This article was originally published in *The Missing Factor,* newsletter of Haemophilia Foundation Victoria (www.hfv.org.au), December 2018 and is adapted with permission.

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JOINT SURGERY

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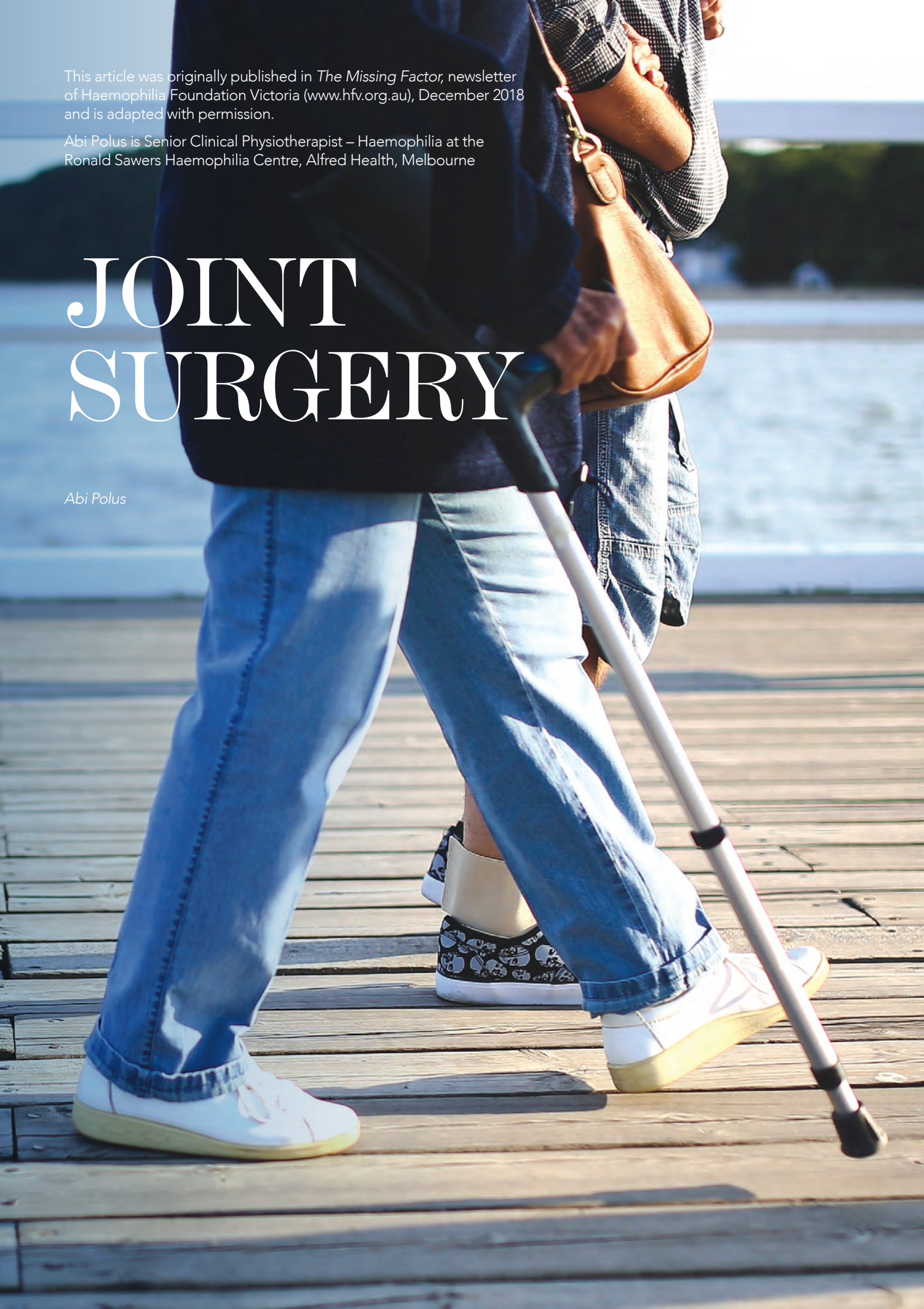

Joint replacements are the last-line solution to joint management.

A discussion regarding joint surgery is common between people with haemophilia and their medical team.

It is well established that recurrent bleeds into joints can lead to arthritis. The exact mechanism of why the damage occurs is still being researched; however, it has been established that the exposure of joint cartilage (which covers the ends of bones that form a joint) to various chemicals present in blood (i.e., during a joint bleed) causes degradation of the cartilage. Without the cartilage between the bones to buffer impact, the bones may develop osteophytes (excess bony growth), or cysts (areas where bone has been lost). If bleeds are managed well - early factor, rest of the joint during the active bleed (and until pain-free movement has been restored), and rehabilitation of the joint to ensure optimal biomechanics and muscle action has been restored - then the likelihood of the development of arthritis can be minimised. The presence of synovitis (inflammation of the joint lining) and decreased joint function can increase the potential to develop arthritis.

It should be noted that some cartilage thinning and changes are a normal part of aging (like grey hair) and what can be seen on an X-ray has been demonstrated not to have good correlation with the amount of pain or dysfunction someone may experience. This article is not intended to predict everyone with haemophilia will need a joint replacement. Rather it seeks to answer some of the frequently asked questions.

First-line management for arthritis has been extensively researched and clinical guidelines recommend weight management and exercise (both general and specific - as prescribed by physiotherapists). Analgesia that is suggested by and prescribed by a doctor can also aid symptoms. Of note: Non-Steroidal Anti-Inflammatory medications or NSAIDs – for example ibuprofen, Nurofen®, Voltaren® and other medications - are often prescribed in arthritis, but have been found to increase bleeding. These should never be used unless in specific consultation with your haematologist or HTC.

Joint replacements are the last-line solution to joint management. Many questions have arisen regarding this and this article seeks to try and answer some of these.

WHAT IS A JOINT REPLACEMENT?

A joint replacement is an operation where the two ends of a bone are excised (cut away) and a synthetic material replaces the bone that was present.

WHICH JOINTS CAN BE REPLACED?

Hip and knee joint replacements are common and have a good reported success rate. This is because these joints are the most common sites of osteoarthritis in the general population and surgeons have the most experience and development with these joints.

In people with bleeding disorders the elbow and the ankle are two common sites of arthritis.

Currently there are surgeons who perform **ankle replacements,** but this is a relatively new procedure. We do not have the long-term data for this operation and there have been reports in some of the available literature of higher rates of infection and operation failure. At this stage the longer-term data does not show superior outcomes for one over the other; however, given the increased risk associated with ankle arthroplasty (infection/ hardware failure), fusion remains the recommended approach. With increased time and studies this may change. We do consider joint fusion in the ankle; this is where the joint is fixed in one position, which usually gives complete relief of pain but may limit movement.

Elbow replacement is not common but can be performed if necessary. Elbow replacement can give relief from pain, but patients are limited to lifting loads of under 5kg, and stability can be an issue afterward. Other joints, for example the shoulder can (rarely) be replaced, which can be an effective procedure for alleviation of pain but typically results in diminished overhead and behind back function.

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WHAT IS THE BEST TIME FOR A JOINT REPLACEMENT?

Joint replacements can technically be performed at any age; however, there are many considerations.

The operation is typically a significant procedure requiring a prolonged period of time under an anaesthetic. A person needs to be medically well enough to tolerate a long anaesthetic; for example, someone with heart or lung issues may experience difficulties with this.

The life of a prosthesis (the term for the new joint that will inserted) is quoted differently in various literature, but currently seems to be around 15 years. This will obviously depend on individual circumstances and could be much longer or much shorter. As an example, an older or less active person is less likely to put strain on the prosthesis than a younger, more active person who engages in repetitive higher loading or twisting activity. This can decrease the length of time it can be comfortably tolerated due to prosthetic loosening.

At present it is usually possible to do revision surgery (a procedure involving replacing part or all of the existing joint replacement) for total joint replacements, but this is a much larger operation and will depend on the bone-stock (how much bone and the quality of the bone) available at the operative site. One revision is usually possible, but it is not usually possible to do multiple revisions because of bone stock. For this reason, if we consider a joint replacement on a 70-year-old: in 15 or so years he may benefit from a revision, in another 15 years it is reasonable to speculate that the joint may not be the overriding issue at 100 years of age. Considering the same timeline for a 40-year-old: in 15 years and then another 15 years, this may have significant implications for life and activity if at 70 years of age we are unable to control the potential pain and loosening of an old prosthesis.

On the other hand, it is reasonable for people to want to live in comfort rather than pain and to be able to perform functionally in the way that they want to. If a person, regardless of age, is unable to perform their usual work and activities due to poorly controlled or escalating analgesic (pain relief) requirements, then this would be a consideration to discuss the possibility of having a joint replacement.

WHERE IS THE BEST PLACE TO HAVE A JOINT REPLACEMENT?

It is generally recommended that you have a joint replacement in a hospital that has a haemophilia treatment centre (HTC). This means that you will have best access to specialists who understand haemophilia, can support your factor levels (or other blood levels) and who are aware of what to do if something does go wrong! Every hospital is different and has different policies so it is worth talking to your HTC to discuss this. Typically the hospital stay for joint replacements is around 3-5 days. However, if you have a bleeding disorder, factor cover may be necessary - and with haemophilia (mild, moderate or severe) or VWD it will be. If you need factor cover, you are likely to spend 7-14 days in hospital to ensure that bleeding complications do not occur.

In Victoria the HTC advises that all joint replacements for adults should be performed at the Alfred Hospital, where the adult HTC is located. Private hospitals will not have the same expertise in managing people with bleeding disorders. Even though a private hospital may offer a shorter waiting list, it is safer to have haemophilia expertise available at the hospital where your surgery is taking place. If it is thought that a joint replacement is warranted in a patient with a bleeding disorder, the HTC and rheumatology team can sometimes liaise with the orthopaedic department regarding timing. We recommend you contact your HTC if you have joint issues, so you can be directed to the physiotherapy, rheumatology and haematology teams accordingly, with onward referral to the orthopaedics team if needed. This usually works out to be quicker than being directly referred to the orthopaedic department by your GP. Every state/territory will have a different process and it is advised that you discuss this with your HTC who will be able to best direct you.

PREVENTION IS BETTER THAN CURE!

Of course, prevention is better than cure. All bleeds should be adequately treated in a timely manner with the correct dose of factor replacement. The less time the exposure a joint surface has to blood the better. There is also some emerging evidence that weight-bearing on a joint that is bleeding is more damaging to the cartilage than not putting weight on it. (That's why your physios nag you to use crutches and completely rest the joint!) So, having enough time off the joint that is bleeding is vital. As a general rule of thumb, you should have FULL, PAIN-FREE range of movement before you weight bear on a joint that has been bleeding. However, every bleed is different so please contact your HTC physiotherapist for individual guidance.

Similarly, there is a mountain of evidence of what the best management of osteoarthritis comprises.

In the last 15 years many different treatments have been compared in rigorous scientific studies and it has been found that weight management and exercise are two interventions that can optimise management of pain and symptoms. Building muscles to support a painful joint and to regain normal control, muscle activity and walking has been shown to be extremely effective in managing symptoms. Trials involving people on a joint replacement waiting list who undertook an exercise program found that: about one-third will go on to have a joint replacement, one-third will delay a joint replacement a few years and one-third will not need to have a joint replacement at all.

BEFORE AND AFTER A JOINT REPLACEMENT

If a joint replacement is ultimately performed, it is IMPERATIVE that you complete your rehabilitation. If you have the operation without the full rehabilitation you are unlikely to get the full benefit of the joint replacement, as you may be lacking muscle power, joint control and range of movement. This can usually be performed in the hospital or at a local physiotherapist, public or private. Your hospital physiotherapist may refer you to a local physiotherapist, but if you notice increased pain, heat or loss of range of movement occurs you should contact your HTC immediately. You may need some prophylactic cover (if you do not usually have it) for physiotherapy during your rehabilitation. Talk to your local HTC for information regarding this.

There is also some research to show that an exercise program prior to a joint replacement can get you 'operation ready' and improve your outcome after the operation, as well as speed up the recovery process. Again, liaise with your physiotherapist at the HTC and this may be able to be accessed locally.

Important note - this article is general advice and information and does not take into account specific circumstances. Please discuss with your personal health care team at the HTC for specific advice.

MORE INFORMATION

Arthritis Australia - arthritisaustralia.com.au

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