

HOW TO MAKE A DONATION

Please use this form if you would like to make a donation or receive more information from The Knee Foundation. Please send to:
The Knee Foundation, 2nd Floor Orchard House, Victoria Square,
Droitwich, Worcs WR9 8DS

- I would like to make a donation, please find enclosed a cheque for £..... towards the appeal. (Made payable to The Knee Foundation)
- I would like to sponsor Ellen to complete the London Marathon, please find enclosed a cheque for £..... as sponsorship. (Made payable to The Knee Foundation)
- I am completing the following challenge:..... and would like to know how I can raise funds for the Knee Foundation
- I would like more information about joining your sponsored Knees Up walk
- I have a link with a company or charitable trust and would like to help
- I would like to be put on your mailing list for the Focus on Knees magazine
- I would like to leave a lasting legacy in my will, please send me further information

(Please make cheque's payable to The Knee Foundation)

Title: Ms / Miss / Mrs / Mr / Other (Please specify)

Forename: Surname:

Address:

.....

.....


.....Postcode:

For every £10 that you donate to The Knee Foundation, the Inland Revenue adds £2.80 at no extra cost to you. To qualify for Gift Aid you must pay an amount of income tax and / or capital gains tax at least equal to the amount we will claim in the tax year.

I would like The Knee Foundation to reclaim the tax on my donation and to treat all donations I make hereafter as Gift Aid donations.

I am not a taxpayer

Signed:..... Date:.....



FREE MAGAZINE FROM THE KNEE FOUNDATION

Focus on KNEES

YOUR HEALTH YOUR LIFE

Real Life Stories
External Fixators
High Tibial Osteotomy
Fundraising



THE KNEE FOUNDATION
Registered Charity Number: 1004606


Focus on KNEES

The Knee Foundation is an Educational Charitable Trust. So far the charity has helped teach over 1,500 Doctors, Physiotherapists and Nurses around the World, supported 44 young doctors to train via its Knee Fellowship programme and encouraged many research projects. We rely on charitable donations to continue our valuable work.

Contents

Welcome to the second issue of The Knee Foundation's FREE magazine - Focus on KNEES which contains up to date information and real life stories designed to keep knee patients informed of the latest treatment.

I hope you find the magazine both informative and supportive.



Ellen Beales
Editor
The Knee Foundation
Registered Charity Number:
1004606

Contact us:
The Knee Foundation,
2nd Floor, Orchard House,
Droitwich Worcs WR9 8DS

Website:
www.kneefoundation.com

E-mail:
kneefoundation@btconnect.com

Tel: 01905 776676
Fax: 01905 793807

News and Special thanks	1
External Fixators	2 - 4
Real Life Story <i>Limb reconstruction for anterior knee pain</i>	5
High Tibial Osteotomy	6 - 7
Real Life Story <i>Miles Challenge</i>	9
Real Life Story	11
Fundraising	12 - 13

MEDICAL CONTRIBUTORS



*Mohi El-Shazly
Consultant Orthopaedic Surgeon
Droitwich Knee Clinic*



*Oliver Schindler
Consultant Orthopaedic Surgeon
Droitwich Knee Clinic*

The Knee Foundation would like to thank
**Intavent Orthofix Limited
& The Droitwich Knee Clinic**
for sponsoring this edition of Focus on Knees

NEWS

A selection of evening joint talks

The Knee Foundation is offering the general public the chance to learn more about joint surgery with a selection of evening talks designed to give pre-op advice for those waiting for surgery. Presented by a Clinical Nurse and Chartered Physiotherapist, people can find out how to prepare for the operation, tests they might undergo whilst in hospital and rehabilitation.

Each evening will cost £5 and will include refreshments. For more information, please contact Ellen on: 01905 776676 or e-mail: kneefoundation@btconnect.com



Top teaching status with ISAKOS renewed



The Knee Foundation and The Droitwich Knee Clinic have been awarded approved teaching centre status by the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS). The Knee Foundation has a close working relationship with the Droitwich Knee Clinic, with the clinic's consultant orthopaedic surgeons and physiotherapists acting as the Foundation's clinical advisory board and four members serving on the Foundation's executive board. This arrangement allows the clinicians access to educational and research facilities and allows the Foundation team access to expert opinion and skills.

Knee patient appointed as Trustee

Dr David Atkin, former knee patient has been appointed Trustee of the Knee Foundation.

"Thanks to the Droitwich Knee Clinic I feel years younger since my left knee replacement."



Special Thanks

The Knee Foundation would like to give a special thanks to Guy, Miles Dawson and Celia Hargrave for all their support:

Donation helps junior doctors to train in arthroscopy

Guy, a former knee patient kindly donated shares worth £32,000 to the Knee Foundation. With this money we have been able to purchase four arthroscopic workstations which has helped junior doctors develop their skills in arthroscopy, using life like knee models. (See his story on page 5)



Round Britain & Ireland challenge

In October 2005 Miles Dawson, a Knee Clinic patient kindly raised £1116.00 for the Knee Foundation by successfully completing the Round Britain and Ireland Challenge. (See his story on page 9)

Trans 333Km foot race

In November 2005 Celia Hargrave, a Knee Clinic patient took part in the Trans 333km Foot Race in the Desert and kindly raised £1160 on behalf of the Knee Foundation.



What is limb reconstruction?

Mohi El-Shazly, Consultant Orthopaedic Surgeon, Droitwich Knee Clinic

What is Limb Reconstruction?

This is a relatively new and fast developing subspecialty of Orthopaedic and Trauma Surgery that encompasses a variety of procedures with the ultimate aim of helping improve the quality of life for patients with various complex and difficult lower limb problems, using often minimally invasive biological techniques of external fixation, quite often resulting in limb salvage. More commonly it provides the BIOLOGICAL solution to problems that would otherwise end up with joint replacement surgery at an early and relatively young age. Below are a few examples of limb reconstruction procedures.

1. Nonunions: Some fractures refuse to heal for various reasons. In some cases, all that is needed is providing the correct biological environment for the fracture to heal. Modern techniques of external fixation provide such an environment with sufficient stability of the fracture at the same time allowing some micromotion which is now known to stimulate the fracture into healing. In more difficult cases, slow distraction techniques help stimulate the fracture to heal by what is called callus distraction. This is particularly useful for even more difficult cases with bone loss, where the defect can be made up by new bone formation at a different site. This is called bone transport. The beauty about modern external fixators is that we have full control over the position of the bone ends from the outside without resorting to repeated surgery. We can therefore stabilise, stimulate or lengthen the leg by stretching the callus.

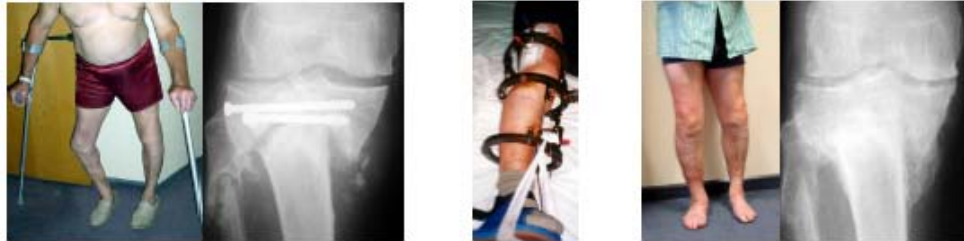


Figure 1 - Before
Non-united fracture of upper tibia

Figure 2 - During
Sheffield Ring Fixator applied

Figure 3 - After
End of treatment

Note: no open incisions, deformity corrected gradually and fracture healed by harnessing the principle of callus distraction

2. Deformity Correction: Deformities may be congenital or acquired usually as a result of fractures in the past which have healed in a bad position. This may have a variety of implications, commonly causing damage to joints over the years and resulting in early arthritis due to the malalignment.



So what can be done?

Well, an external fixator is applied to the leg and using a minimally invasive approach, usually through a tiny incision, an osteotomy (surgical division of the bone) is

performed very carefully preserving the soft tissue attachments and blood supply to the area. The deformity can then be gradually corrected at home by the patient by turning a screw or nut on the external fixator until x-ray measurements show that the deformity is fully corrected. Again in the process, the gap created fills with the patient's own new bone formation, unlike other open techniques where bone grafting is frequently necessary.



Figure 4
Deformity correction before, during and after treatment

What if I go too far with the corrections?

No problem, you can just as easily go back until the correction is as accurate as possible.



Figure 5
A digital scanogram where the computer draws all the angles and appropriate leg lengths.

So how do you know that the correction is accurate?

A special x-ray taking both lower limbs from hips down to ankles called a scanogram is used to accurately measure angles and length of the leg.

So what then?

The hinges on the fixator are locked and the fracture allowed to heal usually by being stimulated by the micromotion produced by weight-bearing, which is encouraged at a very early phase with these techniques.

Do you mean the patient can walk with the fixator on?

Of course, during the correction the patient is taught to walk with crutches taking minimal weight. Once the correction is complete, the patient is allowed to take increasing amounts of weight until full weight bearing long before full healing of the osteotomy. In fact this weight-bearing allied with the unique characteristics of the fixator stimulate healing of the fracture. Mobility in terms of joint motion and early weight-bearing is encouraged.



Figure 5
Weight bearing allowed very soon after onset of treatment with either monolateral (Pictured) or circular fixators

Is it very painful?

Some pain is inevitable in the immediate postoperative period. This is however easily controlled with simple pain-killers for a short period. Subsequently very little in the way of analgesia is required. When the fixator is near a joint, it can cause some restriction of movement, but this is largely overcome by encouragement of active exercises very early on.

Do I need another operation to have the fixator removed?

Not necessarily, this can often be done in the out-patients' clinic. No anaesthetic is required and the screws and wires are removed with little or no discomfort.

Sounds wonderful, any possible complications?

Yes. The most common problem is pin track infection. Of course it depends on the complexity of the case and how long the fixator remains in place. The vast majority of these are superficial which are treated either with simple pin-site care or with oral antibiotics for a few days. By and large this is regarded by most limb reconstruction surgeons and patients as an inevitable nuisance rather than a serious complication. It hardly ever leaves any residual problems.

So what is the alternative?

"Conventional" techniques of corrective osteotomy involve big open wounds, insertion of plates and screws or intramedullary nails and bone graft from the patient's hip or a bone bank to fill gaps and encourage healing.

3. Bone lengthening: Some people are born with short limbs. Others develop shortening due to various abnormalities of their growth plates or after a serious fracture that has healed in a shortened position. Leg length discrepancy can cause problems with walking and eventually low back pain and spinal deformity.

So what can be done?

Modern techniques allow gradual stretching of the leg using either an external fixator or intramedullary nail (a special lengthening nail). Following the operation, the patient performs the lengthening himself at a very slow rate of 1 mm per day, until the desired length is achieved. Then the lengthened area is allowed to heal until it is fully consolidated.



Figure 7
ISKD lengthening nail (Orthofix, Verona): length achieved by day to day activity which activates a clever ratchet mechanism.



Figure 6
Physiostim

So what fills the gap created by the lengthening?

The osteotomy is performed carefully preserving the soft-tissue attachment and blood supply to the area. This is then left for a week or ten days. During this period, fluffy new bone starts forming, this is called callus. At this stage, the lengthening starts and gradually stretches the callus. The stretching actually stimulates more bone formation. This is called callus distraction. Therefore the body forms its own bone without the need for bone grafting.

Wow! Sounds great. Who invented this technique?

A Russian surgeon called Gavriel Ilizarov developed this technique using tensioned fine wire techniques and a circular external fixator. For many years in the fifties and sixties he worked in a little known centre in Kurgan, Siberia, where he developed and perfected his techniques. Later a number of Italian surgeons visited Kurgan and introduced these techniques to the west. A number of modern monolateral and circular fixators have been developed by Orthofix (Verona) and other companies. These are now widely used at the Droitwich Knee Clinic including the Sheffield Ring Fixator.

You mean there is more than one kind of external fixator?

In broad terms there are two kinds. Monolateral fixators for simpler corrections and circular fixators for more complex deformities.

4. Bone infections: This is one of the most difficult problems to tackle and can lead to chronic long-term disability, often ending in amputation, particularly if associated with a nonunited fracture. It is one situation when major open surgery is often required to eradicate the infection, take out any dead bone which would cause persistence of the infection. Once the infection is eradicated, one of the techniques described above can be used to fill the gap created by the excised bone e.g. bone transport.

Real life story

Limb reconstruction for anterior knee pain

Told by Guy, Patient of the Droitwich Knee Clinic

Pain around my kneecaps started when I was 16 years old. My right knee was originally the worse, and over the next 20 years I had more than a dozen operations on that knee. Over the years several orthopaedic surgeons said that the underlying cause of my problems might be the twisted rotational alignment of my legs, where the kneecap is rotated inwards relative to the foot and hip (see figure 1). But correcting this rotational misalignment by conventional surgery was always thought too dangerous or too difficult.



Figure 1:
Both legs are
twisted kneecaps
point inwards.

Having not had much success over the years with the various conventional operations on my right knee, I was very well aware that the problem could be difficult to help by surgery. However by the time I was 36 years old my left knee had become much worse. Over a period of a few months I consulted several orthopaedic surgeons. Some of them suggested a conventional operation such as a lateral release, but I was reluctant because this had not helped my other knee. At the London Knee Clinic, Mr Strover referred me to his limb reconstruction specialist colleague Mr El Shazly in Droitwich, to see if my rotational misalignment might be corrected by limb reconstruction techniques.

Whilst the proposed operation seemed very logical, it would also be an unusual operation for anterior knee pain. Some time was therefore spent seeking advice from limb reconstruction specialists in other countries, and planning the operation in detail using CT scans and X-rays. When the planning had been completed, a whole morning in the operating theatre was booked for the surgery. At the operation, a circular frame called a Sheffield Ring Fixator was attached around my lower leg bone (the tibia), extending up to the lower part of the knee (see figure 2). Through a very small cut in the skin, a complete horizontal division of the tibia was made just below the knee. The lower part of the tibia was then rotated 15 degrees in the operating theatre, partly correcting the twist in my leg. At the end of the operation, the upper and lower parts of the tibia were held precisely in position by the circular frame. The frame was attached to my leg by several pins and thick wires – a bit like the spokes of a bicycle wheel, with the leg in place of the wheel hub, and the spokes passing straight through the leg.



Figure 2:
Sheffield Ring
Fixator applied to
left leg to correct
the rotation



Figure 3:
With the frame
removed, my left
leg is straight, the
knee is no longer
twisted, and no
large scars; other
leg unchanged.

After the operation I was able to go home later the same week, with the frame holding the upper and lower parts of my tibia in position around the unhealed division through the bone. But the rotational correction was not yet finished. Over the next three weeks I gradually rotated the lower part of the tibia another 10 degrees, by making a small adjustment to the frame with an Allen key three times a day. At the end of this period, with the rotation of the tibia now corrected by 25 degrees, the frame was locked and left for another 8 weeks to allow the division in the tibia to heal in the new position.

The frame does restrict your mobility, and it was unpleasant at first, but I gradually got used to it as the weeks passed. I was glad that I was working from home after the operation, although it is possible to get around on crutches. I had been told that infection around the frame was a possible temporary problem, but I had none. My only complication was that for some weeks after the operation, I was unable to move my big toe, probably because a nerve passing close to my tibia had been trapped by the frame. But this gradually recovered, with no lasting ill effects.

When the frame was removed, the rotational alignment of the leg had been fully corrected (see figure 3). There were no metal plates left in the knee, as there might have been with a more traditional operation, and also no large scars. Most important of all the anterior knee pain, which had been slowly getting worse for nearly 20 years, was much improved.

Five years later, I have had no further operations on the leg, apart from some minor arthroscopic surgery to release adhesions around the patellar tendon.

This outcome was very different to my other knee, where initial conventional operations, which did not correct the rotational misalignment, led to a sequence of operations of gradually increasing severity. I was pleased with the result of my limb reconstruction, in fact so pleased that I made a donation to the Knee Foundation as a way of saying thank you. (See Page 1.)



THE DROITWICH KNEE CLINIC

COMPLETE TREATMENT AND REHABILITATION SERVICE FROM SPECIALIST CHARTERED PHYSIOTHERAPISTS

Why choose Droitwich Knee Clinic?

- Specialist in diagnosis and treatment of knee and lower limb disorders.
- All musculo-skeletal problems seen.
- Fully equipped department featuring electrotherapy, diagnosis and exercise apparatus, weight free exercise, computer assessment and rehabilitation.
- Comprehensive treatment programmes and reporting.
- Pre and Post-operative assessment and rehabilitation.
- On site consultants, x-ray, MRI, records, pathology.
- Prompt appointments available.



Our ultimate goal is to return you to your pre-injury activity level

Tel: 01905 794858

Droitwich Knee Clinic, St Andrews Road, Droitwich, Worcs WR9 8YX
E-mail: enquiries@droitwichkneeclinic.co.uk
www.kneeclinics.co.uk

Full Post Operative Rehabilitation

Sports Injuries

Joint & Ligament Injuries

Muscular Sprains & Strains

Mobilisation

Massage

Isokinetics

Postural Exercises

Strengthening Exercises

Hydrotherapy

Electro-Therapy

Acupuncture

Leg alignment and its treatment with osteotomy (OR STRAIGHTENING OF BOW LEGS OR KNOCK KNEES)

Oliver Schindler, Consultant Orthopaedic Surgeon, Droitwich Knee Clinic

With the increase of sports related knee injuries and the subsequent development of wear and tear, knee arthritis has become extremely common in the middle-aged and older patient group. Nearly 50% of patients over the age of 65 report arthritic symptoms, whilst 70% present radiographic changes. Arthritis has already eclipsed heart disease as the leading cause for disability and as the baby boom generation approaches retirement age, these numbers are expected to rise dramatically.



Figure 1
Diminished joint space between femur & tibia on the inside of the knee indicating localised osteoarthritis

Patients with early arthritis often present to the clinician with a subtle bow-leg (varus) or knock-knee (valgus) deformity. This is due to the fact that in these cases some of the cartilage structures in weight bearing areas between thigh bone (femur) and shin bone (tibia) have worn. This in turn reduces the height of the affected knee compartment similar to deflating tyres on one side of a car, causing it to be lobb-sided. Such patients frequently complain of activity related pain or discomfort located across the inner joint space. The clinician has to assess the patient through obtaining a proper history, followed by a thorough clinical examination and appropriate X-rays (radiographs). A family history should also be obtained as lower extremity deformities may run in families and should be considered habitual if apparent bilaterally. It is important to rule-out an acute injury to any of the inside structures of the knee e.g. meniscus (shock-absorber cartilage) or ligament tear. In rare cases the patient may be affected by a process called osteonecrosis, a serious condition which is characterised by localised bone death and sudden onset of pain, which, if untreated can lead to a complete collapse of the knee joint. The specialist is usually able to exclude such problems from normal arthritis through the patient's history and specific investigations.



Figure 2
Traditional treatment of osteoarthritis with a partial or, as shown here, a total knee joint replacement

The traditional treatment of patients with subtle knee deformities associated with localised osteoarthritis has been a total knee replacement. It is generally well understood that a joint replacement has a limited life expectancy and that a revision is inevitable at some point. Additionally, a replaced knee joint may impose limitations upon the patient's activity level, which is an important factor when considering the patients ability to continue with certain sporting activities or a specific occupation. For patients in their 40's and 50's a total knee replacement usually requires lifestyle changes, which may be unacceptable for some.

Figure 3
The mechanical axis or plumb line is drawn from the centre of the hip to the centre of the knee (Figure a). Patients with arthritis and pain on the outside of the knee usually suffer knock-knees with the axis also crossing through the outside (Figure b). In bowed legs, which is the more common, pain and arthritis is located on the inside (Figure c).
Reprinted from: Thine View (August 1992) with permission from Georg Thieme Publishers



A new treatment approach has given hope to this group of patients, allowing the knee joint to be preserved rather than replaced. Conservative measures can help to ameliorate symptoms if the disease is in its infancy. Lateral shoe wedges or off-loader braces may help to shift the plumb line (mechanical axis) laterally henceforth off-loading the damaged compartment. Some patients may benefit from an assessment of the knee using a key-hole procedure (arthroscopy), which also allows for the removal of loose particles and smoothing of joint surfaces. With this technique significant amelioration of symptoms of up to 3 years have been observed. For more advanced cases however, a new surgical procedure has been developed, which is designed to treat the underlying problem of knee malalignment. It is based on the principle of transferring load to the unaffected compartment of the knee in order to relieve symptoms and slow disease progression. The alignment of the opposite knee is usually used as a reference and discrepancies vary between 5 to 20 degrees.



Figure 4
Correction of a bow-leg using an external fixator which gradually straightens the leg until the mechanical axis is deemed back in the centre of the knee.
Reprinted from: Surgery of the Knee, Fourth Edition, 2005, Issue 500 Copyright for the Arthritic knee, page 139 with permission from Elsevier

To determine the mechanical axis, which is equivalent to the plumb-line of the leg, radiographs showing the entire lower extremity from hip to ankle are required. Specific measurements are performed to calculate the changes in angulation required to correct the apparent leg deformity.

The procedure to facilitate straightening is called osteotomy and involves cutting of the tibial bone just below the knee joint and the simultaneous application of an external stabilising frame. A telescopic mechanism housed inside the frame will then allow for gradual extension and correction of the deformity until the correction target is reached. Adjustments are possible up to three weeks post surgery. At this point new radiographs are obtained to establish whether full correction has been achieved. The osteotomy gap gradually fills with new bone which can be observed through radiographs. The frame is usually removed once bone healing is complete, which on average takes 10 to 12 weeks. During this period the patient usually requires no more than a walking stick for ambulation. The damaged compartment is consequently offloaded, which in principle reduces the progression of surface wear and buys time before joint replacement surgery might be required.

In order to qualify for such a procedure the clinician has to ascertain that osteoarthritic changes are limited to one joint compartment. Wear in the remaining knee compartments, with all other compartments may lead to disease progression and could potentially hamper the success of such intervention. In order to judge upon the suitability and correct indication for a realignment procedure, arthroscopic assessment is sometimes required. The ideal patient for this procedure is between 35 to 65 years of age, with no substantial limitation in knee range of motion and symptoms limited to a localised area. However, patients beyond the age of 65 may qualify but need to be assessed individually.

Patients need to understand the aim of the procedure and it may therefore be helpful to provide a simple analogy to the tracking of the front wheels of a car. If the tracking is out of alignment, tyres will develop rim wear. The greater the maltracking the higher the wear, just like in a knee. Once the tracking has been adjusted, the wear rate will revert back to normal levels. As with the osteotomy, neither knee nor tyre have been replaced hence one has to acknowledge that a minor degree of discomfort may prevail as some of the load bearing will still take place on the damaged areas.



Figure 7
The same patient as Figure 6 before and after treatment

The clinician has the opportunity to recreate some of the lost surface cartilage at the time of the osteotomy. This is achieved with so-called marrow stimulation techniques (microfracture), a key-hole procedure by which the surgeon drills into the damaged bone to stimulate a healing response. If such an operation is added to the osteotomy, reduced weight bearing and a specific physiotherapy regime has to be followed for approximately 8 weeks. Long term investigations of patients who have undergone leg re-alignment surgery have revealed good results in 89% after 5 years and 63% at 10 years post surgery. These results suggest that joint replacement surgery may be postponed for at least 10 years in the majority of patients who have received an osteotomy.



Figure 5
Patient during treatment with external fixator on lower leg. Patients can ambulate without restrictions and rarely need walking aids



Figure 6
Long leg alignment radiographs showing a patient's leg before and after correction of a bow leg deformity.



Figure 8
A satisfied patient 6 months after the end of the treatment enjoying a family skiing holiday in France.

Discover innovations for the
**upper extremity, pelvis, hip
 & lower extremity**



- SHOULDER**
Fusion
- HUMERUS**
Fractures
Joint Stiffness
Correction of deformity
Non union
Soft tissue
Lengthening
Bone loss
- FOREARM**
Fractures
Dislocation
Fusion
Stiff Elbow
- WRIST**
Fractures
Correction of deformity
Soft tissue
- HAND**
Fractures
Joint Stiffness
Correction of deformity
Non union
Soft tissue
Lengthening
Bone loss
- PELVIS**
Fractures
Disruptions
- HIP**
Acetabular Fractures
Acetabular Distraction
Fusion
Fusion with concomitant
Femoral lengthening
- FEMUR**
Fractures
Correction of deformity
Lengthening
Bone loss
Major soft tissue defects
- KNEE**
Fractures
Joint distraction
Fusion
Prevention of subluxation
- TIBIA**
Fractures
Correction of deformity
Lengthening
Bone loss
Major soft tissue defects
- ANKLE**
Fractures
Fusion
- FOOT**
Fractures
Correction of deformity
Non union
Lengthening
Bone loss
Joint stiffness

Working in close partnership with surgeons so that we clearly understand their needs and requirements.

Providing the most appropriate yet highly innovative products and services.

Ensuring that they are designed to meet and exceed the expectations of surgeons.

Striving for clinical excellence in the design of our products that ultimately leads to improving patient's quality of life.



Real life story

Great Britain & Ireland Challenge

Told by Miles Dawson, Patient of the Droitwich Knee Clinic

I am 33yrs old and married to Sarah, with two boys Oliver(5) & William(2). I was diagnosed with osteochondritis dissecans at 13 years of age, and for the last 15 years I have undergone, to date 26 surgical procedures, these include: high tibial osteotomy, external fixator, corrective plastic surgery, OATS, bone grafting, multiple arthroscopies. Unfortunately following the High Tibial Osteotomy I developed a non-union, which led to two further fibula osteotomies and two attempts at internal fixation including a stint in plaster. I was again unfortunate to then go on to develop compartment syndrome following one of the procedures and faced the possibility of losing the use of my leg permanently. Just under a year after the initial osteotomy it was felt that we should try an external fixator. This was duly fitted, but again complications followed, an area of my old scar would not heal, leaving an open wound. This then led to the requirement for plastic surgery to correct the defect.



Figure 1
'Non-united upper tibial osteotomy' using conventional plate and screw internal fixation techniques.

The whole experience put massive pressure on my family, my work and not to mention my morale. It was during a low period that I decided I needed a long term focus, something to aim towards that would need a return to fitness and also be a big enough challenge to test me physically, emotionally & physiologically. I had seen the BT Global Challenge on the TV when I was younger, and had always fancied a go at it but thought it was never going to happen. About four weeks after the frame was removed I decided this was just what I needed. I followed through on the idea with Challenge Business, the company who organise the Global Challenge. The next race was going to be called the Round Britain & Ireland Challenge and it would start in October 2005, enough time for me to get fit and raise the finances required to participate.



Figure 2
Skin breakdown at line of intersection of previous open incisions.

I approached my family and my work to see how they would feel about the idea, bearing in mind I hadn't been fully at work for 18 months, that my wife had also been through a rough time looking after me and the kids for 18 months and I would potentially need to re-mortgage the house to fund the trip! I thought the reception may have been rather cool, but to my surprise I was met from both parties with nothing but encouragement.



Figure 3
Perfect leg alignment and full healing of skin and bone at end of treatment using the Sheffield Ring Fixator.



THE CHALLENGE

Leaving the Solent, the fleet races 2000 miles around Great Britain & Ireland in a clockwise direction. Once in the English Channel the fleet race along the English coastline, before crossing the Irish Sea towards the notorious Fastnet Rock. Once around the Rock, the fleet face the full force of the Atlantic Ocean as they head up toward St Kilda, one of the most western outposts of the UK, then on to Muckle Flugga on the northern most tip of the Shetland Islands, at

almost 61° north. From there it's south again passing between the numerous oil rigs stationed in the North Sea. Once around East Anglia the fleet hug the coast as they pass the Thames Estuary and then make their way in to the English Channel, tacking as they work their way between the coast and one of the busiest shipping lanes in the world. So that was it, I filled in the application form, convinced their medical panel and myself I could be fully fit by the time the boat departed and sent off the deposit. I should also point out that I had no sailing experience at all.....!

My connection with The Knee Foundation: My medical insurance cover ran out about halfway through the treatment and the Knee Foundation was able to give me a grant to cover ongoing costs of my treatment through its patient fund. What an experience, I have learnt to sail, proved my return to fitness and made a lot of strong friendships. I am lucky, and was able to see a successful outcome to my treatment and participate in one of life's greatest challenges, however I also feel I was able to give something back, therefore I was proud to raise in excess of £1000 for the Knee Foundation alongside completing the challenge.

BREG

part of the Orthofix Group®

Real life story

Told by Trevor Rice, Patient of the Droitwich Knee Clinic

In July 2004 whilst on a sailing holiday in Majorca, I tripped over and my left knee took the full impact of the fall, little did I know of what was to follow as I was taken away on a stretcher. The consultant in the Spanish hospital told me that the fracture to my tibia was complex and went up into the knee joint, during the following five days different consultants arrived to look at my X-rays and a decision was taken to airlift me back to the UK.



Figure 1
Trevor before exchange to Sheffield Ring Fixator talking to Miles, see pg 9 for his story.

Upon arrival in the UK I had NHS emergency surgery, which included a fixator being fitted around my left knee, I was warned that I may not make a full recovery and may struggle to walk properly again, but that only time would tell. As the potential consequences of the accident were beginning to dawn on me I decided to seek expert advice and assistance, so in August 2004 I went to see Lesley Hall, physiotherapist at the Droitwich Knee Clinic.

I arrived on crutches and was unable to either straighten or bend my left leg. Lesley was concerned about my condition and thankfully referred me to Mr El-Shazly. His diagnosis was one of several conditions that needed attention and suggested a course of action that would require the application of a Sheffield ring fixator. In September 2004 the original single fixator and brace were removed and replaced with two Sheffield ring fixators below the knee, a third ring was added above the knee in December 2004, which effectively locked my leg straight.



Figure 4
Lesley Hall working with Trevor on extension of knee prior to exchange to a Sheffield Ring Fixator.

I wore the fixators for nine months during which I spent many weeks making very small incremental adjustments to the frames which in turn slowly altered the angle of my tibia in the knee joint. I was also required to make small adjustments to the rod behind my knee, which eventually straightened my leg. I had to clean and dress the pin sites every day to prevent infection and went to see Lesley several times a week where I spent many hours with weights hanging off my leg and doing a multitude of exercises.



Figure 2
At onset of treatment

I was unable to wear proper trousers so had a few special pairs made with a left leg that almost resembled a windsock! I spent every night sleeping on my back. Having a "scaffold" on my leg was without doubt a challenging time for me and my family, but I knew that Mr El-Shazly, Lesley and the rest of the DKC team were doing their best for me, equally I was determined to reward their efforts and do my bit to give myself the best chance of recovery.



Figure 3
Tibial deformity fully corrected. Frame extended across the knee to correct flexion deformity.

My advice to others is that you have a major part to play in your own recovery; I established daily routines of rest and exercise and changed my diet to keep the weight off. Eventually we began to see progress, Mr El-Shazly slowly weakened the frames and I started to learn to walk again, he removed them completely in April 2005 after which I had intensive treatment with Lesley. Its now two years since my accident, I can walk properly without a limp, my leg is straight and I almost have full range of movement.

So in summary I can't thank Mr El-Shazly, Lesley and the rest of the team at DKC enough, without their expertise I have no doubt that my life now would be very different.

Figure 5
Sheffield Ring Fixator in position, full weight bearing encouraged.



Polar Care
Continuous Cold Therapy



RoadRunner
Versatile Intermediate Brace



Patellar Tendon Strap



Thigh Support



Compact X2K
Ideal for ligament
instabilities



Wrist Brace
For chronic or acute wrist
injuries



Tennis Elbow Support



Elastic Lumbar Support

For more information or to order please visit our website

www.breg.co.uk

How we have fun raising funds!

Sponsored knees up walk Sunday 20th May 2007

Walk with your surgeon, physio and knee clinic team.....
Show them you can do it!!

In June 2005 we held our second sponsored 1 and 3 mile walk for knee patients, friends and family. With the help of the Knee Clinic team, patients and friends we managed to raise £7000.



We will be holding the walk again on Sunday 20th May 2007 in the Droitwich Lido Park. Special t-shirts will be available for the day as well as refreshments, stalls, games and a raffle organised by the clinic team. Musical entertainment will also be provided



Hazel Thomas
Oldest knee
replacement walker
2005



A great day out for all!

If you would like to take part please fill in the form on the back of this magazine so that we can send you further details and a registration form.

Other ways you can help

Raise money by searching the web!

Raise money for The Knee Foundation just by searching the web! everyclick.com is an internet search engine with a big difference - it donates half its revenue to charity!

Just make www.everyclick.com/uk/kneefoundation your home page and make sure you use it whenever you search the web!

It does not cost us, or you, a penny so please use it to support The Knee Foundation.



WWW.EVERYCLICK.COM



Do you have a challenge that you would like to complete in aid of The Knee Foundation?

If you are thinking of fundraising for The Knee Foundation (a sponsored run or special event etc.) please let us know what challenge you would like to complete by using the form on the back of this magazine.

You can raise money quickly and easily online with your own personalised web page. It takes only minutes to put your details on. Friends and family will be able to support you by donating online with a credit or debit card, they can also send personal messages of support so no more running around with sponsorship forms, or chasing cash after your event!

Just go to: <http://www.justgiving.com/process/raisemoney/>



Donate used orthotics

If you have any braces, air-casts, crutches or canes you no longer need, we will donate every one to the Jacob's Well Appeal, East Yorkshire who will send them to Afghanistan and Eastern Europe together with other medical and relief supplies.

Please hand them to the Knee clinic's Physiotherapists who will pass them on to us.

Do you buy from AMAZON?

The Knee Foundation has become an affiliate to Amazon.co.uk We can earn up to 10% referral fees when visitors click from our site to Amazon to purchase items.

So next time you want to purchase anything from Amazon, please go to the Knee Foundation's website first at www.kneefoundation.com and click on the Amazon link. All purchases you make, Amazon will donate to us up to 10% of the total order.

Recycle your old cartridges & mobile phones

We are running a recycling collection of all used toner and inkjet cartridges and any old mobile phones. For each item collected the Knee Foundation receives a small donation. If you have any empty cartridges or phones at home or work, please leave with the knee clinic's reception who will pop them into our recycling box. (No EPSON cartridges please)

