Welcome to our Spring Newsletter!

In this issue we talk about the second generation C-Brace, introduce our new team members and explain how the Symphonie Aqua socket casting system works and benefits patients.

We also take a look at a week in Resi Rehab and all that it involves, catch up with Rio Woolf and learn how quadruple amputee Ellie Challis is breaking new ground on the ski slopes.

We hope their sporting activities inspire you this Spring!

The Dorset Orthopaedic Team
INTRODUCING THE NEW C-BRACE

The second generation of the ground-breaking C-Brace bionic exoskeleton is now exclusively available at Dorset Orthopaedic.

The C-Brace, which gives patients with lower limb weakness a more streamlined and efficient walking gait, is exclusive to Dorset Orthopaedic through manufacturer Ottobock and is suitable for a number of conditions from post-polio syndrome, weakness resulting from stroke, partial paralysis and spinal injury.

When referring to the C-Brace we are often referring to the entire orthosis as pictured, however the clever part is the joint on the outside of the KAFO (Knee Ankle Foot Orthosis). The C-Brace joint contains sensors around the thigh which monitors a user’s walking 50 times every second. This information is then processed via a mini computer which alters the resistance in the hydraulic unit (positioned around the joint) and this allows the user to put weight fully though the leg during walking in a constantly supported manner. The joint also controls how quickly the leg can swing though during the swing phase. Previously, patients using KAFO’s for support would have had to have walked with a fixed (locked) knee. Lighter than its predecessor, the new orthosis can be worn outside or under clothing and users have the ability to change some settings via a smart phone app.

Matt Hughes, Clinical Services Director at Dorset Orthopaedic, said, “We're delighted to be able to offer the new and improved second generation C-Brace, there really isn’t anything else like it to offer patients the freedom and increased mobility. Our first one was fitted last week to a polio patient who hadn’t walked for over a year. To see him walking freely outdoors down a slope within hours was just remarkable”

For more information on the C-Brace please contact Leigh via email leighl@dorset-ortho.com or telephone 01425 481755

OUR COVER STAR

Congratulations to our ambassador and this quarter’s cover star Colin Edwards for completing yet another gruelling Grizzly 20-mile run. Colin has run the tough off-roader more than ten times, an amazing achievement!
ELLIE CHALLIS HITS THE SLOPES

Dorset Orthopaedic has helped a champion para-swimmer Ellie Challis hit the slopes, with a bespoke snowboarding prosthesis to enable her to go on a snow sports holiday.

Ellie, 14, of Little Clacton, Essex, has broken new ground by becoming the first quadruple amputee in the UK to become a snowboarder. She recently travelled to Andorra in the Pyrenees with her older sister, Tai’la, 19, and a group from Disability Snowsport UK.

Working with prosthetists Matt Hughes and Shaun Annandale, Ellie was fitted with special prosthetic “stubbies” which connect directly to the snowboard, much like regular boots would. The stubbies, created with hard foam, are moulded to Ellie’s residual limbs and provide support and stability with four inches of extra length, so they fit into the snowboard fixings comfortably.

They also have a carbon fibre exterior and special water-resistant locks, made by Ottobock, which she can release should she need to get off her snowboard quickly. To enable her to glide through the snow with confidence, Ellie had a series of bespoke training sessions at the Snow Centre in Hemel Hempstead with tuition from Disability Snowsport UK (DSUK) instructors James Sterry and James Merrey, and Darren Swift, a former soldier who, like Ellie, has bilateral above-knee amputations.

Before the trip, Ellie said, “So far I’ve fallen over a lot but I think that’s pretty normal for everyone who learns. Its a steep learning curve with snowboarding but once I get over the curve I’ll be able to do loads. I’m learning my turns and I’m going further on each run,” she added. “I’m totally ready for my holiday, and this is definitely not a one-off, I want to go on more skiing trips.”

Ellie lost all four limbs, her legs above the knee and her arms just below her elbow when she was just 16-months-old through meningitis. But her disabilities have not stopped her doing whatever she wants. Dad, Paul, said, “She’s never once said ‘why me?’ She’s always been so positive and is so much more active than most able-bodied people are. She works with what she has, takes on everything with a smile, and she does an amazing job.”

Matt, who has been Ellie’s main prosthetist since she was three, said: “Ellie has always been so determined to do whatever she puts her mind to, so when she said she planned to go on a skiing and snowboarding trip with her sister, we were not at all surprised! We were delighted to help her achieve her goal and become a UK first, maybe even a world first with her level of amputation.”

Chief Executive of Disability Snowsport UK, Mark Kelvin, said: “We were delighted to welcome Ellie on to one of our hugely popular activity weeks. It has been great to see Ellie demonstrating that the only thing preventing somebody from getting on the slopes, is their own belief.”

When the family returned from the trip Ellie’s Dad Paul said, “It went so much better than any of us could have imagined, I knew it was going well because I didn’t hear from them all week – they were too busy having fun! And the minute they got home they asked if they could go on next year’s trip.”
MEET OUR NEW TEAM MEMBERS

Steve and Emily both joined us in February, Steve joined the Southern team in Ringwood and Emily the Midlands team in Burton upon Trent.

STEVE COX - PROSTHETIST

Steve is a skilled and enthusiastic clinician with a holistic approach to rehabilitation who believes strongly in patient centred care.

Following his graduation with first class honours from the University of Salford, Steve worked at the Portsmouth Enablement Centre where he provided specialist prosthetic and rehabilitation care for veterans, whose amputation was attributed to their military service and civilian patients recovering from complex multiple injuries. As a result he has gained valuable experience working with incredibly active and challenging cases.

Steve’s exposure to a wide range of clinical conditions and complex trauma cases with multiple limb loss, has resulted in the development of sound clinical reasoning, excellent practical skills and the ability to excel at problem solving bespoke solutions.

Steve is an excellent Prosthetist who finds solutions to meet every patient’s needs and takes great pride in witnessing patients who come in unable to walk or grasp objects mastering those tasks with their new prostheses.

Outside of work, Steve enjoys spending time with his wife and two young children, cooking, hiking and visiting family in Australia.

EMILY BRADER - PHYSIOTHERAPIST

Emily enjoys having the time and autonomy to tailor patients individual rehabilitation packages and work alongside them to achieve their goals.

After graduating from Sheffield Hallam University with a BSc in Physiotherapy in 2015, Emily conducted her junior rotations at Barnsley Hospital and then her senior rotations at Kings Mill Hospital in Mansfield. It was here she began working in amputee rehabilitation, caring for patients following their surgery through to prosthetic rehabilitation where her aim was to physically and emotionally help them recover. She found each case to be varied, challenging and rewarding and decided to specialise in this area.

Emily now provides intensive targeted care for our Midlands Clinic patients and since joining Dorset Orthopaedic, has revelled in the constant challenges patients present, especially when they arrive with specific goals in mind.

Emily is a member of the Chartered Society of Physiotherapy and the Health and Care Professions Council. She is a keen netball player and is currently renovating her new home with her partner and she also participates in various fundraising events for Cancer Research UK.
Joining Billy on stage for the special moment was Matt Hughes, Clinical Services Director, who was invited to join him for the presentation as one of a group of people credited with helping Billy get back to racing and to winning trophies in the BRDC Formula 3 Championship.

Billy has been a patient at Dorset Orthopaedic for just over a year after a horrific crash at Donington Park which resulted in the loss of his legs, one above the knee and one below. As well as his every day prosthetics, Dorset Orthopaedic made a bespoke prosthetic socket for his below knee side with which he can apply the brake on his racing car.

The prosthetic absorbs braking forces, reducing pressure and potential pain on Billy’s residual limb.

Matt said, “It was a huge thrill and a great honour to be able to join Billy on stage as he received his award from Formula 1 champion, Lewis Hamilton.

“We’re delighted to have helped him on his journey so far with his bespoke driving prosthesis and look forward to collaborating more in the future.”

The documentary charting Billy’s story, Driven: The Billy Monger Story, has been nominated for TV BAFTA for best single documentary.
DAY 1
Today I met with my patient, a 55 year old woman who has an above knee amputation following a knee surgery which went wrong. She’s lost a lot of weight in her efforts to get fit and healthy and maximise her recovery journey. She is strong willed and very determined, so I want to really challenge her with a full-on week of rehabilitation.

The first thing to do though, is conduct a thorough review of both her physical fitness and her prosthesis. We took outcome measures, the indices which tell us where a patient is within their recovery and made some minor adjustments to her socket. Then it’s a short circuit training session before some practice on the stairs and a visit to a garden centre. Overall, it’s been a good start with lots of variety.

DAY 2
We’re stepping things up today with some low-impact exercise. First of all we took a trip into the New Forest for an accessible cycling session. There’s a local company here which offers a whole range of bikes for hire along with one to one support, and we opt for a recumbent cycle for a leisurely ride.

Then it’s off to Boscombe beach to learn more about walking on soft and uneven surfaces, including sand and the zig-zag slopes leading to the beach. In total we walked 1.23 miles. Our patient has certainly had a workout today!

DAY 3
It was back to the New Forest for us in the morning for a fresh and invigorating two-mile walk which included a whole range of obstacles for our patient to navigate. She did extremely well managing the inclines and mud.

Then we’re off to the swimming pool for some practical learning on how to change; putting her prosthesis in the locker while maintaining balance, and using her crutches to get poolside. After some lane swimming, we were ready to try the post-swim routine which went really well. This highlighted the need for a dedicated water prosthesis so she could do this independently.
**DAY 4**

Today was all about getting the basics absolutely right. We did some re-education on gait and balance, tackling kerbs and walking without aids.

Then we worked on some relaxation techniques so our patient can overcome her anxiety while out and about. It's important for us to look after our patients’ mental wellbeing as much as their physical fitness, to prepare them for everyday life and the obstacles they may face.

We practiced those relaxation techniques and our earlier gait and balance training with a trip to West Quay shopping centre in Southampton, dealing with the crowds, navigating the shops, slopes and escalators.

**DAY 5**

Our final day was based back at our clinic in Ringwood, where we set out a home exercise plan for our patient and conducted another outcome measures assessment to see where she had improved. We did a full prosthetic review to ensure her prosthesis was fitting and performing as it should. The differences with our patient were outstanding.

She had worked really hard throughout the week; it showed with a 60-metre improvement on her six-minute walk test, improved symmetry and a much better grasp on using her prosthesis to its full potential. I was delighted to see the strides our patient had made in just a week; it shows how an intensive burst of resi rehab can make big differences.

**WHAT THE PATIENT THOUGHT**

“Mary is fantastic, not only as a physiotherapist but as a person in general. Anyone who takes part in a residential physiotherapy week and has Mary can look forward to a fun week, but hard work. I gained so much confidence and valuable skills which have taken me to another level of competence on my new leg.”

For more information on Residential Rehabilitation or to book your client into one of our tailored programmes, click here.
Dorset Orthopaedic ambassador Rio Woolf has been taking part in a BAFTA award-winning children’s programme, which helps children understand the world of medicine.

Operation Ouch! hosted by doctors Chris and Xand van Tulleken, who are twins, is shown on CBBC. Each week it covers a different topic from genetics, to why bones break and how blood clots. They do lab experiments and also film young patients getting treatment in hospital.

As part of the latest series, the show focused on four young patients undergoing various treatments and Rio has been in four episodes, charting his progress as he gets an update on his prosthetic leg.

As well as showing off his footballing skills in his back garden, the cameras followed Rio to the Ringwood clinic for his appointments with Matt Hughes, as well as looking behind the scenes with Matt to show how his prosthetic leg is made.

Rio said, “It was great fun being an Ouch! patient and sharing my story, showing everyone how my prosthetic leg is made and the different sports and activities I do. Operation Ouch! is one of my favourite programmes so it was brilliant to be a part of it.”
SYMPHONIE AQUA SYSTEM FOR A PERFECT FIT

In our last newsletter we told you about the arrival of the revolutionary new socket casting system we have at our Southern and Midlands clinics, the Symphonie Aqua Casting System.

To explain how the system works and how it benefits patients, we have created a video to share with you. We asked two of our current patients, transfemoral amputee Sam Hubble and transtibial amputee Colin Edwards, to try out the system for the video, and they were really impressed.

“It was instantly comfortable and the beauty about this is the quick turnaround,” said Colin. “I came in this morning and effectively I’ll go out at the end of the day wearing a prosthesis.”

The Symphonie Aqua system is powered by water and uses optimal hydrostatic pressure to achieve consistent results. Patients stand while having their new casts made, creating weight-bearing conditions and meaning clinicians get highly accurate measurements. The result is a socket which fits more truly to the residual limb, for optimal comfort and minimal modification.

ARCTIC ONE

It’s that time of year again when patients and clinicians alike are training for the Arctic ONE para-triathlon at Dorney Lake, Eton.

This is the third year Dorset Orthopaedic has supported this amazing and inclusive triathlon for all ages and abilities, which takes place on 27th May. Staff members from across the company will be teaming up with our patients for a day of team work and competitive fun.

There are races for all levels and there are still spaces, so if you fancy trying all or part of a triathlon for the first time get involved and let us know, the more the merrier! We’ll report on how everyone did in our next newsletter.

For more info on how to get involved, e-mail stuartw@dorset-ortho.com or talk directly to your friendly clinician!
SILICONE SHOWCASE

Contact us

enquiries@dorset-ortho.com  www.dorset-ortho.com  0800 433 2239