a good amount of coverage
- Bandeau: gives good coverage, and doesn't feature straps to avoid tan lines
- High-neck: perfect if you feel more comfortable with slightly more coverage
- Ultimate high-neck: high cut, front and back, to give you the maximum amount of comfort, coverage and security
- Halter-neck: a good style if you want to avoid straps on the shoulders, it's very flattering and gives a fair amount of coverage

If you've had a mastectomy without reconstruction, it can help to wear a swimsuit with elasticated pockets and a support underband. They'll securely hold a breast form in place when swimming or being active.

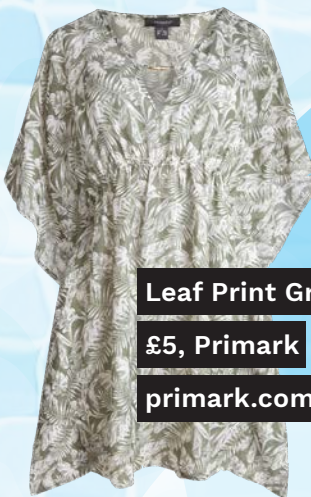
If you don't feel confident in just your swimsuit, kaftans and cover-ups can be a great solution. Made from lightweight, flowing material, they can give you additional coverage and, most importantly, help you feel comfortable whatever you're doing.



**Post Surgery  
Red Frill Swimsuit,  
£14, George at Asda  
[direct.asda.com/george](http://direct.asda.com/george)**



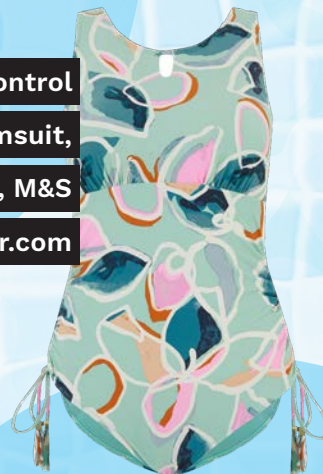
**Kos High Neck Swimsuit,  
£39 (excluding VAT),  
[Nicola Jane nicolajane.com](http://Nicola Jane nicolajane.com)**



**Leaf Print Green Kaftan,  
£5, Primark  
[primark.com](http://primark.com)**



**Tahiti Floral Kaftan,  
£49, John Lewis & Partners  
[johnlewis.com](http://johnlewis.com)**



**Magic Control  
Post Surgery Floral Swimsuit,  
£28, M&S  
[marksandspencer.com](http://marksandspencer.com)**

For more information and useful organisations, order our **Breast prostheses, bras and clothes after surgery** booklet. Call 0808 800 6000 or visit [breastcancernow.org](http://breastcancernow.org)

# I'm learning to cope with

# *hot flushes*

**Kelly Foster began having hot flushes soon after she started taking tamoxifen, a commonly prescribed hormone therapy treatment for breast cancer.**

**‘T**hey happen most days and I can experience them throughout the day and during the night in bed,’ says Kelly, who was diagnosed with breast cancer in 2017 at the age of 39.

Hot flushes are the most reported menopausal symptom caused by breast cancer treatment.

They’re a common side effect of hormone therapies, treatments that are usually taken for between five and ten years.

‘They are not nice to experience,’ says Kelly, ‘and I am learning to cope with them as they have been ongoing for me now for three years.’

## **‘They can be intense’**

The frequency and severity of hot flushes differ for everyone.

For some women, a hot flush is a mild sensation of

warming that just affects the face. Others experience waves of heat throughout the body, sometimes accompanied by drenching perspiration.

For Kelly they can be ‘intense and last mainly moments’.

It’s common to have hot flushes at night as well as during daytime.

‘I often wake in the night with hot sweats and feel soaking wet,’ says Kelly.

‘The broken sleep has an emotional impact as I struggle to stay asleep throughout the night.’

It might be tempting to think of hot flushes as part and parcel of breast cancer treatment, and therefore something you must put up with.

But there are things you can do and treatments that could help.

## **Coping strategies**

Kelly has found various ways of coping which she says have reduced the intensity of her hot flushes and made life easier.

‘I now dress with an awareness of my hot flushes to enable me to cope better,’ she says.

‘I no longer wear wool, and woolly jumpers are a definite no-no.’

‘I can no longer wear long, tight leather boots as it makes me feel too hot. I find trainers much more comfortable.’

Dressing in layers means you can remove clothing if you get too hot.

Loose-fitting natural fibres, such as cotton, are likely to be more comfortable than synthetic fabrics.

Kelly says using cotton bedding helps at night. She uses a low-tog quilt as well



## Hot flush tips

- ◆ Keeping a diary can help identify hot flush patterns or triggers
- ◆ Cold drinks can temporarily lower your temperature and may reduce the number of hot flushes
- ◆ Reducing alcohol intake may help, as can cutting out tea or coffee
- ◆ Speak to your treatment team or GP as there may be treatments that could help
- ◆ Breast Cancer Now's Someone Like Me service can put you in touch with someone else who has experienced hot flushes. Find out more at [breastcancernow.org](https://breastcancernow.org) or by calling the Helpline **0808 800 6000**



as 'a paper-thin one for the summer months'.

'I also use sleep meditation to help me fall asleep and if I wake in the night to help me get back to sleep.'

Another tip is to keep a fan near you when possible.

## A 'natural' remedy?

Some women turn to complementary therapies to try to help with hot flushes.

Complementary therapies, such as herbal remedies, are often seen as 'natural' and therefore safe. But there's little evidence to show how effective these therapies are and there's a risk some herbal remedies could interact with medication.

If you're thinking about using a complementary therapy, speak to your treatment team first.

'I have a ceiling fan above my bed to help cool me,' says Kelly. 'At work I have a fan on my desk, and I carry paper fans in summer.'

## Treatments

While HRT is the most common treatment for hot flushes, it's not usually recommended for women after a breast cancer diagnosis.

However, other treatments may be available and it's always worth speaking to your treatment team or GP.

For example, some antidepressant drugs, taken in lower doses than when used for depression, have been shown to reduce hot flushes in some women.

Like all drugs, these will have side effects, and some may interact with other drugs you're taking. Your treatment team can discuss options with you.

## Good to talk

Kelly has spoken to her breast care nurse about hot flushes.

'We discussed coping strategies,' she says. 'For me it's about small practical steps, such as clothing choices and having a fan close by.'

Talking to other women who have similar symptoms and sharing experiences can often help you find new ways of coping.

You could try Breast Cancer Now's online discussion Forum.

Kelly is now a volunteer for the Someone Like Me service, which can put you in touch by phone or email with someone who has also experienced hot flushes.

To order a copy of Breast Cancer Now's **Menopausal symptoms and breast cancer** booklet, visit [breastcancernow.org](https://breastcancernow.org) or call the Helpline on **0808 800 6000**.

# *I started chemo a week after giving birth*



Laura in chemotherapy not long after giving birth

**When writer Laura Pearson was diagnosed with breast cancer during pregnancy, she felt isolated and feared for her unborn child.**

**I** found a lump in my breast on the day of my 20 week scan,' says Laura, 39, who was pregnant with her second child.

After a visit to the GP and the breast clinic, a few weeks later Laura was told the lump she'd felt was breast cancer.

'I was diagnosed on April Fools' Day 2016,' she says. 'It was really scary.'

## **Alone**

The time spent waiting for a treatment plan was terrifying, says Laura, who was 35 when diagnosed. She found herself fearing the worst.

'Your primal instinct is to protect your child. My fear was they'd tell me I had to terminate the pregnancy.'

'At the time I felt like I must

be the only person this was happening to.

'I felt alone on two fronts. I didn't realise first that young people get breast cancer, and second that people who are pregnant get breast cancer.'

## **Missing out**

Treatment began with a lumpectomy to remove the cancer when Laura was 27 weeks pregnant.

At 35 weeks, labour was induced with a plan to start chemotherapy soon after the birth.

But barely 24 hours after she was born, baby Elodie was taken to an intensive care unit in Sheffield, a long way from the family's home in Leicestershire. She would remain there for the next two weeks, watched over

by Laura's husband Paul, while Laura stayed with Elodie's older brother Joseph, then two years old.

Chemo began as one-week-old Elodie was still in hospital.

Reflecting on this time, Laura feels she missed an important part of her daughter's life.

'When I look back I don't really remember her being a baby,' says Laura, who spent the first four months of Elodie's life having chemotherapy.

'I feel like I've missed out,' she says.

## **More news**

Laura is grateful to family who helped out during this time.

'We had lots of support from both sets of parents,' she says. 'We didn't have to do any cooking or cleaning, which meant Paul and I could look after Elodie once she came home from hospital after two weeks.'

Because her mother had had breast cancer too, Laura was offered testing for the known genetic alterations that can





With husband Paul and their two children, Elodie and Joseph



'It's what I always wanted': Laura with her latest novel

increase the risk of breast cancer.

Laura tested positive for the altered BRCA2 gene, which significantly increases the risk of breast and ovarian cancers.

'I was given the news over the phone while I was on holiday,' says Laura.

'It felt like one thing after another, that everything that could go wrong did go wrong.'

Laura later went on to have surgery to remove her ovaries, followed later by a double mastectomy.

## A lifeline

Laura found support through the Younger Breast Cancer Network, which provides private Facebook chat groups to younger women with breast cancer.

It was here she found out about Younger Women Together, Breast Cancer Now's two-day support events for women under 45.

'At local support groups or at the breast clinic all the women I saw were in their 60s, 70s or

80s. If I went to appointments with my mum, everyone assumed it was my mum who had breast cancer,' says Laura, who attended a Younger Women Together event in Bath.

'It felt like a huge weight off knowing there were other people in the same situation.

'It was intense and emotional. I felt drained afterwards. But finding people my own age, and having conversations with people who really got it, felt like a lifeline.'

## Making it happen

Laura, who has an MA in creative writing, always wanted to be an author. Despite coming close, she'd never found an agent or publisher for her first two novels.

In November 2016, shortly after finishing treatment, she decided to take part in NaNoWriMo. National Novel Writing Month challenges people to write 50,000 words in 30 days.

'I made it a charity challenge,' says Laura, 'raising money for

Mummy's Star.' The charity helps women affected by cancer during pregnancy.

A year later Laura submitted the work to a small publisher, who offered to publish it along with her first two novels.

*I Wanted You to Know* came out in 2019. It follows a young woman with incurable cancer who writes letters to her daughter.

'I wrote all my worst fears in the book,' says Laura.

'It was a way of pouring out all the things that could happen. I found it really cathartic.'

The author partly attributes her success in getting published to her breast cancer experience.

'It's what I'd always wanted,' she says. 'I had to make it happen.'

At a Younger Women Together event, you can meet around 30 other women under 45 who've been diagnosed with primary breast cancer. Visit [breastcancernow.org](https://breastcancernow.org) or call the Helpline on 0808 800 6000 to find out more.

# The healthy bone zone

*Everyday tips for keeping bones strong*

**Some breast cancer treatments could put you at higher risk of osteoporosis. We look at some ways to help keep bones strong and healthy.**

**O**steoporosis is a condition that affects over 3 million people in the UK.

It happens when bones lose their strength, making them more likely to break.

While it usually develops slowly over time – our risk increases the older we get – some breast cancer treatments can affect bone health and could put you at higher risk.

One of the reasons for this is down to the hormone oestrogen. Oestrogen helps keep bones strong. But some breast cancer treatments, such as aromatase inhibitor drugs, work by reducing the amount of oestrogen in the body. This can increase the risk of osteoporosis.

There are things you can do to keep bones healthy and reduce your risk of osteoporosis.

## **Necessary nutrients**

A varied and balanced diet can give us the nutrients we need for strong, healthy bones.

Calcium is a vital mineral for teeth and bones, giving them strength and hardness.

‘Most of us know dairy products are a great source of calcium,’ says Dietitian Adele Hug.

‘If you don’t eat dairy for whatever reason there are lots of other sources, you just need to make sure you are getting enough.’

Non-dairy sources of calcium include calcium-fortified cereals; fish with edible bones, such as sardines or tinned salmon; green leafy vegetables like broccoli and kale (but not spinach); nuts and pulses.

‘If you’re having a dairy

alternative like soya or oat drinks, make sure they are fortified with calcium,’ says Adele. ‘Give them a good shake before you pour as sometimes the calcium falls to the bottom of the carton.’

In order to absorb calcium, we also need vitamin D.

Our body creates its own vitamin D when our skin is exposed to sunlight outdoors. However, according to the NHS, between October and early March we don’t get enough vitamin D from sunlight.

‘We now recommend vitamin D supplements for everyone during the winter months. You can ask your doctor to check your vitamin D status to make sure you are getting the dose you need.’

Vitamin D is also found in some foods.

‘Vitamin D is found in oily fish like salmon, mushrooms, egg yolks, and fortified yoghurts and cereals,’ says Adele.

As well as getting enough calcium and vitamin D, Adele also says: ‘We need enough





Regular weight-bearing exercise can help keep bones strong

protein for strength and support, and a balanced diet with different fruits and vegetables, wholegrains and starchy carbohydrate foods, nuts and seeds to provide important nutrients, good fats and fibres.’

Cutting down on alcohol and avoiding smoking can also help keep bones healthy.

## Have an impact

Another way of helping keep bones strong is by doing some regular exercise.

According to the Royal Osteoporosis Society, for healthy bones we need to combine ‘weight-bearing exercise with impact’ and ‘muscle-strengthening exercise’.

Weight-bearing exercise is any type of activity where you’re standing and supporting the weight of your own body. So walking is weight-bearing, whereas swimming or cycling are not.

These exercises can be broken down into lower impact exercises, such as walking; moderate impact ones such as

jogging; or high impact such as star jumps.

Doing a variety of these activities can be good for bone health.

However, some people might be advised to avoid high-impact activities, for example if they’re thought to be at particularly high risk of a fracture. Before starting a new activity, it can be useful to talk to your GP or treatment team.

Activities that strengthen your muscles can also help keep your bones strong. These could be exercises where you use weights, an elastic resistance band, or your own body weight such as press-ups. Try to do these at least a couple of times a week.

You can find more tips on exercising for healthy bones on the Royal Osteoporosis Society website [theros.org.uk](http://theros.org.uk)

## Treatment options

It’s important to try to prevent osteoporosis because, once it has developed, it cannot be cured. However, treatments are available to try to make bones

less likely to break.

Some people are recommended to take calcium or vitamin D supplements.

Bisphosphonates are a group of drugs that can help strengthen bones and reduce the risk of fractures.

You might be offered a bisphosphonate drug to help protect your bones if you’re taking an aromatase inhibitor.

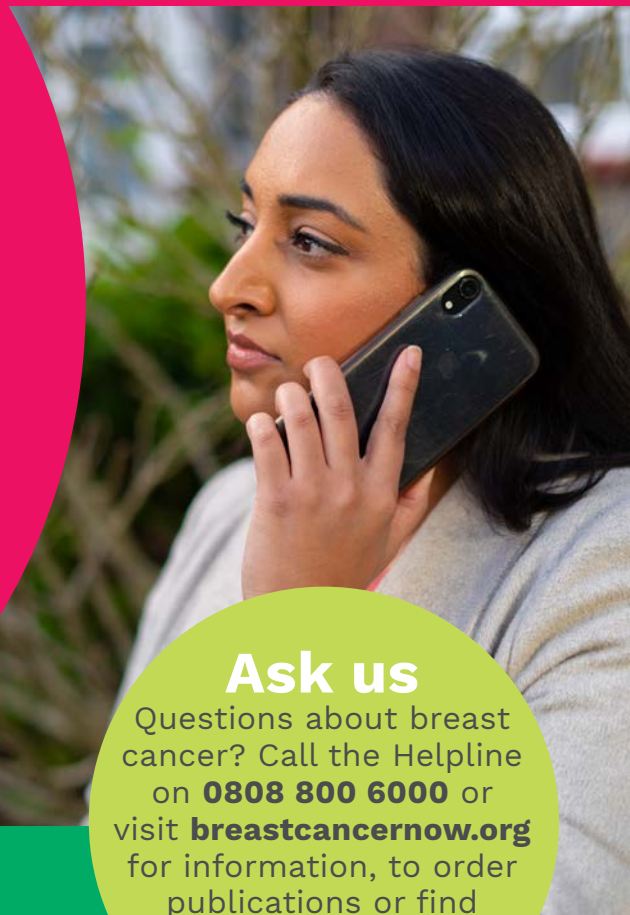
Bisphosphonate drugs are also used as cancer treatment for some people, to reduce the risk of breast cancer spreading. They’re also sometimes given to treat breast cancer that has spread to the bone.

You can find more detailed information on these and other drugs used to prevent and treat osteoporosis on the Royal Osteoporosis Society website.

For more information about osteoporosis and breast cancer, including how to look after your bones, order a copy of **Osteoporosis and breast cancer treatment**. Call **0808 800 6000** or visit **[breastcancernow.org](http://breastcancernow.org)**

# Your questions answered

Breast Cancer Now's experts answer your questions about breast cancer and its treatments



## Ask us

Questions about breast cancer? Call the Helpline on **0808 800 6000** or visit **breastcancernow.org** for information, to order publications or find out how to Ask Our Nurses by email

## Can I get a Blue Badge?

**Q** I've got secondary breast cancer in the bone. Am I eligible for a Blue Badge and, if so, how do I get one?

**A** A Blue Badge allows people to park in parking spaces that are closer to where they are going.

Some people are automatically eligible for a Blue Badge if they receive certain benefits.

Others may be eligible because of their circumstances. This includes if they need help from another person to walk or they use a mobility aid. Or if they find walking very difficult due to pain, breathlessness or the time it takes.

You can check eligibility and apply for a Blue Badge online at [gov.uk/apply-blue-badge](http://gov.uk/apply-blue-badge) or you

can contact your local council for a paper version of the application form.

If you live in Northern Ireland, you can apply online at [nidirect.gov.uk](http://nidirect.gov.uk) or call 0300 200 7818.

## Letrozole is causing my hair to thin

**Q** My hair has been getting thinner since I started taking letrozole. Is there anything I can do?

**A** Hormone therapies such as letrozole can cause some hair loss or hair thinning. This can be very upsetting, not least because treatment is usually recommended for five, sometimes ten, years.

Eating a healthy well-balanced diet can help with the

overall condition of your hair, although no specific foods are recommended.

Some women use a foam containing the medicine minoxidil, applied directly to the scalp. Minoxidil may help some women with hair loss.

There are claims that some supplements can reduce hair loss, but we're not aware of evidence to support this.

Using gentle shampoos, conditioners and hair products

can reduce the risk of hair breaking.

There's information about hair care in our **Breast cancer and hair loss** booklet. This also contains a list of organisations that offer information and support to women with hair loss.

If hair thinning is upsetting you, you can talk to your treatment team or GP, or call our Helpline for information and support.



## I'm worried because I'm triple negative

**Q** I've been diagnosed with primary triple negative breast cancer and I'm worried there's a lack of treatments. What are my options?

**A** Triple negative breast cancer (TNBC), which doesn't have receptors for the hormones oestrogen and progesterone or the protein HER2, can be treated with chemotherapy, surgery, radiotherapy and bisphosphonates.

Chemotherapy is often given before surgery – called neo-

adjuvant chemotherapy – and ongoing research is looking into different chemotherapy combinations.

An oral chemotherapy drug called capecitabine is sometimes used if there's still some cancer left after surgery.

Clinical trials are trying to find out if other treatments may help people with TNBC. These include treatments called PARP inhibitors and immunotherapy.

Cancer Research UK has a list of current trials for TNBC and you can ask your treatment

team if you might be eligible.

Many people find it helpful to talk to someone who has been through a similar experience. Breast Cancer Now's Someone Like Me service can put you in touch with someone who has had a diagnosis of TNBC, so you can talk through your worries and share experiences.

You can also post messages and receive support on our online Forum.



## Is it safe to take supplements?

**Q** I've read so much conflicting advice online about the safety of taking supplements while on treatment. How do I know if it's OK for me to take them?

**A** Many people ask about taking vitamin and herbal supplements as they want to do as much as possible to be healthy while on treatment for either primary or secondary breast cancer.

There is often a belief that

vitamins and herbs are safe as they are 'natural'.

However, the evidence is conflicting about how safe it is to take vitamin supplements during some treatments for breast cancer, particularly antioxidants such as vitamins A, C and E and Co-enzyme Q10. Some experts suggest that they might make treatment less effective.

Herbal supplements don't have to comply with the same regulations or rigorous testing

that conventional medicines do. For many products, there's a lack of research to confirm if they are safe to use. For some there's evidence they can interfere with some medicines, including cancer treatments.

If you'd like to take any vitamin or herbal supplements, it's always best to discuss this with your treatment team first.

# Lymphoedema

## *reducing your risk*

**Lymphoedema can be a worry for many women after breast cancer treatment, but how can you reduce your risk of developing it? Megan Stansfield finds out.**

### **What is lymphoedema?**

Lymphoedema is long-term swelling caused by the build-up of fluid in the body's tissues.

It usually affects the arm, sometimes including the hand and fingers, but can also affect the breast, chest, shoulder or the area on the back behind the armpit.

Lymphoedema can develop after breast surgery or radiotherapy to the lymph nodes under the arm or surrounding area.

'It's understandable that you may be concerned about developing lymphoedema after breast cancer treatment,' says Clinical Nurse Specialist Addie Mitchell. 'But there are ways you can help to reduce your risk.'

### **Should I avoid injections or medical procedures on my at-risk arm?**

There's no firm evidence that having injections, blood tests, blood pressure readings or intravenous fluids in your at-risk arm will increase your risk of developing lymphoedema.

### **Healthy weight**

Maintaining a healthy weight, through eating a healthy balanced diet and doing some regular exercise, is one way to reduce your risk.

'Keeping to a healthy body weight can help reduce strain on your lymphatic system,' explains Addie.

If you want to lose weight, you can find tips on the NHS website [nhs.uk](https://www.nhs.uk)

### **Using your arm**

Often people believe they should use their at-risk arm less to reduce the likelihood of lymphoedema developing. However, as Addie explains, this isn't helpful.

'Using your at-risk arm normally and exercising the arm regularly can actually reduce your risk,' she says.

Exercises provided by your treatment team can help gradually increase your arm and shoulder mobility after surgery.

Once your normal mobility returns, you can gradually return to any activities or sports you did before your surgery.

Addie stresses it's important to build up slowly and seek guidance from your treatment team if you're unsure about exercise.

'If you have limited mobility, you may be able to do gentle

stretches and deep breathing exercises to help promote lymph flow around the body,' she says.

### **Skincare**

Caring for your skin is important to reduce your risk of an infection. An infection in your at-risk hand, arm, breast or chest area can cause swelling, which could lead to lymphoedema.

Some tips for reducing the risk of infection are:

- Moisturise your skin daily
- Use a high-factor sunscreen to avoid sunburn
- Use oven gloves when cooking or gardening gloves when gardening
- Use insect repellent to avoid bites and stings
- Take care when using a razor, having a wax or cutting your nails
- Keep cuts and grazes clean and use antiseptic cream

**Contact your GP or breast care nurse if you notice signs of an infection, such as redness, heat, swelling, tenderness or flu-like symptoms.**

You can call the Breast Cancer Now Helpline to talk to one of our nurses about any concerns on **0808 800 6000**. You can also order a free copy of the booklet **Reducing the risk of lymphoedema**.



# Five podcasts *to get hooked on in 2020*

The recent rise of podcasts means that it's easier than ever to tune in to some great stories, interviews and discussions, no matter where you are. Bridie Wilkinson, Breast Cancer Now's Digital Content Manager, picks five series to listen to in 2020.

## 1 You, Me and the Big C: Putting the can in cancer

Hosted by Lauren Mahon, Deborah James and Steve Bland, this podcast is a candid look at life with, treatment of and other topics surrounding cancer. Expect funny commentary and honest discussions on various subjects, from media portrayals of cancer to dating after a diagnosis.

## 2 The Open Ears Project

The Open Ears Project invites guests to share the piece of classical music that means the most to them. Guests range from project managers and soldiers to actors and singers, and the short episodes make this a great podcast to lose yourself in.

## 3 Happy Place

Presenter Fearne Cotton interviews a variety of people about life and what happiness means to them. The conversations are about an hour and are an interesting insight into other people's lives and perceptions. It's a series that's bound to make you think.

## 4 Griefcast

Comedian Cariad Lloyd invites other funny people to talk frankly about grief, death and everything between. This podcast addresses taboos around bereavement, in an effort to make it 'less depressing' and manageable by talking to each other.

## 5 Breast Cancer Now podcast

Our own podcast is in its second season. It's a series that shares the stories of women and men who have had breast cancer. It's also where you'll hear the voices of our nurses, researchers and experts who help to provide support for today and hope for the future to anyone affected by breast cancer.

# Could our immune system be used to destroy cancer?



## Breast Cancer research

Immunotherapies – treatments that help the immune system target and destroy cancer cells – are a rapidly growing area of research. Edd Jones looks at the science behind immunotherapies and some of the exciting research Breast Cancer Now funds.

### The immune system – our guardian protector

Our immune system is made up of specialised cells, tissues and organs that work together to protect our bodies from disease.

The cells of our immune system are called white blood cells. There are many types, and each has a unique role in protecting the body from infection.

One type ‘eats’ viruses or bacteria it encounters and displays their broken parts to turn on the rest of the immune system.

Another type, called T cells, assesses whether a cell is a friend or foe. T cells can then trigger an immune response and activate other immune cells against the enemy.

As part of this process, other cells act as a form of memory for the immune system and produce antibodies. If our

body faces a threat it has seen before, the antibodies recognise it and alert the immune system to produce a quicker response.

### How immunotherapies work

Immunotherapies can work in different ways to stimulate these processes and help the immune system to recognise and destroy cancer cells.

However, immunotherapies for breast cancer are currently in research stages. For a long time, it was thought that immunotherapies may not work to treat breast cancer. But now we know more about breast cancer and the immune system and can change that.

Here are just two of the projects we’re funding.

### Developing a safe immunotherapy for breast cancer

Dr John Maher and his team, based at King’s College London,

want to develop a safe and effective immunotherapy for breast cancer.

John has developed an immunotherapy which is effective against HER2 positive breast cancer.

Some breast cancer cells have a higher than normal level of a protein called HER2 on their surface, and this stimulates them to grow. These breast cancers are known as HER2 positive, and account for around one in five breast cancers.

Unfortunately, HER2 is also found on some other cells, such as heart or lung cells, which means the immunotherapy may also act against them and cause serious side effects.

John hopes to reduce the risk of side effects by adapting the immunotherapy. He wants to add a safety feature that will make sure it acts only against breast cancer cells. The safety



Professor Andrew Sewell  
hopes his research will lead  
to immunotherapies  
for breast cancer



feature will recognise another molecule that is only present on breast cancer cells, and not any healthy cells. And the immunotherapy will only be active if this and HER2 are present.

First they will develop the safety feature and then test the immunotherapy on breast cancer cells in the lab, before testing it further on breast cancer cells in mice.

This research could help pave the way for a safe and effective immunotherapy.

### Telling cancer cells and healthy cells apart

Professor Andrew Sewell, working at the University of Cardiff, wants to understand how special T cells can target and destroy breast cancer cells, without causing harmful side effects. Ultimately, it could lead to promising new treatments.

T cell therapies have recently shown success in treating advanced skin cancer. Andrew and his team have found the specific T cells responsible for targeting skin cancer. They now want to find out if these cells could also be used to successfully treat breast cancer.

They found that these T cells can target breast cancer cells without harming healthy tissue. But their most exciting feature is that they could potentially be used for all cancer patients.

T cells rely on a molecule

called HLA to recognise cancer cells. These molecules are unique to every person, which means that T cell therapies can only be made for individual people. But the specific T cells found by Andrew's team don't rely on HLA molecules and so could be used to treat many more people.

To understand more about these T cells, the researchers are hoping to find the molecules they target on the cancer cells and understand how they can tell apart cancer cells from healthy cells.

Andrew hopes this project will help drive the field of immunotherapies forward, leading to safe and effective immunotherapies for breast cancer that can be made on a wide scale.

### *Researchers are looking into immunotherapies for breast cancer*



T cells assess whether a cell is a 'friend' or 'foe' and can trigger an immune response

If you would like to find out more about the research we fund, visit [breastcancernow.org/breast-cancer-research](https://breastcancernow.org/breast-cancer-research)

# *One* potato, *two* potato...

Why relegate potatoes to side dish status when you can make them the star of the show? Try these recipes from [lovepotatoes.co.uk](http://lovepotatoes.co.uk)

## Cajun-spiced chicken and potato one pot

Serves 2



- 300g smooth potatoes (such as Desiree), cut into 2cm pieces
  - 1 tablespoon olive oil
  - 2 large chicken thighs, boneless and skins removed, quartered (or use chicken breasts if you prefer, sliced into large pieces)
  - 60g chorizo, cut into 1cm thick discs
  - 1 onion, thinly sliced
  - 1 red pepper, thinly sliced
  - 2 garlic cloves, chopped
  - 2 teaspoons Cajun seasoning
  - 1 tin chopped tomatoes
  - 200ml chicken stock
1. Cook the potatoes in salted water and drain.
  2. Heat the oil in a small frying pan and brown the seasoned chicken until golden and crispy, about 3 minutes each side. Remove from the pan and add the chorizo. Cook for several minutes until crispy.
  3. Lower the heat and add the onions to the pan, cooking until soft, about 10 minutes. Add the pepper, garlic and spices and cook for another 5 minutes.
  4. Add the potatoes, tomatoes, chicken and stock and bring to the boil. Reduce to a simmer and cook for 20 minutes, checking that the chicken is cooked through. Season to taste before serving.



## Quick and easy dauphinoise potato

Serves 4

- 500g smooth potatoes (such as Desiree), thinly sliced
- 200ml double cream
- 100ml milk
- 1 garlic clove, crushed
- 50g Gruyère cheese, grated

1. Preheat the oven to 180°C/160°C fan.
2. Place the potatoes in a bowl of cold water to prevent them from browning. Rinse, then pat dry with kitchen paper.
3. Place the cream, milk and garlic in a large saucepan and bring to a gentle simmer.
4. Add the potatoes, cover and simmer for 10 minutes until just tender. Season well.
5. Transfer to a buttered ovenproof dish and sprinkle over the cheese. Bake for 25 minutes until golden, and there you have it – the perfect dauphinoise potatoes.

## Asparagus and feta potato frittata

Serves 2

- 100g baby/new season potatoes
- 10g butter
- 1 teaspoon olive oil
- 2 spring onions, chopped
- 4 asparagus spears, chopped
- 50g feta cheese, crumbled
- 3 eggs

1. Cook the potatoes in salted boiling water for about 10 minutes or until tender, drain and when cool enough to handle, thinly slice.
2. Pre-heat your grill to medium.
3. In a frying pan add the butter and olive oil and cook the spring onions and asparagus over a low heat for 3–4 minutes. Add the potatoes and continue cooking for a few more minutes while you beat the eggs in a bowl with the crumbled feta cheese.
4. Pour the eggs and cheese over the potatoes and cook very gently without stirring. When the base has started to set, pop the frittata under the grill until set.

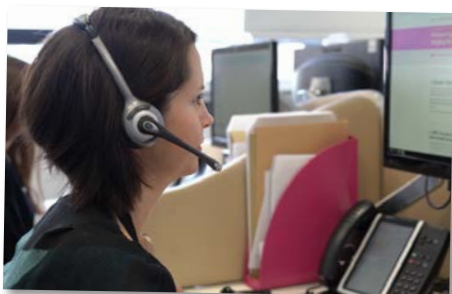




# Support *for you*

Breast Cancer Now's support services are here for you, whenever you need them.

## Someone to talk to



### Helpline

If you have a query about breast cancer, just want to talk things through or find more support, our nurses are at the end of a telephone line. Call our free, confidential Helpline on 0808 800 6000.

### Someone Like Me

Someone Like Me won't just put you in touch with someone else who's been affected by primary breast cancer. With a network of 200 trained volunteers, we'll find someone who understands your individual concerns.

## Online support



### Becca

Download the Becca app for hints to help you move forward after treatment.

### Forum

Whether you're going through treatment, moving forward or living with secondary breast cancer, you'll find someone who understands what you're going through on our popular online discussion Forum.

## Face to face



### Moving Forward®

Adapting to life after breast cancer treatment can be difficult. Moving Forward short courses take place throughout the UK to empower you to live better with and beyond breast cancer.

### Living with Secondary Breast Cancer

A diagnosis of secondary breast cancer can mean adjusting to difficult changes. These monthly sessions provide information, support and the chance to meet other people with secondary breast cancer.

### Younger Women Together

Come to a Younger Women Together event and meet around 30 other women under 45 who've been diagnosed with primary breast cancer. You'll have the chance to talk, share and be yourself.

## Find the right support

Call 0345 077 1893

Visit [breastcancernow.org](https://www.breastcancernow.org)



# It's a great day *with people who care*

**Jan Cannon was so pleased with her first Afternoon Tea for Breast Cancer Now that she's looking forward to organising another.**



**J**an was hesitant at first about holding a fundraising event she thought might be 'a bit too public for me'.

'I was very private during my breast cancer surgery and treatment,' says Jan, who was diagnosed with breast cancer in November 2017.

'However, Breast Cancer Now had been such a great support that I decided to sign up for an Afternoon Tea.'

## **I kept it low-key**

Jan decided a relaxed event at home for friends and family was the way to go.

'My sisters, my daughter and a friend agreed to bake and help gather items for a "Pink Pamper Hamper", which I made and raffled on the day,' says Jan.

Instead of asking for money for refreshments or the raffle, Jan kept a donations box on the table.

## **I was shocked and delighted**

Jan was delighted with her Afternoon Tea and the amount of money she raised.

'It was great fun and there was plenty of chat,' says Jan.

'I was shocked and delighted to find we had raised £651.'

## **You can make a difference**

Jan is planning another Afternoon Tea.

'To anyone who is unsure about organising an Afternoon Tea, my advice is to go for it,' she says.

'I kept mine low-key and didn't worry about numbers. Those who came were happy to have a chat, some nice sandwiches and cake.'

'It doesn't matter how big or small it is. You will have a great day with people who care and make a difference to a fantastic charity.'

Enjoy an Afternoon Tea and help support life-changing care and world-class breast cancer research.

Register your interest at  
[breastcancernow.org/afternoonteavita](https://breastcancernow.org/afternoonteavita)



**BREAST  
CANCER  
NOW** The research  
& care charity

At the time of printing, the government has advised avoiding social gatherings. For the most up-to-date information about Afternoon Tea, visit the website





**Anita Care** The most comprehensive range of breast forms, beautiful, supportive lingerie and stylish swimwear for all occasions. Designed to support women through all stages of treatment and recovery and to give confidence and comfort to those who have undergone breast surgery. Please call **01908 340 094** or visit **eloise.co.uk**

**TO ADVERTISE HERE**

**PLEASE EMAIL US AT**

**vita@breastcancernow.org**



**Banbury Postiche** est.1931 is an NHS-approved supplier that offers a fantastic range of acrylic wigs with a next-day delivery service available. We have a Customer Care team to support you, whatever your needs. Our purely wigs range is guaranteed to have a style to suit and delight you. Please take a look at our website **wigsuk.com** or call **01295 757 408**.

Code: **Vita 10**  
**10% off** for  
Vita readers



**Cancer Care Range from Cancer Research UK**

Using real-patient feedback, Cancer Research UK has hand-picked a collection of helpful little things for all stages of cancer treatment and recovery. Plus all the profits from your purchase will go towards beating cancer, so your helpful little thing will be helping others too. Visit **cruk.org/cancer-care**



**Chemo Headwear** Award-winning luxurious handmade headscarves, bandannas, turbans and hats that will make you feel pretty and feminine. Offering a beautiful selection of Liberty prints, checks and plain fabrics that are all natural and breathable including cotton, silk, bamboo and cashmere. **10% discount** when quoting 'breastcancercare' **chemoheadwear.co.uk**  
Telephone: **01798 861501**.



**Jennifer Effie's Hair Solutions** has created a bespoke hair replacement system for individuals who are undergoing cancer treatment. Our concept is to recreate how your hair looked before experiencing hair loss. Visit **jehair.com** to review our gallery, client testimonials and newspaper articles. Email: **info@jehair.com** Call: **020 3752 5089**, 5 Upper Wimpole Street, London W1G 6BP.



**Liberty Breast Prosthesis** Using 3D scanning and colour matching technology, each Liberty prosthesis is hand-crafted to resemble your existing breast or chosen intimate details. Our custom-made prostheses are designed to be worn against the skin, capturing the delicate contours of your post-surgical shape. Visit **breast-prosthesis.co.uk** for further information or contact us on **01656 768566** or **clinic@technovent.com**





**Lymphies** Lymphoedema relief. Beautiful, seam free compression sleeves, gloves and gauntlets. In lightweight, breathable material, infused with aloe softness. Call **0800 433 4757** or visit **lymphies.com**



With over 35 years of experience, **Nicola Jane** aims to restore confidence and femininity after breast cancer. Designed for women who have had all types of breast surgery, our pocketed lingerie and swimwear collection combines comfort and practicality with on-trend styles. Nicola Jane also offers free Bra Fitting Services across the UK. Visit **nicolajane.com** to find out more or call **0345 265 7595** for a free catalogue.



**Shear Genius** A hairdressing salon with a private wig studio offering free consultations with a wide range of wigs and customised hairpieces. We offer the Raccoon Hair in Recovery Extensions Programme for clients whose hair is growing back six-months post chemotherapy. Telephone: **01785 819444** Website: **sheargeniussalon.co.uk**



**SPRING  
SPECIAL OFFER**  
20% OFF  
USE PROMO  
CODE **VITA20**

**SILIMA®**

**SILIMA.co.uk** Home to the highest-quality and most realistic post-surgery breast forms available, plus a range of stylish and supportive bras from £18 each. Silima is a trusted supplier to the NHS with 40+ years' experience in mastectomy care. Visit **silima.co.uk** or call **01295 220 524** to request a catalogue.



**Suburban Turban** offers stylish, fashionable headwear and accessories for women experiencing hair loss. The collection offers styles for all occasions – from beautifully simple, super-soft jersey hats to chic berets and sparkling cocktail hats. We also offer a range of natural skincare products, chosen for their gentle, soothing benefits. To shop the range go to **suburbanturban.com** or call **01306 640 123**.



**Womanzone ABC** offers Made to Measure swimwear that will make you feel unique. Our expert stylists have chosen a lingerie collection to meet the needs of all types of breast surgery. We have a reputation for innovation and reliability providing the most innovative breast forms, including the unique Custom Made Breast Form. The heart of our service is our experienced and knowledgeable team. For advice or information on our Bra pocketing service, to request a brochure call **01925 220 932**. Visit **woman-zone.co.uk** or Womanzone Facebook.

Breast Cancer Now does not endorse any product advertised on these pages. Speak to your treatment team before buying compression garments for lymphoedema.

**BREAST  
CANCER  
NOW** The research  
& care charity

When you have  
a question  
or just need  
to talk

**WE'RE  
HERE**

**0808 800 6000**

Call us free, for information you can trust and support when you need it



**VITA**

Four ways to subscribe to Vita magazine

1. Visit [breastcancernow.org/vita](https://breastcancernow.org/vita)
2. Email [vita@breastcancernow.org](mailto:vita@breastcancernow.org)
3. Call 0345 092 0808
4. Fill in this form and send it to the address below

☐ I'd like to receive Vita magazine three times a year

Name

Address

Postcode

Breast Cancer Now, Freepost RTSC-SJTC-RAKY, Fifth Floor, Ibex House, 42-47 Minories, London EC3N 1DY

If you already hear from us, we'll continue to contact you in the same way. From time to time, we may contact you by post to keep you updated on our work and ways you can help. You can change the way you hear from us at any time by emailing us at [supporter.care@breastcancernow.org](mailto:supporter.care@breastcancernow.org), calling us on 0345 092 0817 or writing to us at the address above.

To help us work more efficiently, we may analyse your information to make sure you receive the most relevant communications. This may include using publicly available information. You can ask us to stop this at any time, by contacting us using the above contact details. You can read more about how we will use your information on our website at [breastcancernow.org/privacy](https://breastcancernow.org/privacy), or contact us if you'd like a paper copy.

