

# ExWell@Home For Cancer

A home-based exercise programme  
to support people with cancer



# ACKNOWLEDGEMENTS

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## ExWell@Home is kindly supported by:

TOWERVIEW

UPMC  
LIFE CHANGING MEDICINE



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# SECTION 1

## FOREWORDS



# WELCOME TO THE EXWELL MEDICAL CANCER BOOKLET



Dr Noel McCaffrey, Founder and  
Medical Director of ExWell Medical

On behalf of our team, I am delighted to welcome you to ExWell@Home. I hope you will enjoy being an ExWell participant and that you find our programme helpful during and after your cancer treatment.

ExWell Medical is a not-for-profit social enterprise, formed in January 2019. After 10 years working in the field of community-based chronic illness and cancer rehabilitation through exercise (in a centre that grew to become the largest of its kind in Europe, hosting 700 participant visits every week)

ExWell was formed to drive the national roll-out of this programme. Our aim is to make ExWell accessible in all parts of Ireland as soon as possible.

Our programme is medically-led. This means we operate on the basis of receiving a referral from your doctor or health care professional, that the programme has been designed with medical input, that you will have the opportunity to meet or contact one of our doctors regularly, that our doctor will be the link between your own doctor and our programme, and that all our staff receive support and back-up from one of our doctors as they deliver the programme.

For someone who has received a cancer diagnosis, being physically active has a critical role to play in helping you to get through the treatment and recovery phases of your cancer journey. Research has shown that keeping fit improves physical function, fatigue (which is often associated with cancer treatments), health related quality of life and many other important aspects of health. We are very passionate about our work and our aim is to help you to make regular exercise part of your everyday life from now on. Exercise is cheap and it is great fun. If you work with us and give our programme a real try, we can play an important role in the months ahead.

You may have exercised regularly until quite recently. If so, you already understand the joy of regular physical activity and how it can contribute so much to your overall wellness. If you are still exercising, this is great. If you have stopped, you almost certainly miss it and you may worry that you will not get back to it, or not to the level you previously enjoyed. On the other hand, you may have never been regularly active in the past. If this is the case, we want to help you to change that as quickly as possible.

ExWell Medical's cancer programmes are offered in group classes, one-to-one sessions and also on-line or as a home programme option. So please jump aboard and stay aboard. Our job is to help, encourage and support you.

### **How this booklet is laid out:**

- **Section 1** welcomes you to the exercise programme and provides a letter of support from the Irish Cancer Society and Novartis, and a list of our delivery partners. It also includes testimonials from medical experts and participants providing you with an insight on the important role exercise has to play from the perspective of a person diagnosed with cancer and also the medical experts.
- **Section 2** provides you with an overview of the important role exercise has to play as part of the cancer survivorship journey and summarises the evidence on the beneficial effects exercise has for people diagnosed with cancer including the importance of building resilience. It provides an overview of the specific cancer programmes offered by ExWell and information about how the exercise programme works. In addition, it also discusses the different components of fitness and provides you with our top 10 tips as well as the evidence for the effectiveness of the ExWell programme.
- **Section 3** gives you individual exercises we recommend.
- **Section 4** provides additional exercises specific to certain cancer types
- **Section 5** summarises common issues that arise for people with cancer. It also discusses safety and the challenges involved in changing behaviour and in dealing with set-backs if they occur.
- **Section 6** contains information/instructions on how to carry out the assessments at home.
- **Section 7** provides blank sheets for your exercise prescription and physical activity logs/diaries.
- **Section 8** contains summary background information about other common medical conditions. This is included for general information but also because you may have another condition other than cancer.

# IRISH CANCER SOCIETY



The Irish Cancer Society is very pleased to work in partnership with ExWell Medical to support the development and delivery of this new exercise programme for cancer patients. The ExWell Medical exercise programme will provide a unique opportunity for cancer patients to avail of a professional led and safe programme, appropriate to each patient's

needs, no matter where they are at on their cancer journey. The flexible delivery options for the programme will allow people to participate at home or with groups at a time and place that is most comfortable and enjoyable, enabling people to become more active and enjoy the benefits of regular exercise in their daily lives.

Extensive research has confirmed that physical activity helps to reduce the symptoms of fatigue, the side-effects of cancer treatments, and improves overall wellbeing and heart health. Regular physical activity also helps to protect against some types of cancer coming back and other types of cancer developing so we want to encourage as many people as possible to participate in this programme.

We would like to wish all the participants and the ExWell team, every success with this programme and look forward to hearing about the positive results and impact, we are confident this programme can bring.

If anyone has particular concerns about physical activity or questions about their treatment please contact the Irish Cancer Society Support Line on 1800 200 700, or email [cancernurseline@irishcancer.ie](mailto:cancernurseline@irishcancer.ie) or through the 'Ask the Nurse' section on the Irish Cancer Society's Online Community <https://www.cancer.ie/community/talking-about-cancer/ask-a-nurse>

**Irish Cancer Society**

# NOVARTIS



Novartis Ireland Ltd are proud to partner with ExWell Medical and applauds the development of this exercise booklet. This exercise programme provides cancer patients in Ireland with a unique, tailored, medically-led exercise programme.

Regular exercise plays such an important role in all our daily lives. Scientific research demonstrates that exercise is important and beneficial for cancer patients – supporting people to live well while being treated for cancer; and supporting people to live well beyond cancer. Physical activity and exercise intersect with oncology in both the pre-diagnosis and survivorship settings. Clinical evidence shows that physical activity plays a role in the prevention of many cancers. Exercise decreases treatment side effects, speeds recovery after a cancer diagnosis, and enhances survival.

This ExWell Medical team of experts have compiled and produced this booklet with great care. The booklet is a resource that will support and educate patients to exercise throughout your cancer journey. The booklet will be a useful reference guide for all patients and for participants in the ExWell Medical exercise programme.

We wish all associated with this publication and the future participants of the ExWell Medical programme the very best of luck and continued success.

**Novartis**



# DELIVERY PARTNERS



# PARTICIPANT TESTIMONIALS

## **Rory Lynch, aged 51**

### ***Gastric cancer treated by chemotherapy followed by surgery***

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“Following my diagnosis in Oct 2019, I was invited to join a pre-op fitness programme run by ExWell Medical. The programme ran for about 10 weeks starting before my cancer treatment and ran right up to my surgery. The help and support that I got from ExWell Medical was exceptional.

The physical and emotional benefits that I got from the programme were immense. It clearly set me up to be in the best condition possible for my op and beyond. It also complemented the great work that was carried out by my oncologist and surgeon. Four weeks after my surgery, I have now started the post-op exercise programme with ExWell Medical”.

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## **Louise Boylan, aged 51**

### ***Gastric cancer treated by chemotherapy followed by surgery***

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“I really appreciate the exercise programme. The programme and the support has given me so much confidence. The wellbeing feeling and sense of achievement as a result of the programme took my focus off being a patient and gave me a purpose. The exercise helps me to de-stress and is good for a positive mindset. I got lots of endorphins from the exercise which gave me a boost. I found it was a good way to get the body into action to promote healing and made me feel stronger. My family and friends have all engaged in the programme too, and they are doing the exercises with me. Even remotely my friends are sending me pictures of themselves walking to motivate me. This helps me feel connected to my friends and the illness doesn't define me. I'm really grateful to you and the team for this.”

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### **Dara Delaney, aged 53**

#### ***Stage 3 breast cancer treated by radical mastectomy followed by chemoradiotherapy***

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“My experience with ExWell was so positive. When I joined I was post-surgery and pre-chemo. With the help of Noel McCaffery and Lisa Loughney and the amazing ExWell team, I started working out to a tailored exercise programme to gain more range in my arm flexibility which had been affected post-surgery while also doing gentle cardio and building leg strength. I will always be grateful to Lisa for helping me so much to remain strong and for minding me physically after each chemo round.”

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### **Karen McCabe, aged 49**

#### ***Colon cancer treated by surgery followed by chemotherapy***

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“I found the exercise programme very beneficial to me during my cancer illness. The support I got from ExWell and your clients was brilliant, really boosted my spirits. I met some lovely people who made me feel that they really cared. It made me realise how lucky I was to have caught the cancer early – there are people a lot worse off than me. Gave me a reason to get up early, kept my days busy, felt I had achieved something by doing my exercises ... kept me active and helped hugely with my recovery post-surgery. Thank you all for being so nice to me.”

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### **Tony King, aged 60**

#### ***Prostate cancer treated by surgery***

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“In the lead up to surgery, the exercise programme made me more fit and ready for surgery. It took my mind off the prostate cancer. By exercising, you're thinking of other things. I was thinking about what I was going to do the next day, at the weekend, and going to see my grandkids to play with them, and where to go on holidays after surgery ... I was thinking of everything and prostate cancer surgery was out of my mind once I was exercising.”

## **Fergal Keenan, aged 37**

### ***Colon cancer treated by surgery***

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“Receiving a cancer diagnosis in your 30s is a surreal experience. Time seems to both slow down and to speed up. Daily life quickly becomes a baffling treadmill of consultations, assessments, and examinations, while the wait for a surgery date can seem endless.

I was fortunate enough to have been referred to the ExWell programme early on in my journey. Amidst the shock and bewilderment following the diagnosis, the regular exercise sessions with Lisa and the team provided a much-needed sense of structure to me. As someone who has always enjoyed a fairly active lifestyle, I was immediately concerned about the short and long-term impacts of the cancer treatment. How long would I be out of action for? When could I start exercising again? Thankfully the team in ExWell were on hand to assuage my fears and guide me through the process; beginning with an initial fitness assessment and progressing to a bespoke exercise plan that was monitored and adjusted throughout my recovery.

Without exception, the team in ExWell were attentive, proactive, and, above all, compassionate. Their encouragement and support aided me immensely, and it's no exaggeration to say that I doubt I would have made it through the process without them. I would strongly encourage anyone that is currently facing down a diagnosis or living with a chronic illness to consider ExWell. My time with the programme not only assisted me in preparing for and recovering from my surgery, but also instilled in me a commitment to push myself further and gain fitness. Exercise can't fix everything, but it's a good place to start.”

# CLINICAL EXPERT ADVICE

## WHAT MEDICAL EXPERTS SAY ABOUT THE EXWELL PROGRAMME



**Professor Karen  
Redmond**

*Thoracic &  
Lung Transplant  
Surgeon, Mater  
Misericordiae  
University Hospital*

“Exercise in prehabilitation or rehabilitation is life changing. By doing exercise, I can change what might be perceived to be an inoperable candidate to an operable candidate and that can be life changing. You can cure people of cancer. I would say to people, **I don’t want you coming in to hospital in a night gown, I want you coming in in a tracksuit and runners.**”

Exercise has a major impact on perioperative outcomes, both in relation to sense of wellbeing, ability to get up and get moving and preventing life changing conditions or problems. I would encourage people to get involved in exercise programmes with family or a friend where you can be educated about how much exercise is important and what types of exercise is important. To me, ExWell is an essential part of my programme for patients going to surgery. Their availability and flexibility around supporting the needs of the patient is phenomenal. The other thing I find about ExWell is that it lifts my patient’s sense of wellbeing. They have some responsibility/accountability about their outcome because now they are responsible for their own exercise programme which can **impact on their overall survival.**”



**Professor John McCaffrey**

*Medical Oncologist, Mater Misericordiae University Hospital*

“Patients with advanced cancer or going through the combination of radiation and chemotherapy often suffer significant symptoms including fatigue and a drop in their normal level of health similar to deconditioning. ExWell has been a phenomenal success for our patients before and after systemic therapy and in between radiation and surgery. Patients’ confidence is often restored at their achievement through the programme. **They have confidence in their physical and mental health and it provides a pathway back to their normal, baseline, healthy state.** It can certainly help to lift tiredness and occupies time in an enjoyable way. **It gives a sense of control** back to a patient who has often been deprived of control through the necessary treatments for the cancer. We are often involved in patients before operations, especially those receiving chemotherapy ahead of an operation, and exercise can be helpful in reducing the risks related to the operation.

I have enjoyed seeing the feedback that patients provide from ExWell attendance. It has been phenomenally positive with demonstrable improvement across all disease types.”



**Mr Jurgen Mulsow**

*Colorectal and Perineal Cancer Surgeon, Mater Misericordiae University Hospital*

“The better prepared a patient is for that surgery, the better their chances of making a quicker recovery, returning to normal activities and potentially having lower risk of complication at the time of surgery. We have had a number of patients with bowel cancer and peritoneal cancer, more advanced cancer within the abdominal cavity, that have come through the ExWell programme both in advance of their surgery and during their recovery period. All those patients reported a very significant improvement in wellbeing and physical fitness. Our sense is, this will very **clearly impact on their recovery period and their return to wellness after what often is a very major surgical intervention.** Following assessment with ExWell, the patients can then take the exercises, the regimes that they have been shown and implement these at home, to allow them to prepare better for surgical treatment. We also encourage them to continue to practice the techniques they have been shown and the exercises they have been shown during the recovery period, as we believe that this will impact on their return to function and their return to wellbeing after their surgery.”



**Dervilla Danaher**

*Physiotherapy  
Manager, Mater  
Misericordiae  
University Hospital*

“Exercise is vital, to get patients moving, to get people active and is a vital part of their programme and recovery. We have worked closely with ExWell and as a community rehab exercise programme it’s fantastic that we can refer our patients to try and sustain their exercise habit. It’s important to have the home exercise programme as well, which we are very supportive of. As physiotherapists, it is vital that we try to instil the exercise message for people who present to us, who come to physio. It is really important, **no matter what your age, no matter what your capacity, that you always have the ability to improve and to adopt exercise.** Exercise is fun and it can add years to your life.”



**Professor  
Ronan Cahill**

*Colorectal  
Surgeon, Mater  
Misericordiae  
University Hospital*

“The ExWell Programme is terrific. We’ve collaborated with Dr McCaffrey and his fantastic team for 5 years, initiating preoperative exercising training in Ireland for patients undergoing major, complex cancer surgery. From the start, I have been greatly impressed by the organisation, expertise and kindness of the service and admired how the personal touch and positive energy of the team has been preserved as the programme has expanded. My colleagues and I have seen how well patients benefit from engagement at the difficult time between cancer diagnosis and surgical therapy and how it improves their confidence and well-being facing into major operation. Very often, during in-patient recovery, the patient credits their participation in the programme as a major factor in their good outcomes and re-engagement following in-hospital stay is common. While I thought I understood the physical benefits of exercise, I have really learnt from the patients the profound psychological gains achievable in short time-frames and how otherwise arduous “waiting times” before admission can be in this regard. It’s clear too how well appreciated the role of exercise is for family members and friends and how the immediately understandable the offer of exercise support ahead of surgery is for them. The ExWell programme is one of the most impressive services I know in cancer care in Ireland.”





**Professor  
Arnold Hill**

*Professor of Surgery  
Beaumont Hospital  
(specialist in  
General Breast and  
Endocrine Cancer)  
and Chair of Surgery  
Royal College of  
Surgeons*

“I believe in improving fitness at any time in a person’s life and especially around the time of cancer diagnosis, treatment and follow up. I have seen the benefits of improving fitness levels in both the body and the mind during this sometimes complex time for patients.

Research has proven that among its benefits, exercise can improve fitness, symptoms of fatigue and quality of life in those undergoing cancer treatment. Additionally, we are currently involved in research in Beaumont Hospital and ExWell Medical to discover more in this area.”



**Daire Plunkett**

*Senior  
Physiotherapist  
in Cardiothoracic  
Surgery, Mater  
Misericordiae  
University Hospital*

“Exercise is hugely important in the preparation for and recovery after any surgery, but particularly in lung surgery. **Increasing your physical activity prior to surgery helps to prevent complications associated with surgery, as well as helping you to make a speedy recovery after surgery.**

Following a structured exercise plan in the weeks before and after surgery has been shown to help recovery, decrease your length of stay in hospital and allows you to regain your strength after surgery.”





**Mr. William Robb**

*Consultant Upper  
GI and General  
Surgeon, Beaumont  
Hospital and the  
Royal College of  
Surgeons in Ireland*

“Physical exercise being integrated into the treatment pathway of oesophageal and gastric cancer patients is increasingly being recognised as a necessary part of preparing patients for surgery and leading them into recovery and survivorship. Surgery for these patients is physiologically demanding. Recovery from it is also physically and nutritionally challenging. It makes intuitive sense that getting patients fit for surgery means they are in a better position to cope with the physical insult of their operation. Further their ability to recover and return to baseline function can be accelerated.

Beyond its physical benefits, exercise has a well established role in well-being. It has been remarkable to observe these positive benefits in our patients who have engaged with an exercise programme with ExWell. In the light of so many putative positive benefits of peri-operative exercise, I have been delighted to collaborate with ExWell in the design and recruitment to a randomised controlled trial assessing the benefits of a community based perioperative exercise programme . The expertise of ExWell has been essential to facilitate this and it appears there is little doubt the prescription of exercise during cancer treatment will continue to be integrated into treatment algorithms.”

## SECTION 2

# CANCER SURVIVORSHIP



# THE ROLE OF EXERCISE IN CANCER SURVIVORSHIP

A cancer diagnosis can be a very anxious time. It is also a time when you may consider making positive lifestyle changes such as taking part in regular exercise to increase your fitness levels helping you go into treatment “fighting fit” and to improve your health in the long term.

A healthy lifestyle that includes regular exercise is a core element of the cancer treatment pathway. If you were fit and active before developing cancer, it is really important to maintain that lifestyle. Doing this means that you retain a key part of your own identity. In addition, you take some control over your own health at a time when a natural tendency may be to let others make all the decisions. If you were not physically active before your cancer diagnosis, starting an exercise programme is possibly the most important thing you can do to maintain or even improve your health during your cancer treatment.

The specific advantages of exercise are:

- **Preparing for cancer treatment and/or cancer surgery:** Exercise increases your physical fitness as you prepare for surgery. In this period you may be having chemotherapy and / or radiotherapy. This treatment, combined with the effect of the illness itself, often leads to dramatic reductions in strength and aerobic fitness. By maintaining or even improving these fitness components, you will be much better prepared for the surgery.
- **Building strength and fitness:** Improving your strength and fitness may help you withstand the treatments proposed. This also has a specific benefit in rehabilitation and is essential to allow you become mobile and independent again.
- **Improving confidence:** Getting back to exercise, or taking up exercise during/after cancer treatments is a fantastic way to rebuild confidence and to move back towards your pre-treatment health status, back to work and back to normal leisure activities.

- **Reducing/counteracting side effects of treatment:** Some cancers require long term treatment in the form of medications which may have possible side-effects that can damage your health. For example, medications used in the long-term treatment of some types of prostate cancer can increase the risk of developing heart disease or diabetes. Knowing this, it is particularly important to adopt lifestyle changes, including exercise, which counteract this risk.
- **Reducing anxiety and fear in relation to treatments/surgery:** Speaking with or exercising with other people who are in the same situation as yourself, and people who have successfully recovered from surgery, provides great support.
- **Staying well in preparation for relapses:** Some cancers may recur after the initial treatment is completed, requiring a further course of treatment. Staying fit and well is hugely helpful in getting through the treatment.
- **Enhancing mood:** Low mood and depression can be a feature of cancer treatment. Exercise is known to be an effective way to prevent and treat mild to moderate depression.









Research shows exercise can provide many more benefits, especially when aerobic exercise (walking, cycling, swimming etc) and resistance exercise (weights) are combined. The benefits are listed in the table overleaf.

# Effects of Exercise on Health-Related Outcomes in Those with Cancer

## What can exercise do?

- **Prevention of 7 common cancers\***  
Dose: 2018 Physical Activity Guidelines for Americans: 150-300 min/week moderate or 75-150 min/week vigorous aerobic exercise
- **Survival of 3 common cancers\*\***  
Dose: Exact dose of physical activity needed to reduce cancer-specific or all-cause mortality is not yet known; Overall more activity appears to lead to better risk reduction  
\*bladder, breast, colon, endometrial, esophageal, kidney and stomach cancers  
\*\*breast, colon and prostate cancers

Overall, avoid inactivity, and to improve general health, aim to achieve the current physical activity guidelines for health (150 min/week aerobic exercise and 2x/week strength training).

Outcome	Aerobic Only	Resistance Only	Combination (Aerobic + Resistance)
<b>Strong Evidence</b>	<b>Dose</b>	<b>Dose</b>	<b>Dose</b>
 <b>Cancer-related fatigue</b>	<b>3x/week for 30 min</b> per session of moderate intensity	<b>2x/week of 2 sets of 12-15</b> reps for major muscle groups at moderate intensity	<b>3x/week for 30 min</b> per session of moderate aerobic exercise, plus <b>2x/week of</b> resistance training <b>2 sets of 12-15</b> reps for major muscle groups at moderate intensity
 <b>Health-related quality of life</b>	<b>2-3x/week for 30-60 min</b> per session of moderate to vigorous	<b>2x/week of 2 sets of 8-15</b> reps for major muscle groups at a moderate to vigorous intensity	<b>2-3x/week for 20-30 min</b> per session of moderate aerobic exercise plus <b>2x/week of</b> resistance training <b>2 sets of 8-15</b> reps for major muscle groups at moderate to vigorous intensity
 <b>Physical Function</b>	<b>3x/week for 30-60 min</b> per session of moderate to vigorous	<b>2-3x/week of 2 sets of 8-12</b> reps for major muscle groups at moderate to vigorous intensity	<b>3x/week for 20-40 min</b> per session of moderate to vigorous aerobic exercise, plus <b>2-3x/week of</b> resistance training <b>2 sets of 8-12</b> reps for major muscle groups at moderate to vigorous intensity
 <b>Anxiety</b>	<b>3x/week for 30-60 min</b> per session of moderate to vigorous	Insufficient evidence	<b>2-3x/week for 20-40 min</b> of moderate to vigorous aerobic exercise plus <b>2x/week of</b> resistance training of <b>2 sets, 8-12</b> reps for major muscle groups at moderate to vigorous intensity
 <b>Depression</b>	<b>3x/week for 30-60 min</b> per session of moderate to vigorous	Insufficient evidence	<b>2-3x/week for 20-40 min</b> of moderate to vigorous aerobic exercise plus <b>2x/week of</b> resistance training of <b>2 sets, 8-12</b> reps for major muscle groups at moderate to vigorous intensity
 <b>Lymphedema</b>	Insufficient evidence	<b>2-3x/week of</b> progressive, supervised, program for major muscle groups does not exacerbate lymphedema	Insufficient evidence
<b>Moderate Evidence</b>			
 <b>Bone health</b>	Insufficient evidence	<b>2-3x/week of</b> moderate to vigorous resistance training plus high impact training (sufficient to generate ground reaction force of <b>3-4</b> times body weight) for at least <b>12</b> months	Insufficient evidence
 <b>Sleep</b>	<b>3-4x/week for 30-40 min</b> per session of moderate intensity	Insufficient evidence	Insufficient evidence

Citation: [bit.ly/cancer\\_exercise\\_guidelines](https://bit.ly/cancer_exercise_guidelines)

Moderate intensity (40%-59% heart rate reserve or VO<sub>2</sub>R) to vigorous intensity (60%-89% heart rate reserve or VO<sub>2</sub>R) is recommended.

**The aims of the exercise programme are different dependent on your cancer treatment pathway.**

## **DURING CANCER TREATMENT**

If you are receiving cancer treatment, exercise may become a challenge for you during this phase because of symptoms related to the chemotherapy/radiotherapy. The aim is to ensure your fatigue is managed, to maintain rather than improve your fitness and strength, provide psychological support and give you confidence to exercise.

## **BEFORE SURGERY**

If you are being treated with surgery, the aim is to improve fitness and strength, while continuing to offer psychological support and reduce any anxiety or fear related to surgery. Every bit of exercise will help. Your focus now shifts towards getting fit for surgery.

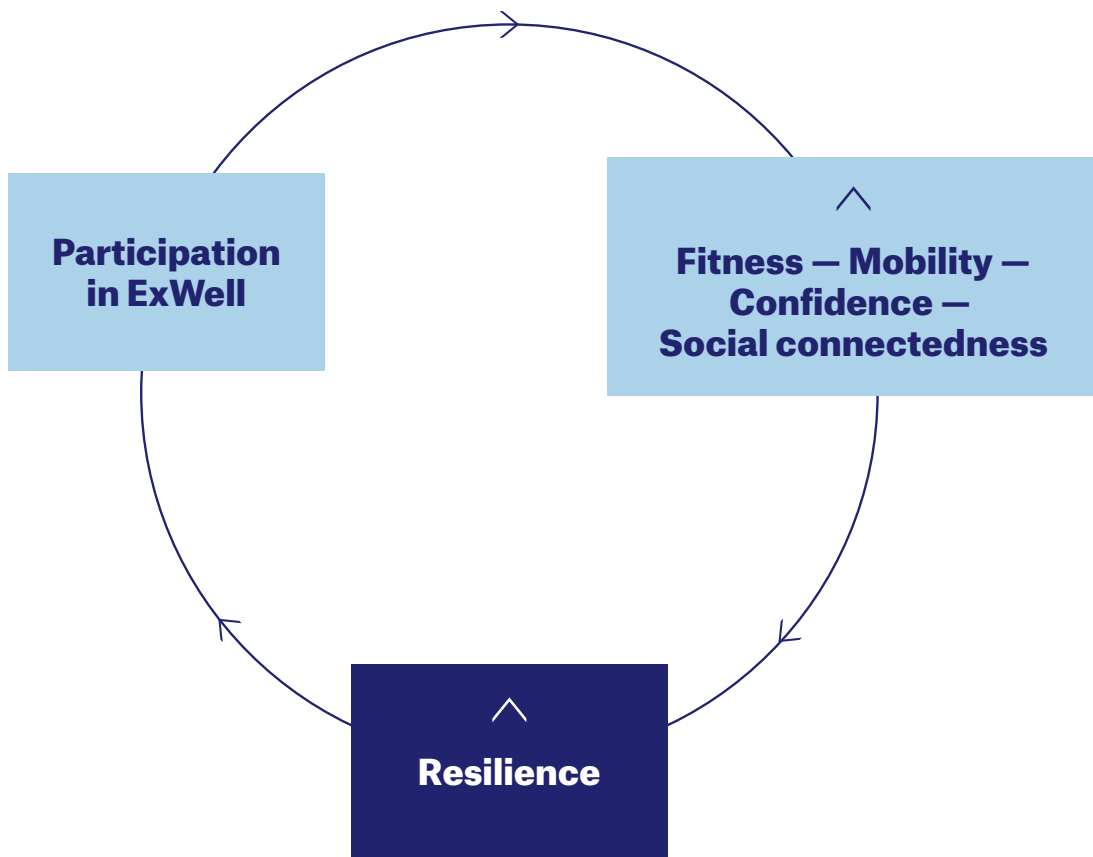
## **POST SURGERY/CANCER TREATMENT - ON THE ROAD TO RECOVERY**

Following completion of cancer treatment and/or in the post-operative phase, the main aim is to regain fitness and strength and motivate you to be active for your future. You will need to build up your activity level gradually. You may be feeling tired following your surgery/completing treatment. It is a good idea to schedule a mid-day nap for a while. But at the same time, try to increase your walking distance every day. The focus is now to gently get back to your pre-diagnosis levels or indeed become even fitter.

# RESILIENCE

Resilience is very important in people living with cancer. Resilience means mental toughness. It describes your ability to bounce back, to adapt well, to maintain a positive attitude and stay optimistic despite threats or set-backs or challenges to your health.

Participation in the ExWell programme leads to increased fitness, mobility, confidence and also social connectedness (which means having regular contact with other people). This combination builds resilience, which in turns leads to an increased willingness and ability to keep taking part in the programme, as well as a greater ability to deal with cancer.





# WHAT PROGRAMMES ARE AVAILABLE AT EXWELL FOR PEOPLE WITH CANCER?

The cancer programmes offered by ExWell can be delivered in group settings or as remote programmes (either on-line, using live and recorded video support, or by simply following guidelines from this Home Programme booklet). The programmes are:

## a) Move On

This is a 12-week programme mainly for people **who have finished their primary cancer treatment** and need a little help to 'move on' back to their pre-cancer lifestyle. The exercise content involves a mixture of aerobic work, strength exercises, core stability and also dance fitness.

## b) Cancer Prepare

This programme offers intensive exercise support **following a cancer diagnosis** and in the time period before surgery. Exercise during this time has huge benefits both physically and psychologically in preparation for surgery and enhances recovery. It puts a structure on the day during what can be a difficult period and encourages people to get out of the house having a direct active role in getting ready for the surgery. It may also be helpful in reducing anxiety and fear related to surgery.

## c) Main ExWell Classes

This is an open-ended programme which is ideal for people with those cancers that are really **more like long-term illnesses**, such as long term prostate cancer or some forms of blood cancers.

## d) Living Life

This is a more gentle programme, for people with **advanced cancer** who want to enjoy modest exercise, including yoga, stretching, gentle aerobic and strength classes and some easy dance sessions (including chair dance).



# HOW DOES THE EXWELL MEDICAL PROGRAMME WORK?

ExWell@Home aims to help you carry out our programme in and near your home. You will be in one of the following categories:

- you are now switching from our group classes to ExWell@Home.
- you now want to combine the group classes with ExWell@Home.
- you are new to ExWell and you are starting with ExWell@Home.

ExWell@Home is a medically led service. Our job is to help, encourage and support you. It can sometimes be confusing not knowing which exercises to do and how often to do them. However, our experienced team at ExWell have worked with you to create a tailored exercise programme that suits you as an individual. Before you start your exercise sessions, we will talk you through your personalised programme that outlines which exercises to do, how often and how long to do them, and how intensely to exercise.

The following steps take place in our on-line programme:

## **1 Referral**

Your GP/hospital consultant/health care professional refers you to ExWell Medical. This is done by sending us a referral letter, providing us with your medical condition and giving us your contact details. You are then contacted by our team to let you know that we have received the referral and to invite you to take part in the induction process (see below).

### **1A Self Referral**

If you become aware of our programme and wish to attend, we still need your medical information, so we ask you to contact your GP or hospital specialist to arrange this. This is called a 'self-initiated' referral.

## **2 Induction Lecture**

This is a talk from Dr Noel McCaffrey, Medical Director of ExWell Medical, that you can access online. It explains the rationale for the programme, its structure and content, and summarises much of the content in this booklet.

### **3 Consent**

If you agree to get involved, we ask you to sign a consent form to indicate that you understand what's involved in the programme and to allow us permission to store your data.

### **4 Home assessments**

We ask you to carry out some simple assessments at home to assess your fitness. We provide you with simple written guidelines and a video explaining how to do these assessments. We also ask you to complete some questionnaires.

### **5 Group Zoom Meeting**

You are then invited to attend a group Zoom meeting at which you meet the ExWell Medical team and other programme participants where you will have a chance to ask any questions you may have. An individual phone consultation call with one of our doctors can be arranged after the Zoom meeting if you wish.

### **6 Your personalised exercise programme is designed**

We then give you advice about your own programme based on information from your medical referral, your home assessments and any other feedback you give us.

### **7 Get Started**

Next, you start your programme. This involves a combination of the following:

- a. daily exercises, incorporating aerobic, strength, flexibility and core stability/balance work, drawn from this booklet.
- b. optional participation in ExWell online classes
- c. linking with local activities in your community, and we will help you to identify suitable options, based on your own preferences.

### **8 Using this ExWell@Home booklet**

This booklet has a section giving details of all the exercises we suggest. You can refer to this to remind yourself of the exercises and suggested sessions, and also to get ideas about how to change your sessions from time to time.

## **9 Linking with other ExWell participants**

There may be other ExWell participants living nearby. If this is the case, we offer you the option of meeting them so that you can exercise together, if you wish. Alternatively, we can link you with another ExWell participant who can stay in touch with you by phone in order to encourage you and offer support while you are settling into the programme.

## **10 Keeping an exercise log/dairy**

We ask you to keep a simple diary of your activities/exercises and to share it with us every week. This helps your motivation and also helps us understand how well things are going. This may involve using a step counter every day.

## **11 Viewing video material**

You can access any of the following video support material:

- A video of the induction talk that is delivered at face-to-face group inductions. Most of the material in the talk is included in this manual, but it can be helpful to hear it spoken as well as to read it;
- Demonstrations of the individual exercises we recommend;
- Demonstrations of suggested exercise sessions, of different lengths;
- Testimonials from ExWell participants;
- Advice from different medical specialists.

## **12 Retesting and Reporting**

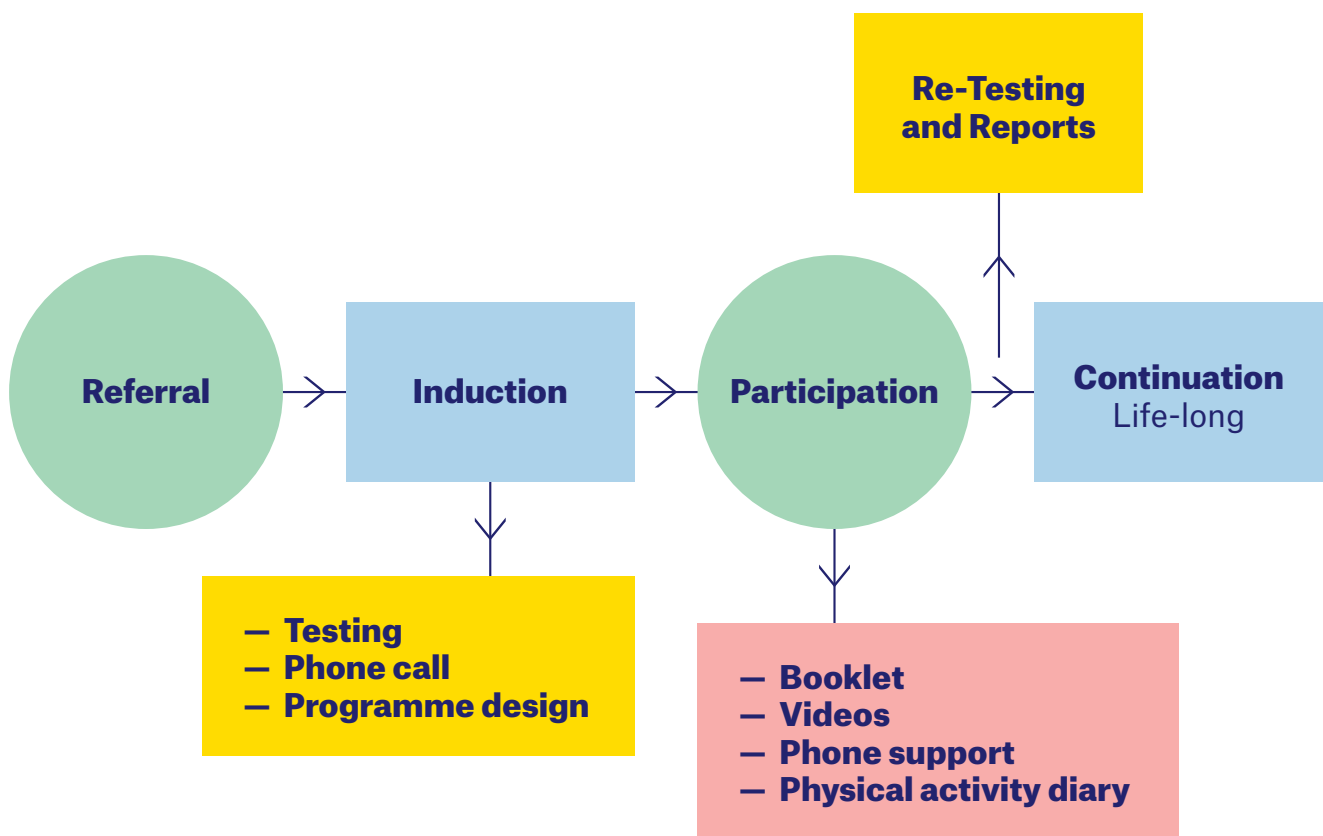
Retesting depends on your cancer journey. If you are preparing for surgery, we will ask you to repeat an assessment directly before surgery, or if you are undergoing cancer treatment, we will ask you to repeat an assessment after you finish, otherwise after 6 weeks and again after 3 months we will ask you to repeat the assessments that you carried out at the start of the programme. Based on the results, we prepare a report for you and for your doctor. We also discuss the results with you by phone.

## GROUP ASSESSMENTS / INTERACTION

Please note, if you wish, you can attend some group exercise assessments/sessions, even if you are following the ExWell@Home Programme.

- You have the option of attending a group, face-to-face induction session, at which you will hear a talk about the programme and the assessments. This is available instead of doing the assessments at home.
- You have the option of attending repeat assessments in a group setting at an ExWell centre.
- You have the option of attending occasional group exercise classes if this is convenient. This allows you to interact with other participants, discuss how you are getting on, and also to ask the ExWell team any questions you may have.

## THE EXWELL@HOME PATHWAY



# ExWELL MEDICAL TOP 10 TIPS

- 1 Give it a real try.** You have been referred for a reason. Your doctor or health care professional believes this is the right programme for you. You would not have been referred to us if this was not the case.
- 2 Trust Us.** We know what we are doing. We have the experience and the scientific proof from our research that our programme works. You can contact us at any time for advice.
- 3 Make ExWell the centre-piece of your week.** It must take priority over other activities you now have. Being more active is a habit, it must be worked gradually into our daily routine. This programme will help you develop this habit to improve both physically and mentally.
- 4 Everyone can take part.** We will structure a programme to suit you. Even if you feel very unfit at present, we will ease you into the programme gently, in a way that will build up your confidence.
- 5 Enjoy yourself.** This is vital. Get your family or friends involved and build a social network around regular exercise. Build your programme around activities you like doing.
- 6 Easy as you go.** Build up gradually.
- 7 Be active in every way possible.** This includes your housework, your commuting and also in your workplace.
- 8 Measure your progress.** Use our assessments to measure your progress, or use your own, such as how long does it take you to walk the loop in the park for example.
- 9 Set goals.** There must be something you would like to achieve. Make sure it is realistic and involves action by yourself (not someone else). Your goals could be short term or long-term, or both.
- 10 Be ready for set-backs.** This happens for everyone at some stage. Have your family and friends ready you help get you going again.

# GENERAL EXERCISE INFORMATION

## PHYSICAL ACTIVITY AND EXERCISE: WHAT'S THE DIFFERENCE?

**Physical activity** is any movement that is carried out by the skeletal muscles that requires energy. Normal daily activities that involve movement, such as household chores, shopping, gardening or walking between offices at work are examples of physical activity.

**Exercise** is one type of physical activity and is defined as planned, structured, repetitive and intentional movement intended to improve or maintain **physical fitness**. Examples include jogging, cycling, swimming, strength work in the gym etc.

## COMPONENTS OF FITNESS

We know that you need to include 3 different types of exercise on a regular basis, as follows:

### **Aerobic exercise**

Remember, one of the best predictors of how long you will live and also of how well you will live (i.e. your quality of life) is your current (today) level of aerobic fitness. You get no credits for how good you were 5 years ago. Nor do you get any for your good intentions for next year. Today is what matters. This is why you need to be physically active every day in order to enjoy the health benefits. This applies to everyone, including people with chronic illness.

### **Strength**

This is extremely important and is often forgotten. Strength exercises will help you to increase strength and tone of the muscles. It is particularly important in women, who have less muscle mass as adults than men anyway, and therefore tend to suffer more from age-related and inactivity-related muscle loss.

### **Core stability and balance**

This is very helpful in reducing the risk of falls in those who are at risk of falling.

# THE IMPORTANCE OF AEROBIC FITNESS

There are 3 questions that need to be answered about the exercise programme, which are as follows:

## 1 How much exercise should you do?

The first point to make is that every bit of exercise you do helps, no matter how little it is. Sitting still is called sedentary behaviour. The only energy being consumed is that required to keep your heart beating and your various organs working at rest. We know that anti-sedentary behaviour, which means simply not sitting still, is extremely beneficial to your health compared with sedentary behaviour. This is why we ask you to just stand up and walk about during the day, for example during the ad breaks while watching television, and to avoid using lifts and escalators while shopping etc. Building extra physical activity into your daily life in this way is really beneficial to your health compared.

The experts advise that we all try to do 30 minutes or moderately vigorous aerobic exercise 5 times every week. Even if you are unable to walk for 30 minutes, several small walks of say 5-10 minutes throughout the day are equally beneficial. The ExWell group exercise programme offers you 2 supervised classes per week, and hopefully you will add the rest yourself. The ExWell@Home Programme provides guidelines for daily exercise.

## 2 What type of exercise should you do?

We know that you need to include 3 different types of exercise on a regular basis, as follows:

- Aerobic exercise
- Strength exercise
- Core stability and balance

## 3 How hard (intense) should the exercise be?

For aerobic exercise, we use a simple method which is very easy to understand. We advise that you will know the correct intensity to exercise by answering yes to each of the questions below:

- Do I have a red face?
- Am I sweating a little?
- Am I a little breathless?

There are many ways to judge exercise intensity. A very good test is called the Talk Test, which means that when exercising you should be able to talk but not sing a song. Another way is to measure your heart rate using a technical device and aim to achieve 50–65% of your age-related maximal heart rate when starting the programme.

## **SUMMARY**

The typical supervised ExWell class lasts about an hour. This includes the warm-up at the start, the cool down at the end and the main class in between. The main class always has the 3 different elements (aerobic exercise, strength work and core stability/balance. There are different ways of doing all 3 elements.

For ExWell@Home, you have the option of doing a long session (up to 1 hour), effectively repeating the supervised class. Alternatively, you can break your programme up into shorter sessions and do more than 1 session every day if you wish.



# DO WE HAVE EVIDENCE THAT EXWELL WORKS?

If you have a chronic illness, your health status may be dis-improving. Once you start the ExWell programme, there are 4 possible outcomes, as follows:

- 1 Your health may start improving, reversing the downward trend of physical inactivity. This is a very good outcome.
- 2 Your health may stop dis-improving and may instead become stable (not changing). This is a good outcome.
- 3 Your health may continue to dis-improve, but at a slower rate. This is an acceptable outcome.
- 4 Your health may continue to dis-improve (i.e. the ExWell programme makes no difference), which would be a disappointing outcome.

Our experience is that most ExWell participants experience one of the first 2 outcomes (either a plateau effect, where health becomes stable, or an improvement in health).

We undertook a large research study over a 3-year period which, funded by the HSE, to see if the ExWell programme worked in people who attended classes in the gym. This study showed that participation in ExWell for a full year improved the following important outcomes:

- Strength.
- Aerobic fitness.
- Psychological wellness.
- Quality of life.
- Cognition (memory and attention).
- Blood pressure control in people with confirmed high blood pressure at the start of the study.

- Fasting blood sugar.
- Blood cholesterol levels.
- Walk distance in people with poor circulation to the legs.

What this means is that we have scientific evidence that the ExWell programme is effective in Ireland. The above is additional to the many known benefits of physical activity, which include:

- Improved mood.
- Increased energy and concentration.
- Improved self esteem.
- Increased confidence.
- Decreased anxiety and depression.
- Decreased fatigue.
- Maintenance of a healthy weight.
- Reduced need for medications in some diseases (including diabetes and high blood pressure).
- Reduced risk of developing new illnesses.

# SECTION 3

## EXERCISES



Your exercise specialist at ExWell has put together a personalised exercise programme, tailored for you, using some of the exercises shown below. Below, you will be signposted to the exercises that you should do. As there are different levels for the exercises, there are a selection of exercises below; however, you will not be completing all of these. The exercise session must include:

- A** Warm Up
- B** Aerobic
- C** Resistance
- D** Balance/Core
- E** Cool Down

Each exercise will have a name, a brief description, and a picture to demonstrate the correct technique for the exercise. Some exercises will have an 'adaptation' underneath. This is a different way to do the same exercise if you are finding the original too easy or difficult.

### **Some key tips before you start:**

- Ensure you have sufficient space.
- Ideally work out on non-slippery floor such as a carpet or large rug.
- Make sure you're well hydrated! Drink plenty of water before, during and after exercise.
- Take breaks as often as you need to and carry on when you feel ready.
- Wear comfortable clothes that you can move about in.
- Wear shoes with a good grip (e.g. runners).

### **When to not exercise**

It is not safe to exercise vigorously if you have a high temperature (shivering, feeling hot and cold, sweating to the point of changing your pyjamas or night dress, or changing the bed clothes). Separately, you should not exercise if you have:

- Chest pain at rest or on mild exertion (effort)
- Dizziness and/or fainting
- Severe and unusual headaches
- Nausea, vomiting or diarrhoea
- Unexplained bleeding or bruising

## A) WARM UP

The purpose of the warm-up is to prepare the body for more intense exercise. The following exercises should be carried out in a slow and controlled way, allowing the muscles to warm up gradually before the main session. The intensity should be increased gradually so that at the end of the warm-up you feel a little red-faced and a little breathless.



### **Marching on the spot**

Stand tall with the shoulders back.

Begin marching bringing your knees high and swinging your arms.

While marching on the spot, roll the shoulders forwards.

Change direction and roll the shoulders backwards.

### **Heel digs**

Place the hands on the hips.

Tap the heel out in front.

Alternate between the left and right leg.



3



### Heel flicks

Place the hands on the hips.

Bend the left knee and lift the left heel to the buttock.

Return to starting position and repeat with right leg.

Alternate between the left and right leg.

### Side steps

Place the hands on the hips.

Step to the right and stand with your feet together.

Step to the left and stand with your feet together.

Repeat to both sides.

4



### High knees to elbow

Stand tall and squeeze the tummy muscles tight.

Raise the left knee and tap it with your right hand.

Lower your leg.

Alternate to the opposite side by raising the right knee and tapping it with your left hand.

Lower your leg.

Repeat this action, alternating the arms and legs each time.

5



6



### Full body stretch

Stand with your feet shoulder width apart.

Lock your fingers together with your hands in front of you.

Bring both arms over your head and stretch yourself as tall as possible.

Hold this stretch for 10-15 seconds.

### Side tap and arm raise

Start with feet shoulder width apart and arms by your side.

Tap your left foot to one side. As you are doing this, slowly raise your arms out to the side and up over your head.

Slowly lower your arms and return to starting position.

Repeat on the right side and alternate.

7



8



### Heel dig and bicep curl

Tap the heel out in front.

Alternate between the left and right leg.

Bend the arms at the elbow, bringing the hands up to the shoulders.

Straighten arms and repeat.

9



### Heel dig stretch.

Tap the heel in front and hold it in that position.

Keep your front leg straight and lean your body forward until you feel a gentle stretch in the back of your leg below the buttock.

Keep your head and chest up.

Hold this stretch for 10-15 seconds.

### Jogging and punching

Begin by jogging on the spot.

Next, punch out in front with alternating arms at a steady pace.

Lastly, for 10 seconds, pick up the pace and do this as fast as you can.

Slow down to a relaxed pace and march on the spot.

10





## B) AEROBIC EXERCISE

Please refer to your personalised exercise plan for which exercises to perform and for how long. Typically each exercise should be done for 1 minute but your exercise specialist will prescribe you what they want you to do for each exercise. We recommend working towards an effort that make you feel a little out of breath, red face and some sweating. Another good way of checking whether you have reached this intensity is the “talk test”; you should be a little breathless, and able to speak a short sentence but not a conversation.



### Half Jacks

Place your right hand on your right hip.

Tap the left toe out to the side and raise your left arm upwards.

This movement should reflect one half of a jumping jack.

Change to the opposite side.

Repeat and alternate between sides.

*To make this exercise harder, increase the speed.*

### Hand to knee

Stand tall and squeeze the tummy muscles tight.

Raise the left knee and tap it with your right hand.

Lower your leg.

Alternate to the opposite side by raising the right knee and tapping it with your left hand.

Lower your leg.

Repeat, alternating each time.

*To make this exercise harder, touch your knee with the opposite elbow, instead of hand.*



3



### Heel flicks

Place the hands on the hips.

Bend the left knee and lift the left heel to the buttock.

Return to starting position and repeat with right leg.

Alternate between the left and right leg.

*To make this exercise harder, bend your elbows (hands-to-shoulders) up and down in a bicep curl as you go.*

### Side steps

Place the hands on the hips.

Step to the right and stand with your feet together.

Step to the left and stand with your feet together.

Repeat to both sides.

*To make this exercise harder, raise your elbows as high as you can with your hands in front of your chest and lower back down again.*

4



### Jogging on the spot

Begin by marching on the spot.

Increase the pace and jog on the spot and maintain this.

*To make this exercise harder, as you are stepping, alternate between raising your hands over your head and then out to the side at shoulder height*

5



6



### Foot Taps

Stand with your feet shoulder width apart.

Lift your left foot off the ground and reach down to touch it with your right hand.

Return to the starting position.

Repeat exercise with your right foot and left hand.

Alternate between the two.

*To make this exercise harder, increase the pace.*

### Push backs

Start with hands on your hips and feet shoulder width apart

Lift one leg and reach your foot back comfortably, push your toes up from the floor and return to starting position.

Repeat with the other leg.

Alternate between the two.

*To make this exercise harder, lift both arms out in front to shoulder height on each repetition.*

7



8



### Skipping

Begin by marching on the spot.

Imagine you have a skipping rope and begin skipping by lifting one leg at a time on the spot.

Rotate the hands in a skipping movement as you skip.

*To make this exercise harder, skip by jogging on the spot instead of marching.*

## **C) STRENGTH EXERCISES**

Strength exercises will help to increase the strength and tone of your muscles. This will in turn improve your ability to perform everyday tasks such as getting out of a chair, carrying shopping bags or lifting heavier objects.

To increase strength and tone in your muscles, we need to get them doing a little more work than they are used to. This section includes exercises which will work your main muscle groups and help you gradually increase the strength and tone of your muscles.

To ensure that you do these exercises safely, follow the advice below:

- 1 Make sure that you are warm before doing these exercises, e.g. after a walk or after completing the warm-up exercises.
- 2 Work your muscles through as full a range of movement as is comfortable.
- 3 Take your time to control the movements; each movement should take 3-4 seconds to complete from beginning to end.
- 4 Try to maintain good posture (back straight, feet shoulder width apart, tummy in) throughout the exercises.
- 5 Don't hold your breath, breathe in a regular pattern.
- 6 By the end of the exercise you should feel that you have worked your muscles a little, but they should not feel painful.



### **Lateral Raise**

Begin by standing with your feet shoulder width apart.

Have a slight bend in your knees.

Squeeze your tummy muscles tight.

Start with the arms/weights by your sides.

Raise the arms/weights out to the side to shoulder height.

Lower the arms down.

Repeat the action.

*To make this easier, do this exercise sitting down or complete exercise one arm at a time.*



### **Bicep Curl**

Begin by standing with your feet shoulder width apart.

Have a slight bend in your knees.

Squeeze your tummy muscles tight.

Bend your elbows bringing your hands/weights towards your shoulders.

Lower the arms down.

Repeat.

*To make this easier, do this exercise sitting down or complete exercise one arm at a time.*



### Sit to Stand

Begin by sitting on a chair, placed against a wall for safety.

Place your hands across your chest as demonstrated.

Stand up from the chair.

Sit back down.

Repeat.

*To make this easier, place your hands on your knees for support or use a chair with armrests to help push up.*



### Wall Press

Find a clear space on a wall.

Stand in front of the wall with your feet shoulder width apart.

Squeeze your tummy muscles tight.

Place your two hands on the wall at shoulder height as shown.

Bend the elbows, bringing your body closer to the wall.

Keeping your hands on the wall, push off the wall to return to the starting position.

Remember to keep your back straight throughout this action.

*To make this easier, stand closer to the wall to start off.*



### Shoulder Press

Begin by standing with your feet shoulder width apart.

Have a slight bend in your knees.

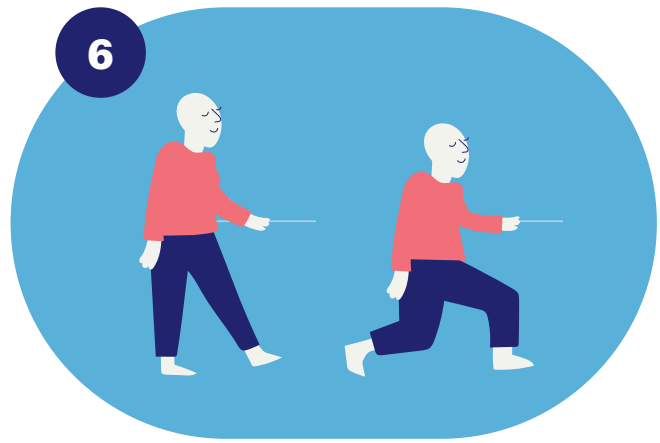
Squeeze your tummy muscles tight.

Start with the arms/weights at shoulder height with the elbow at a 90-degree angle.

Raise the arms/weights up, extending towards the ceiling.

Lower the arms/weights down.

*To make this easier, do this exercise sitting down or complete exercise one arm at a time.*



### Forward Lunge

Stand with your feet hip width apart.

Hold onto a stable surface for support if needed e.g. kitchen counter or a heavy chair.

Take a comfortable step forward with one leg.

Bend both knees.

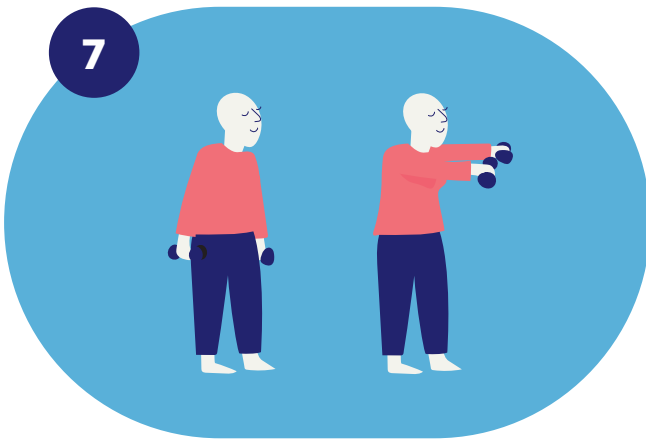
Keep your back straight and tall as you lower down.

Straighten your knees and return to starting position.

Repeat on the opposite leg.

*To make this easier, bend the knees less.*

7



### Frontal Raise

Begin by standing with your feet shoulder width apart.

Have a slight bend in your knees.

Squeeze your tummy muscles tight.

Start with the arms/weights by your sides.

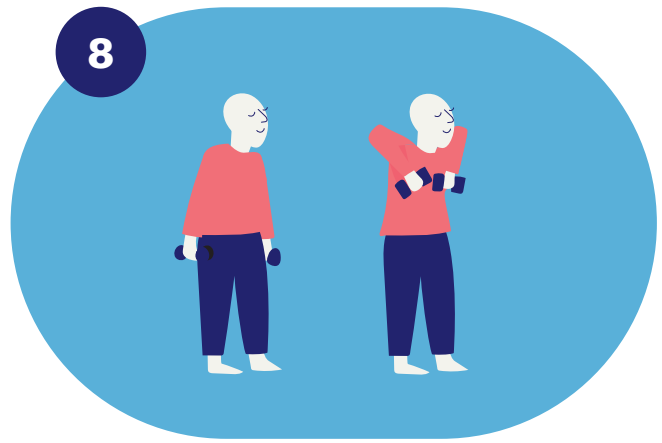
Raise the arms/weights out in front to shoulder height.

Lower the arms down.

Repeat the action.

*To make this easier, do this exercise seated or complete exercise one arm at a time.*

8



### Upright Row

Begin by standing with your feet shoulder width apart.

Have a slight bend in your knees.

Squeeze your tummy muscles tight.

Straighten your arms/weights down keeping them close to your body.

Slowly raise your elbows up as high as you can, keeping the weights in front of your chest.

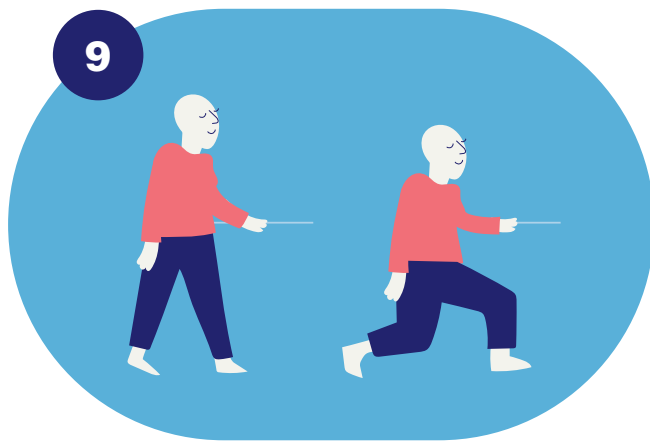
Your elbows should be pointing upwards.

Lower your arms/weights back down.

Repeat.

*To make this easier, do this exercise seated or complete exercise one arm at a time.*





### Backward Lunge

Stand with your feet hip width apart.

Hold onto a stable surface for support if needed e.g. kitchen counter or a heavy chair.

Take a comfortable step backwards with one leg.

Bend both knees.

Keep your back straight and tall as you lower down.

Straighten your knees and return to starting position.

Repeat on the opposite leg.

*To make this easier, bend the knees less.*



### Push Backs

Stand with your feet shoulder width apart.

Hinge at your hips, sending your backside back and keeping your back straight.

Bend your knees slightly.

Start with your elbows slightly bent and your hands/weights close to your body by your side.

Push one arm backwards to send your hands/weights behind you. Pause at the top.

Slowly lower the weight down to the starting position again.

Repeat with the other arm and alternate between the two.

Don't allow the weights to come in front of the body.

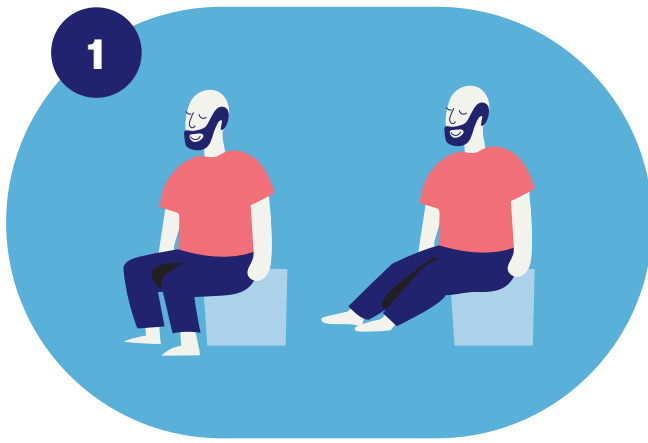
## **D) BALANCE/CORE EXERCISES**

These exercises will challenge your balance and strengthen your core muscles. If we think of the core muscles as a belt with wraps around our middle; it includes the pelvic, lower back and abdominal (tummy) muscles. Having strong core muscles carries several benefits including:

- Reduced back pain and pressure
- Improved balance
- Better posture
- Enhanced ability for resistance and aerobic exercises.

The core exercises are to be performed on a sturdy chair, with your feet raised an inch or two above the floor. Try and suck your tummy in while breathing normally; this will have the effect of making you sit more upright in your chair.

If your balance is poor, you may want to hold onto a sturdy chair, a table top or kitchen counter when performing the balance exercises. Start slowly and push yourself a little further each time.



### **Seated hold**

Sit upright, ideally away from the back of your chair.

Hold onto the sides of your chair.

Lift your feet an inch or two above the floor and straighten out your legs, toes pointed.

Hold this position, all the while breathing normally.

Bend your knees and return your feet to the floor.

*To make this exercise easier, do one leg at a time.*



### **Knee Tucks**

Sit back in your chair so that your back is supported.

Hold onto the sides of your chair.

Lift your feet an inch or two above the floor and straighten out your legs, toes pointed.

Slowly bring both knees in towards your chest.

Extend both legs back out again

*To make this exercise easier, do one leg at a time.*



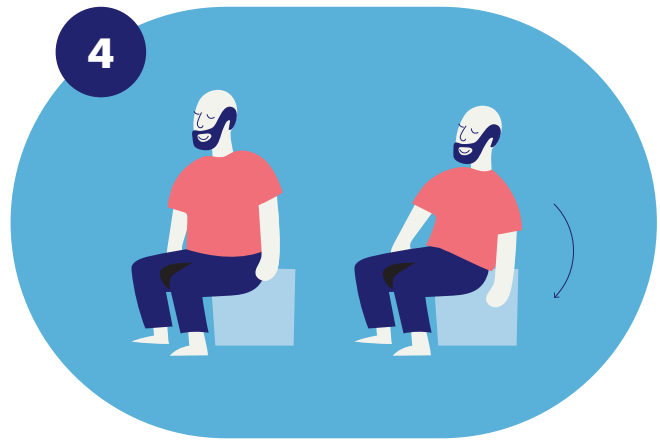
### Scissor Kicks

Sit upright, ideally away from the back of your chair.

Lift your feet an inch or two above the floor and straighten out your legs, toes pointed.

Start to steadily move your legs up and down in a scissoring movement, keeping them straight.

Bend your knees and lower your feet to the floor.



### Side Bends

Sit upright, ideally away from the back of your chair.

Lift your feet an inch or two above the floor and bend your knees a little and have your arms by your side.

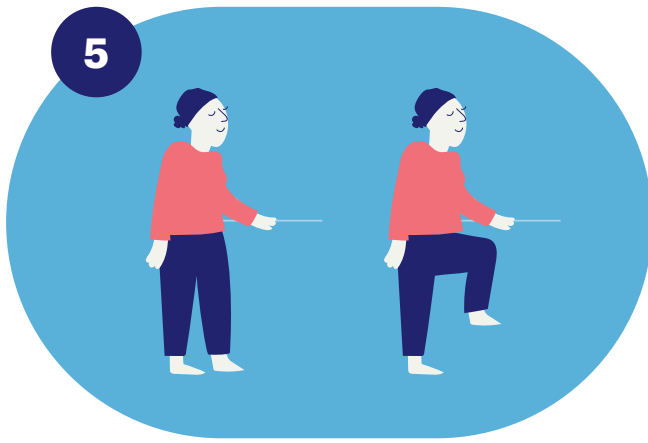
Keeping your hips stable, slowly bend to your right side with your hand reaching towards the floor.

Return to the starting position.

Repeat this to the left side.

**Note** — this will not be a big movement to either side. You are not trying to touch the floor!

*To make this exercise easier, slightly rest your toes on the floor throughout.*



### 5 **Single Leg Stand**

Stand with your feet hip width apart.

Draw your tummy in towards your spine.

Hold onto a sturdy chair or wall for support.

Slowly draw your knee up to the level of your hips.

Hold this position and slowly lower your foot back to the floor.

Repeat on the opposite leg.

*Adaptations to make this exercise harder: **Speak to the ExWell team before trying these adaptations.***

- *Try taking your hand off the support.*
- *Try this exercise with your eyes closed.*



### 6 **Leg Side Raise**

Perform this exercise beside a wall/counter/sturdy chair for support.

Start with your feet shoulder width apart.

Lift your foot off the floor and take your leg out to the side as shown.

Slowly return it to the starting position.

Try and keep your foot off the floor as you bring your leg back towards you.

Repeat on the opposite leg.

*To make this exercise harder, increase the number of repetitions (times), or wear an ankle weight.*



### **Kick Backs**

Face a wall or hold onto a kitchen counter/tabletop for balance.

Slowly lift your foot off the floor.

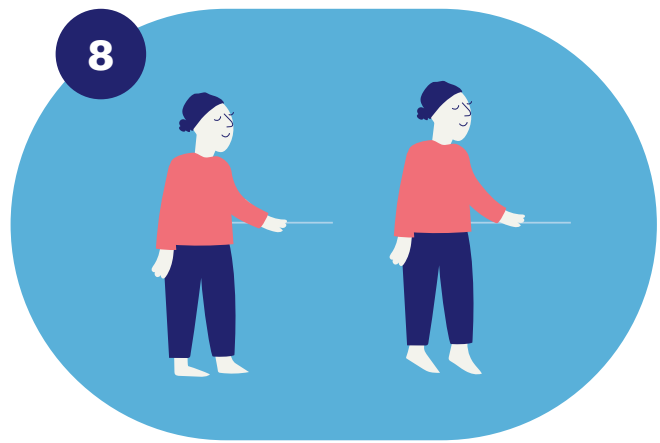
Push your leg straight out behind you as demonstrated.

Keep your back straight and chest upright, looking straight ahead.

Slowly return to the starting position.

Repeat on the opposite leg.

*To make this exercise harder, increase the number of repetitions, or wear an ankle weight.*



### **Calf Raise**

Use a chair or stand beside a wall for balance support if needed.

Begin by standing with your feet shoulder width apart.

Have a slight bend in your knees.

Squeeze your tummy muscles tight.

Lift the heels off the ground as demonstrated.

Lower the heels to the ground.

Repeat.

## E) COOL DOWN

It is important to cool down after an exercise session. This means not stopping your exercise too suddenly, but instead reducing the intensity gradually and bringing your heart rate back to its resting level. This section includes some light exercises and stretches.

1



### **Slow marching on the spot**

Stand tall with the shoulders back.

Place the hands on the hips.

Begin a slow march.

While marching on the spot, roll the shoulders forwards.

Change direction and roll the shoulders backwards.

### **Heel digs**

Place the hands on the hips.

Tap the heel out in front.

Alternate between the left and right leg.

2



3



### Heel dig stretch

Tap the heel in front and hold it in that position.

Keep your front leg straight and lean your body forward until you feel a gentle stretch in the back of your leg below the buttock.

Keep your head and chest up.

Hold this stretch for 10-15 seconds.

### Calf stretch

Stand with hands on hips.

Step out in front with the left leg.

Keeping both heels on the ground and both feet facing forward, push forward with the left knee.

You will feel the stretch on the back of your right leg.

Change to the opposite leg.

4



### Side steps

Place the hands on the hips.

Step to the right and stand with your feet together.

Step to the left and stand with your feet together.

5





6



### **Chest stretch**

Stand with feet shoulder width apart.

Lock the fingers of the hands together behind your back.

Push the hands away from you as far as you can.

You will feel the stretch across the top of your chest.

### **Upper back stretch**

Stand with feet shoulder width apart.

Lock the fingers of the hands together.

Push the hands away from you as far as you can. You will feel the stretch across the top of your back.

7



8



### **Hip circles**

Stand with the feet shoulder width apart and the hands on the hips.

Make circles with the hips.

Change direction.

## **SECTION 4**

# **EXERCISES SPECIFIC TO CERTAIN CANCER TYPES**



# PELVIC FLOOR REHABILITATION – INTRODUCTION



Content Development  
**Patricia Malone**

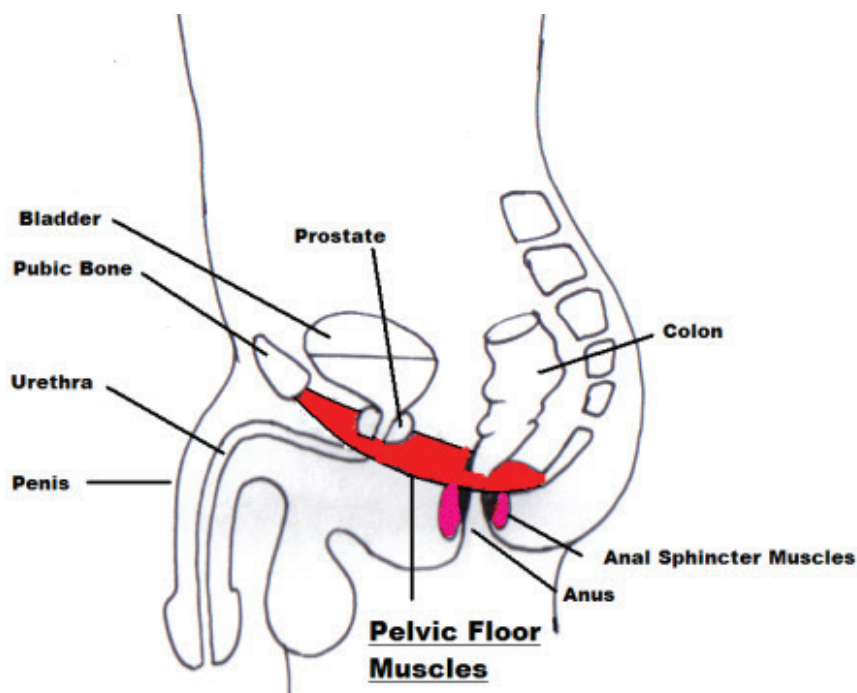
Clinical Specialist  
Physiotherapist,  
Pelvic Floor  
Rehabilitation/  
Continence

*Men who have prostatectomy for prostate cancer can find that it is more difficult to control their bladder after surgery. It is recommended to do a pelvic floor exercise programme to help alleviate this problem. The following pages will help guide you through an exercise programme before and after your prostate surgery.*

*In addition, treatment for many other pelvic cancers (e.g. gynaecology or rectal cancers) may cause difficulty with bladder and /or bowel control. Some reasons that this may happen are explained on pages x-x (pages with other pelvic cancers should be referenced here). There are many treatment options available for bowel and bladder control issues, so do talk to your medical team or GP. Pelvic floor exercise can be helpful for some people in this situation also.*

## PELVIC FLOOR EXERCISES BEFORE AND AFTER PROSTATE SURGERY

### Your bladder after radical prostatectomy



## **YOUR BLADDER**

- Your bladder is like a balloon, or a bag turned upside down, that stores urine until you feel the need to empty it.
- When you pass urine, your bladder empties out through a tube called the urethra.

### **How prostatectomy can affect your bladder:**

- The urethra runs through the prostate.
- With removal of the prostate, the ability of the bladder to close off can be affected.
- This can make it more difficult for the bladder to store urine without leaking.
- Most bladder leakage after prostatectomy does resolve over time.

**But ... there are some things you can do before and after the operation to help yourself.**

## **YOUR PELVIC FLOOR MUSCLE**

The pelvic floor muscle is a sheet of muscle underneath your bladder that helps to close off the tube (urethra) bringing urine out of your bladder. It helps to you to control your bladder. This muscle works in two ways – by working gently to provide constant support to your bladder, and by working quickly to adapt to sudden changes in pressure, for example when you cough or change position.

Making your pelvic floor muscles stronger will help you to control any leakage of urine after your operation.

### **How to find your pelvic floor muscles:**

- “Draw in” as if to stop the flow of urine, or as if you were walking into very cold water.
- Feel penis shorten and testicles lift upwards  
(Try it once or twice when you are actually passing urine – the flow should stop)

**Now you know how to find your pelvic floor muscles – you need to exercise them, making them stronger and fitter both before and after your prostate surgery.**

# YOUR PELVIC FLOOR EXERCISE PROGRAMME

**Position:** Lying down/sitting until you get used to it initially. When you feel more confident, move to doing your exercise programme standing and walking. You are aiming for controlled steady movement, not huge effort. There should be no pain or discomfort from doing these exercises.

Do this programme 3- 5 times/day before surgery:

## **1 Exercise to improve your constant support**

- Slowly and steadily draw in as though stopping the flow of urine, feeling a shortening of your penis and movement upwards of your testicles.
- Hold this squeeze as you breathe normally, for a slow count of 10.
- Let the squeeze go and feel the muscle relax fully.
- Repeat 10 times.

## **2 Exercise to help you quickly add extra support**

- Draw in quickly as though stopping the flow of urine, feeling a shortening of your penis and movement upwards of your testicles.
- Let go immediately, relax fully.
- Repeat 10 times.
- Your goal is to do this 10 times in 10 seconds.

As you start to find this exercise easier, try squeezing a little harder and faster each time.

## THE KNACK – A GOOD HABIT FOR BLADDER CONTROL

Get into the habit of squeezing and holding your pelvic floor muscles whenever:

- you feel a cough or sneeze coming on.
- you are going to move from sitting to standing.
- you are going to lift something.
- you are about to undertake a quick movement that you have noticed causes you to leak.

### **To stop leaks that happen after you empty your bladder:**

- After you finish emptying your bladder, while still at the toilet squeeze your pelvic floor muscles quickly two or three times

## AFTER SURGERY

### **Stop your pelvic floor exercises while the catheter (a tube inserted into your penis to drain urine) is in place.**

Check with your surgeon when to resume after catheter removal.

When you resume your pelvic floor exercise, start very gently in the beginning. Just do a few gentle squeezes the first day, and build up from there.

There should be no pain or discomfort associated with doing these exercises.

Work back up to 10 x 10 second holds, and 10 quick contractions, 5 times/day.

Any bladder leakage tends to resolve slowly. If you are not seeing any improvement, or are unsure of how to do these exercises, talk to your medical team, and ask for a referral to a pelvic floor physiotherapist.

You can also find a suitably qualified physiotherapist by contacting the Irish Society of Chartered Physiotherapists (01 402 2148 / [www.iscp.ie](http://www.iscp.ie))

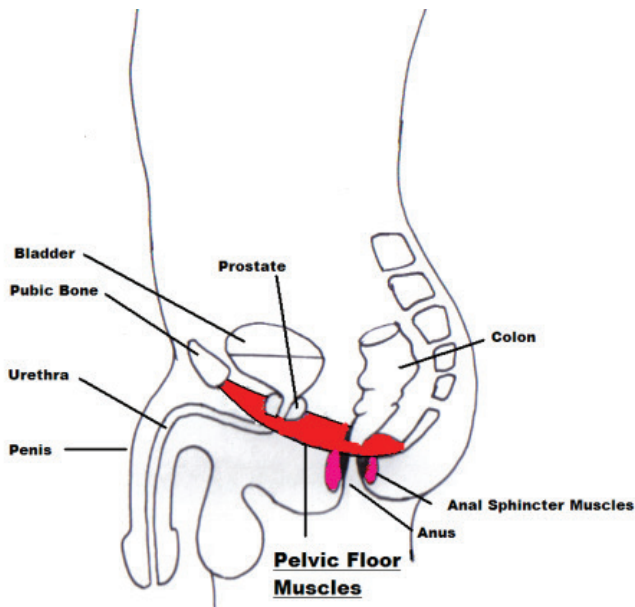
### **Helpful resources:**

**Website:** [www.IPCOR.ie/men-and-families/information-about-prostate-cancer](http://www.IPCOR.ie/men-and-families/information-about-prostate-cancer)

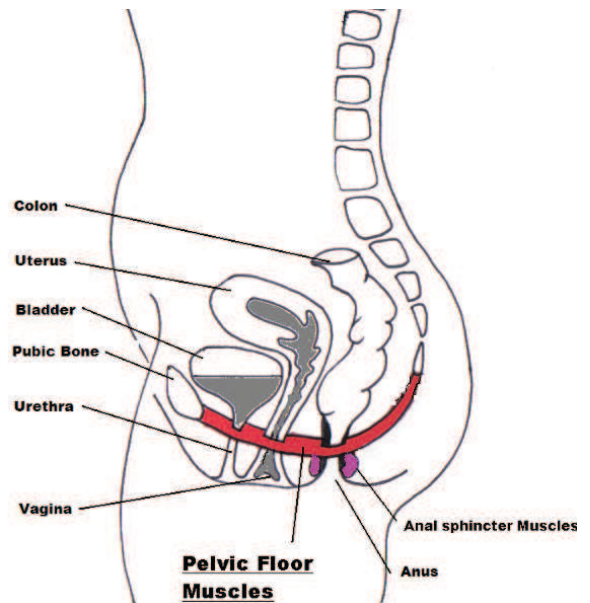
**Book:** Prostate Recovery MAP by Craig Allingham

**Website:** [www.Redsof.com](http://www.Redsof.com) (Redsof international)

# PELVIC FLOOR EXERCISE FOR BLADDER AND BOWEL CONTROL AFTER OTHER PELVIC CANCERS



Male pelvis, pelvic floor and sphincters



Female pelvis, pelvic floor and sphincters

## THE PELVIS

The **pelvis** contains the bladder, the rectum (end of the bowel), and the uterus (womb) and vagina in women.

The **bladder** is like a balloon with the opening underneath, whose job is to store urine. Urine is constantly being made in the body, and fills into the bladder. From time to time you get an “urge” that tells you it is time to empty your bladder.

The **rectum** is the end of the digestive system. The waste from your food forms as a stool that passes to your rectum and empties through your anus (back passage).

### The pelvic floor and anal sphincter muscles

The pelvic floor muscle is a sheet of muscle in the pelvis supporting the bladder and rectum, and the vagina and uterus (womb) in women. The anal sphincter muscles are circular muscles that surround the opening of the anus (back passage). Together, these muscles also help you control your bladder and bowel, particularly when you have an urge to pass urine, or a bowel motion or wind, but need to wait for an appropriate time.

For example, if you are on the bus and feel the need to go to the toilet, your pelvic floor and sphincter muscles will contract (tighten up) helping you wait a little longer, until you can get to a toilet.

## **PELVIC CANCER**

If you have had treatment for cancer in the pelvis, for example rectal cancer or cervical cancer, you may have had surgery and radiotherapy, or both.

Following surgery, the organs within the pelvis may work differently and the healing process may cause scar tissue. Radiotherapy may cause the soft tissues of the pelvis to become less flexible and more rigid, and you are more likely to produce a softer stool.

These changes may alter the how well the organs are able to work and they can behave differently. Sometimes, this can result in difficulty controlling your bladder and bowel and lead to leakage of urine or faeces.

### **Why do pelvic floor exercises?**

If you exercise any muscle it becomes stronger and more efficient. If you exercise your pelvic floor muscles this can improve your bladder or bowel control.

## **HOW DO I MAKE MY PELVIC FLOOR AND SPHINCTER MUSCLES WORK?**

### **Finding your pelvic floor muscles. There are a few different ways to find these muscles**

When passing urine, try to stop the flow mid-stream. This action is caused by your pelvic floor muscles contracting, so remember what it feels like. **This is not an exercise**, just a way to help your brain “find” and work these muscles. Now do this as an exercise at times other than when you are passing urine.

**or**

Imagine you are trying to stop wind escaping, and tighten your back passage. Feel the back passage closing as you tighten the muscle.

**or**

To feel the muscles working – place your index finger between your buttocks, on top of your tailbone. Slide your finger forward towards your anus. When you reach the tip of your tailbone, the tissue feels



softer here. Tighten your pelvic floor (draw in as though stopping wind, or stopping the flow of urine), and feel the skin move away a little. Relax, and feel it drop back towards your finger.

**Men should feel a tightening at the back passage and a small lift upwards of their penis and testicles.**

**Women should feel a tightening at the back passage and a small movement upwards at the vagina.**

## **YOUR PELVIC FLOOR AND SPHINCTER EXERCISE PROGRAM**

When you know where your pelvic floor muscles are and how to use them, it is time to start your pelvic floor exercise program:

- Sit comfortably or lie down, knees slightly apart.
- Keep your tummy soft, and breathe deeply in to it. Take a couple of deep breaths like this before you start.
- Now slowly tighten your pelvic floor muscles (draw in as though stopping wind at the back passage, or stopping the flow of urine). Feel a tightening at the back passage and a small lift at penis/vagina.
- Hold this feeling of squeezing as you **breathe normally**. Hold for a slow count of 5 (about 5 seconds)
- Let the squeeze go and feel the muscle **relax fully**.
- Repeat 10 times.
- As you start to find this exercise easier, try gradually holding the squeeze a little longer e.g. hold for 7 seconds, and gradually build up to about 10 seconds.
- Also, try squeezing the muscles hard and letting go immediately. Repeat 10 times
- Do this programme 2-3 times per day

Strengthening your pelvic floor muscles takes time. If you are not seeing any improvement, or are unsure of how to do these exercises, talk to your medical team. If they think it is appropriate, they may refer you to Chartered Physiotherapist in Women's Health and Continence for formal assessment of your pelvic floor.

You can also find an appropriately trained physiotherapist through the Irish Society of Chartered Physiotherapists: [www.iscp.ie](http://www.iscp.ie)

# HELPFUL TIPS FOR BOWEL AND BLADDER CONTROL

## **The Knack – a good habit for bladder control**

Squeeze and hold your pelvic floor muscles whenever:

- you feel a cough or sneeze coming on.
- you are going to lift something.
- you are about to undertake a quick movement that you have noticed causes you to leak.

Then relax the muscles when you have completed the cough/sneeze/movement.

## **Tips to promote a healthy bladder:**

Drink plenty – 1.5 fluid/day (unless your doctor has advised you to limit fluids).

Avoid caffeine and alcohol.

Don't empty your bladder "just in case" – wait until you feel the urge.

Women – sit down properly on the toilet to empty your bladder.

## **Tips to promote a healthy bowel:**

Eat well, and regularly.

Have your breakfast as soon as you get up.

Don't skip meals, or avoid eating because you are going out.

Bowel motions are likely to happen about half an hour after you eat, particularly after breakfast. So if you are worried about accidents, try to stay home for a little while after meals, particularly breakfast.

## **Helpful resources**

**Pelvic Radiation Disease Association:** [www.prda.org.uk](http://www.prda.org.uk)

**Irish Cancer Society:** [www.cancer.ie](http://www.cancer.ie)

# **SECTION 5**

## **IMPORTANT BACKGROUND INFORMATION**



# COMMON ISSUES THAT CAN ARISE FOR PEOPLE WITH CANCER

In this section we want to give some specific and practical advice about the common issues that can arise for people with cancer. The messages given here are extra points to consider.

## LYMPHOEDEMA

Lymphoedema describes limb swelling that arises when fluid gathers in the limb tissue outside blood vessels. Lymphoedema occurs when the lymphatic circulation pathway is damaged: this can occur following surgery where lymph nodes have been removed or following radiation treatment. This is common following breast cancer surgery, and can affect the arm.

Some fluid leaves the small blood vessels (called capillaries) in the arm or leg as part of the normal process of carrying nutrients to the muscles and gathering waste products from the muscles. This fluid is called plasma. The plasma re-enters the circulation via one of two routes. Most of it (70%) gets directly back into the small blood vessels again in the limb. The remaining 30% flows through a parallel set of tubes, similar to blood vessels, called the lymphatic system, and enters the main veins near the heart. The fluid in these vessels is called lymph, which is very similar to plasma. En route back towards the heart the lymph flows through lymph nodes, which has a role in removing viruses and bacteria. Lymphoedema can cause the affected area to feel heavy, tight, tired and sometimes painful. The swelling can fluctuate and can interfere with wearing certain clothing and jewellery.

Lymphoedema is a difficult condition because it requires long-term attention and management. The treatment may include wearing a pressure garment and having regular drainage massage. It is now recommended that regular exercise, including aerobic exercise, strength and core stability/balance exercises may assist reducing lymphoedema swelling.

Excellent advice is available on the following websites:

**[www.breastcancer.org/treatment/lymphedema/exercise](http://www.breastcancer.org/treatment/lymphedema/exercise)**

**[www.lymphireland.com](http://www.lymphireland.com)**

## PAIN

Research shows that over half of all cancer patients experience pain as a symptom. Even following curative cancer treatment, one third of patients have pain. Exercise has a role to play in managing pain (both the level of pain and the interference of pain). Pain is common in people who do not have cancer particularly older people who may have wear and tear (arthritis) that affect major joints (lumbar spine, hips and knees).

Our advice is to try and take part in regular physical activity despite the pain, because the benefits of the exercise justify this approach. In general, we feel pain might increase after an exercise session but can be ignored if the flare up is not too severe and settles down quickly and fully to the pre-exercise level. In addition, there are some practical steps you can take to reduce the pain, such as:

- Select the exercise: if specific exercises provoke pain (for example squatting if you have knee pain), just avoid these exercises.
- Exercise at the right time for you: try and do your exercise at times of the day when you tend to have less pain.
- Graded increase: start off gently and gradually increase your exercise over a few weeks.
- Protect/support the sore area: sometimes support strapping of an affected area can reduce pain.
- Clothing/footwear: make sure you wear comfortably fitting shoes and clothing, to avoid simple problems like blisters.
- Medication (before/after exercise): sometimes safe medication such as Panadol for example, taken before or after the exercise, can be helpful.
- Pre- or post-exercise massage.

### References:

Prevalence of pain in patients with cancer: a systematic review of the past 40 years. van den Beuken-van Everdingen MHJ et al. *Annals of Oncology* 18: 1437-1449, 2007. <https://pubmed.ncbi.nlm.nih.gov/17355955/>

Effects of Aerobic and Resistance Exercises on Physical Symptoms in Cancer Patients: A Meta-analysis. Nakano J et al. *Integr Cancer Ther*. 2018. <https://journals.sagepub.com/doi/10.1177/1534735418807555>

Effects of exercise on pain and functional capacity in breast cancer patients. Reis AD et al. Health Qual Life Outcomes. 2018.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5889570/>

## **PERIPHERAL NEUROPATHY**

Peripheral neuropathy means damage to peripheral nerves. These are nerves that provide sensation and motor function (the ability to contract muscles) to the arms and legs. Many drugs used in chemotherapy are known to cause peripheral neuropathy. The effects include altered sensation (including numbness, pins and needles and pain), muscle weakness and clumsiness. The muscle weakness and clumsiness can increase the risk of falling. One of the difficulties with peripheral neuropathy is that the time line and degree of recovery can be difficult to predict.

With regard to exercise for people with peripheral neuropathy, we know that in general, exercise will not worsen the problem, which is important. Our approach is guided by the severity and location of the neuropathy. For some people, the neuropathy is quite mild (such as having pins and needles in the finger tips) which doesn't pose a significant risk and therefore shouldn't affect exercise advice. For others, who have foot numbness and/or unsteadiness, it is advised to avoid agility exercises and activities like backward walking or running. It can be very helpful to focus on exercises that involve good support, such as an exercise bike, rowing machine or a cross trainer where you are holding on securely.

Excellent advice on peripheral neuropathy is provided on the following website: <https://www.cancer.ie/cancer-information-and-support/cancer-information/cancer-treatments-and-side-effects/coping-with-side-effects/nerve-changes>

## **DISEASE SPREAD**

Some people's cancers spread to other sites in the body. The symptoms that arise depend on the site(s)/area where cancer has affected and will impact the advice we give about exercise participation.

Our position is that we always want to work with to design an exercise plan that is enjoyable and safe. To do this, we will discuss the options with you and also, as appropriate, with the referring doctor or medical team.

So, if there is cancer spread to bones, the impact will depend on which bone and how extensive the spread is. If the bony spread is small and is not damaging the overall stability of the area, there may be little interference with exercise. If there is a serious risk of suffering a cancer-related fracture, we need to be careful about weight-bearing exercise and twisting actions. With brain spread, there may be impairment of balance or vision, meaning we need to be careful about exercising in a way that is safe and secure (for example using an exercise bike with an assistant).

Our underlying belief is that it should always be possible to exercise.

## **RADIATION TREATMENT**

Radiation treatment can have side effects, including local fibrosis and scarring. This can cause reduced flexibility and mobility in the affected area. Flexibility exercises and massage (before and after exercise) can help loosen out the stiff area to allow for exercise and to reduce post-exercise stiffness.

Radiation can also damage bones, leading to an increased risk of fracture. This may also have an impact on the exercises we recommend.

## **ANXIETY AND DEPRESSION**

In 2017, 23,890 cases of cancer were diagnosed (National Cancer Registry, Ireland). Based on international studies, this indicates that approximately half of people diagnosed with cancer in Ireland were psychologically impacted by their diagnosis and between 1,200 and 1,800 had significant coping difficulties.

Research shows strong evidence that exercising 2-3 times per week has a positive impact of anxiety and depression.

Excellent advice on anxiety and depression is provided on the following website: **<https://www.cancer.ie/cancer-information-and-support/cancer-information/cancer-treatments-and-side-effects/coping-with-side-effects/anxiety-and-depression>**



# SAFETY

In general, exercise is very beneficial to your health, no matter what condition you may have. By exercising regularly, you greatly reduce the risk of having a sudden severe medical event that could have negative effects on your health or cause sudden death. There may be a slightly increased risk of suffering an adverse medical event while actually exercising, but overall the benefit to your health from exercising is far greater than the risk. By being sensible and taking appropriate precautions where necessary, any risk is minimised.

## **Soft Tissue Injury**

Soft tissue injury, such as a pulled muscle or a sprained ankle ligament, can happen anyone who is exercising. These injuries are unfortunate when they happen but usually heal quite quickly (within a few weeks) with proper rehabilitation. We try to reduce the risk of injury by doing a careful warm-up and also by asking participants to avoid specific exercises, based on what we learn about at the induction, and on any difficulties, which are reported to us during the programme.

## **What about Pain?**

Pain is a very common complaint, especially in older people, most of whom will have some degree of wear and tear (arthritis), which tends to affect mainly the back, hips and knees. Most people attending ExWell will have pain or stiffness on a regular basis, even though this is not why they have been referred to ExWell. For some, chronic pain is itself the main problem. We are often asked for advice about whether or not the presence of pain should influence whether or not a participant can take part in the exercise class.

Very commonly, participants tell us that the pain (in the knee, ankle, back etc) flares up a bit on the day of exercise but settles after a few hours or overnight. This pattern of pain repeats itself, but the overall pattern is that the pain is unchanged, and the person is taking part in the exercises. This is a good outcome as it demonstrates that the benefits of an ExWell exercise session far outweigh a temporary flare-up of pain.

If, however, the pain does not fully settle after each class, the pain may slowly worsen. This is not a good outcome. An example of another bad outcome is when the flare up of pain is extremely intense. This is not acceptable, even if the pain fully settles later on. Another bad outcome is if the pain takes a week to settle, instead of a few hours. It is particularly unacceptable for us if the exercise causes you pain that keeps you awake at night. If any of these bad outcomes occur, it is important that you let us know and we can change your exercise plan.

# CHANGING YOUR BEHAVIOUR: MOTIVATION AND BARRIERS

At ExWell, we want to help you to change your behaviour by increasing your levels of physical activity and exercise. Being regularly physically active is a habit. Like any other habit, it is difficult to stop. This means that once you get started on an exercise programme, there is a very good chance you will keep it up. However, being physically inactive is also a habit which can be hard to change. Our biggest task, and our greatest success (if we manage it) is to help you to switch from the habit of being inactive to the habit of being active. This is the biggest contribution we can make to improving your health and transforming your life. Sometimes poor motivation is a problem. You may have had many disappointments in the past in relation to your illness. Many different treatments may have failed. You may have lost confidence and perhaps you now feel nothing will work, including exercise. So you may be coming to us because you were referred, but don't really believe we can help.

## **We believe the following points are crucial if ExWell is to work for you:**

- You must be willing to give it a real try. You have been referred for a reason. Your doctor or health care professional believes this is the right programme for you. You would not have been referred to ExWell if this was not the case.
- Please open your heart to ExWell and trust that we know what we are doing.
- We are asking you to commit to at least 4 weeks full participation. If you promise yourself this, and if you do it, we are confident we can make a difference, that you will feel this difference, and that you will stay with us.
- To make this work, you must make ExWell the centre-piece of your week. It must take priority over other activities you now have. You must move these around to make room for ExWell.
- We have experience and expertise. Although ExWell Medical started in January 2019, we have been working in this area since 2008. We ran the biggest centre of its kind in Europe for 10 years, before setting up ExWell Medical to bring the programme to all parts of Ireland.

- We have proof that the programme is effective, from a 3-year research study funded by the HSE.
- We will structure a programme to suit you. So even if you feel very unfit at present, we will ease you into the programme gently, in a way that will build up your confidence.

### **Let's keep it going**

Hopefully you will get into the swing of regular exercise, either in the group classes or at home. So, what happens if you then experience a set-back of some sort, which makes continuing with exercise difficult. We have some suggestions to help deal with this situation:

- 1 Anticipate what the problems might be, so that they are not a total surprise;
- 2 Have a solution ready so that you can quickly respond to whatever challenge arises;
- 3 Make sure your family and friends are made aware of the problem, so that they can help;
- 4 Contact your doctor for advice;
- 5 Always feel free to contact one of the ExWell team for advice and support;
- 6 If you are forced to stop for a period start back gradually.



Some challenges to being active may be pain (discussed earlier), poor motivation and common barriers that arise from ordinary, everyday events. These include work, hospital visits, family occasions, holidays and transport. Our sincere advice is that you must challenge yourself to overcome these challenges and not let them get in the way. Remember the ExWell@Home

programme is now an extremely important treatment to which you have been medically referred for. We have included a table of some challenges that participants have experienced before and the plans that you can put in place to overcome these challenges.

<b>The Challenge</b>	<b>Solution Suggestions</b>
<b>I have a new injury</b>	<ul style="list-style-type: none"> <li>– Have it assessed by your doctor/ physiotherapist and get the right advice quickly.</li> <li>– Contact the ExWell team so that we can help plan your return to activity. It may be possible to keep exercising while the injury is healing, by changing what you are doing (e.g. using an exercise bike instead of walking if you have torn a calf muscle).</li> </ul>
<b>I feel unwell</b>	<ul style="list-style-type: none"> <li>– Make sure you know what is wrong by contacting your doctor.</li> <li>– If you have a viral illness, stop exercising until you are well, and then start back gradually.</li> <li>– If this is not the problem, follow your doctor’s advice.</li> </ul>
<b>I don’t have time</b>	<ul style="list-style-type: none"> <li>– There should be time in every day for a little bit of exercise.</li> <li>– Attend a different group class if necessary.</li> <li>– If following the Home Programme, think about ways that you can incorporate activity into everyday life: <ul style="list-style-type: none"> <li>– Walk or cycle to and from work.</li> <li>– If you get the bus, get off a few stops earlier and walk the rest of the way.</li> <li>– If you have to drive, park the car further away.</li> <li>– Take the stairs instead of the lift.</li> <li>– Include some exercise in your lunch break.</li> </ul> </li> </ul>
<b>Exercise isn’t for me</b>	<ul style="list-style-type: none"> <li>– Firstly, try to remember that this is not true. Exercise is vital for everyone. It is up to us to work together to find an exercise that suits you.</li> <li>– Find an activity you enjoy (e.g. walking, dance classes, golf). Focus on the benefits of exercise for you.</li> <li>– Ask a family member or friend to exercise with you.</li> <li>– Contact a member of the ExWell team to discuss your exercise plan.</li> </ul>

<b>The Challenge</b>	<b>Solution Suggestions</b>
<b>My family think I should rest</b>	<ul style="list-style-type: none"> <li>— Share the information in this booklet with family members and friends.</li> <li>— Ask them to support your decision to be more active and invite them to be active with you.</li> <li>— Ask them to consult your doctor or to contact the ExWell team.</li> </ul>
<b>I'm losing motivation</b>	<ul style="list-style-type: none"> <li>— Firstly, it is important to recognise that this is what is happening.</li> <li>— Link up with a family member or friend, either to go to the group classes or to exercise at home.</li> <li>— Let us know in ExWell and we will set up a buddy support for you or arrange for one of our team to meet you.</li> </ul>
<b>I can't keep up</b>	<ul style="list-style-type: none"> <li>— Change your exercise programme.</li> <li>— Do it in smaller bursts (shorter walks) or less intensely.</li> <li>— Let us know so that we can help your planning.</li> </ul>

### **Setting goals**

We would ask you to reflect on why you are joining ExWell and what you hope to achieve. This can be very helpful and can help your motivation. It is really very rewarding to look back after a period and see if you have made progress towards achieving your goals.

Remember to have REALISTIC goals, that involve action by yourself, not someone else. It is also important that you can actually measure whether or not you have achieved your goals, and also that you put a time frame on them.

## **How family and friends can help**

Research shows that people who have support from their family and friends for physical activity, are more likely to be regularly active. It's important to share your plans for exercise with your family and friends especially if becoming active is new to you. Tell them about the benefits that being active will have for you and ask them to support you as you work towards your goals. If they are concerned, ask them to contact one of the ExWell team. You have been prescribed exercise and just like other medications, it is important for you to take it. Could you work together and get the whole family moving more? Think about the things you enjoy doing as a family or with friends – how can you include physical activity?

# **SECTION 6**

# **ASSESSMENTS**





# SELF ADMINISTERED ASSESSMENTS

The following assessments are easy to do and require little equipment. It will take no longer than **20 minutes** to complete these assessments.

The assessments are important for a number of reasons:

- 1 They give us important information which helps us to design your exercise programme.
- 2 They allow us to measure your progress objectively. This can be a great in motivating you.
- 3 They allow us to give very helpful feedback to your referring doctor.
- 4 They help us in ExWell to evaluate whether or not our programme is working.
- 5 When you carry out the tests yourself, this is a really good way of taking control of your own health.

Ask a family member or friend to help you do the assessments and encourage you throughout. Each assessment will be explained below.

**Note:** If for any reason you are unable to complete all or one of the assessments, please let a member of the ExWell Team know and we can make an alternative arrangement for you.

As always, before you complete any exercise you should ensure you are feeling well and have a safe environment. Please see page 34 for more details.

## **Equipment**

Before you start, you will need;

- Sufficient Space to Move
- A timer
- Measuring Tape
- A Chair (with or without arm rests)

## **ASSESSMENT 1: MODIFIED 6-MINUTE WALK TEST TO MEASURE AEROBIC FITNESS**

This assessment measures your heart and lungs' ability to get oxygen around the body to carry out the movement. For this assessment, you will be asked to cover as much distance as you can, walking/jogging or running (whatever your ability), within the 6 minutes.

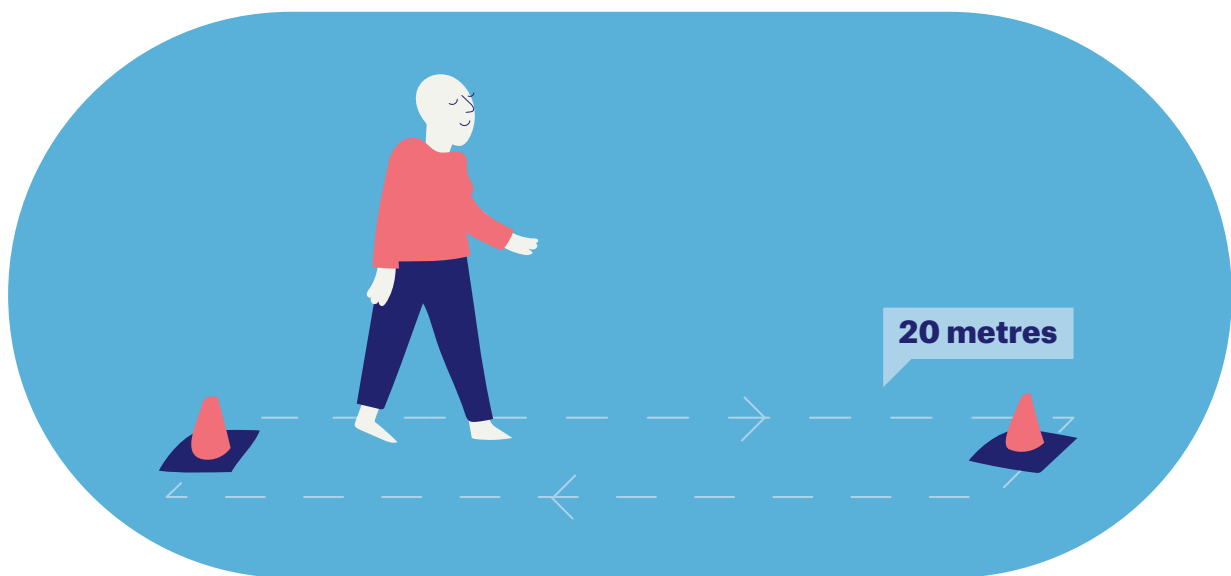
Please ask a family member/friend to help you.

### **Equipment includes:**

- Measuring Tape
- Timer (phone/stopwatch)
- Floor Markers e.g. cones, objects
- 20 metre floor space
- Person to time, mark distance and instruct the assessment

### **Set Up**

- Measure out a distance of 20 metres. Ideally, this is done using a tape measure. Alternatively, this can be done using an estimated step width e.g. 1 step equals 1 metre. Place one marker at either end to mark track distance.
- If you have room, allow for a chair along the track in the event you need to take a break.
- Now your course is set up and you are ready to go.



### Assessment instructions

Please read the following carefully:

- 1 The aim is to cover as much distance as you can within the 6 minutes walking from one cone (or marker) to the other over and back continuously over the 6 minutes.
- 2 You can do this by walking, jogging or running. Picking the pace or changing your pace throughout is completely up to you.
- 3 It is normal to get out of breath or feel tired. **Note: If you feel any chest pain or dizziness, stop the assessment immediately.**
- 4 You can change your pace at any time and stop to take a break at any time (if required).
- 5 You can take a seat to rest if needed, and resume when you're ready. The timer will continue on and you can resume at any point. The person recording will mark where you stopped and when you recommenced.
- 7 When you are walking, make sure you walk around the cones. Making brisk, tight circles around the cones. Alternatively, you can plant your foot beside the cone, turn and continue.

- 8 You will be regularly informed of the time and you will be encouraged to do your best. Below is a guide for the instructor (your family member or friend) marking to let the participant know each minute that passes:

*At minute one: "You are doing well. You have five minutes to go."*

*At minute two: "Keep up the good work. You have four minutes to go."*

*At minute three: "You are doing well. You are halfway."*

*At minute four: "Keep up the good work. You have only two minutes left."*

*At minute five: "You are doing well. You have only one minute to go."*

*At minute six: "Please stop where you are."*

- 9 Each time you reach a cone/marker your family member/friend will record your distance by ticking a box on the table below.
- 10 Please try not talk during the assessment to ensure you are fully concentrated.
- 11 When the six minutes is up, stop where you are. Your family member/friend will then measure the remaining distance from where you have finished and total your distance.

On the next page is an assessment record for recording your 6-minute walk test. We have provided a record log so you can re-assess at a later date.

## 6 Minute Walk Test Marking Sheet

<b>20m</b>		<b>320m</b>		<b>620m</b>	
<b>40m</b>		<b>340m</b>		<b>640m</b>	
<b>60m</b>		<b>360m</b>		<b>660m</b>	
<b>80m</b>		<b>380m</b>		<b>680m</b>	
<b>100m</b>		<b>400m</b>		<b>700m</b>	
<b>120m</b>		<b>420m</b>		<b>720m</b>	
<b>140m</b>		<b>440m</b>		<b>740m</b>	
<b>160m</b>		<b>460m</b>		<b>760m</b>	
<b>180m</b>		<b>480m</b>		<b>780m</b>	
<b>200m</b>		<b>500m</b>		<b>800m</b>	
<b>220m</b>		<b>520m</b>		<b>820m</b>	
<b>240m</b>		<b>540m</b>		<b>840m</b>	
<b>260m</b>		<b>560m</b>		<b>860m</b>	
<b>280m</b>		<b>580m</b>		<b>880m</b>	
<b>300m</b>		<b>600m</b>		<b>900m</b>	

## 6 Minute walk assessment results

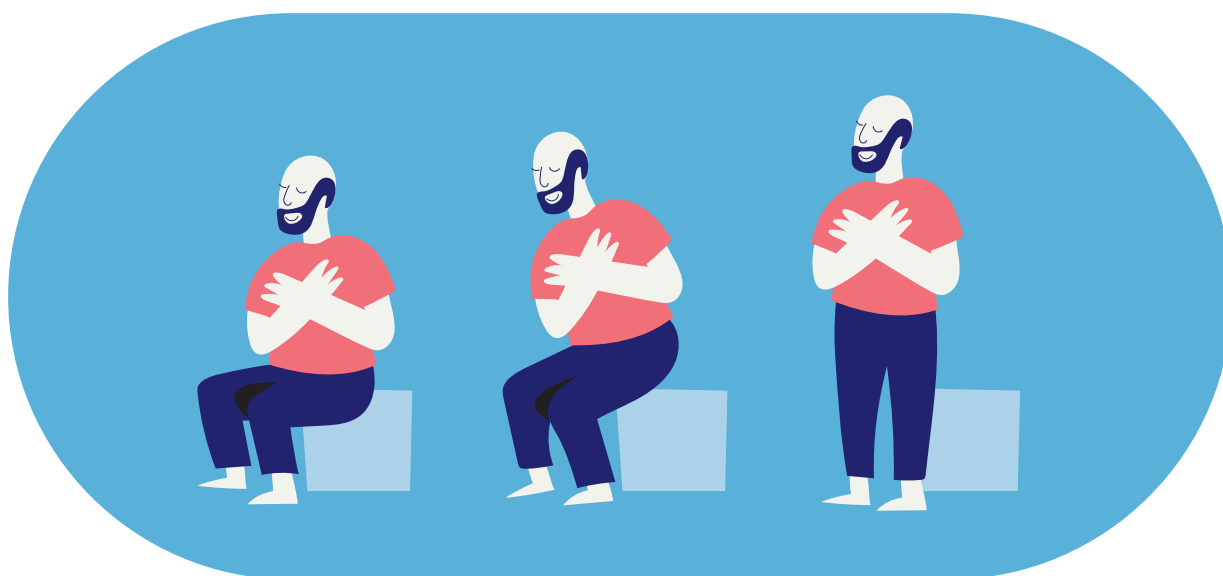
<b>Date</b>		<b>Distance</b>	
<b>Date</b>		<b>Distance</b>	
<b>Date</b>		<b>Distance</b>	
<b>Date</b>		<b>Distance</b>	
<b>Date</b>		<b>Distance</b>	

## ASSESSMENT 2: SIT TO STAND MEASURES LOWER BODY STRENGTH

The Five Times Sit to Stand is an assessment of lower body strength.

### Equipment includes:

- Timer/Stopwatch
- A person to instruct and time the test
- Standard chair with straight back, with arm rests is possible, placed against a wall for safety.



### Assessment instructions

- 1 Sit on the edge of the chair (back does not touch the chair).
- 2 Make sure both your feet are flat on the floor, creating a broad stable base.
- 3 Cross your arms across your chest.
- 4 When ready, stand up from the chair once.
- 5 If you can perform this first trial with your arms crossed, you will be able to carry out the assessment like this. If you have difficulty rising from the chair without using your arms as an aid to push yourself up, please record this and perform the assessment using your arms. Note your bottom only has to touch the chair, your back does not touch the back of the chair while doing this assessment.

- 6 The instructor will begin timing the test when you are ready.
- 7 The stopwatch is started just as you begin your first stand up (i.e. while you are still sitting).
- 8 The assessment commences once you rise from the chair and sit back down as fast, but as safely, as you can.
- 9 Perform this action 5 times.
- 10 The stop watch is stopped when you finish your 5th stand up (i.e. when you are fully upright).

Take a few minutes rest and then repeat the test again to try and better your starting result. Record times in the table below.

### 5x Sit to Stand Assessment results

	Trial 1	Trial 2	Best result	Arms used?
<b>Date</b>				
<b>Date</b>				
<b>Date</b>				
<b>Date</b>				
<b>Date</b>				

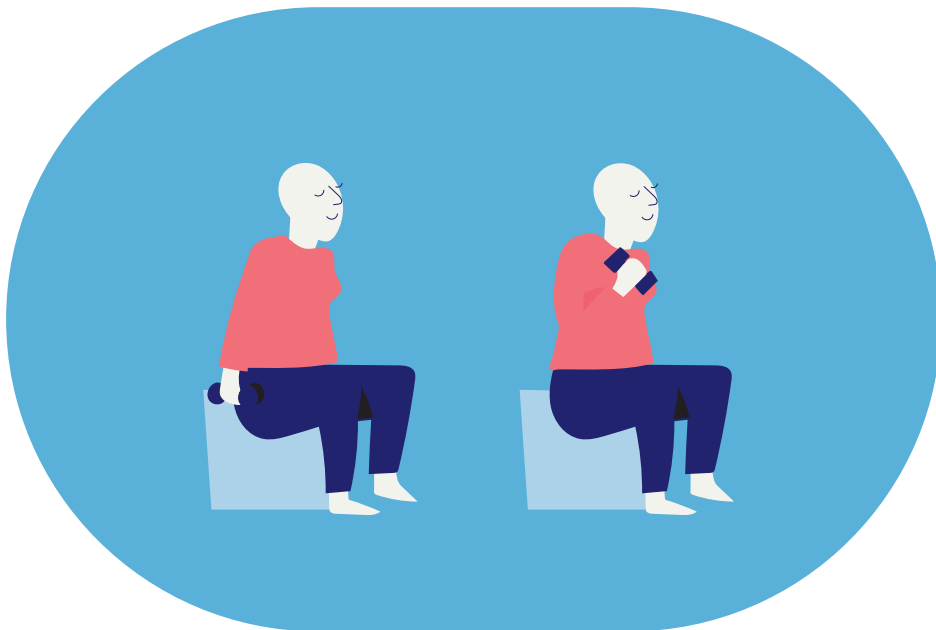
## ASSESSMENT 3: ARM CURL MEASURES UPPER BODY STRENGTH

The Arm Curl assessment measures upper body strength. In this assessment, you will be asked to perform as many arm curls as possible using a weight for 30 seconds on your stronger side (dominant arm). This will be done in a seated position, on a chair with no arm rests.

When doing the assessment, you will use a weight to perform the arm curl. This can be done by using dumbbells, or if you don't have any, a household object such as milk cartons or tins of food that equal the weight of the test.

### Equipment includes:

- Timer/Stopwatch
- Standard chair with straight back
- 5 pound/approx. 2kg weight (women)
- 8 pound/approx. 3.5kg weight (for men)
- Someone to help time the assessment.



### Assessment instructions

- 1 Use your dominant (stronger) arm.
- 2 Sit on the chair, holding the weight in the hand using a suitcase grip (palm facing towards the body) with the arm hanging down in a downward position, beside the chair.



- 3 Brace your non dominant (free) arm against the body so that only the arm using the weight is moving.
- 4 Begin recording when you begin to lift your arm towards your shoulder.
- 5 Curl your arm up through a full range of motion, gradually turning the palm up towards your face.
- 6 As the arm is lowered, gradually return to the starting position.
- 7 Your arm must be fully bent and then fully straightened at the elbow when doing the movement. This will be counted as a full curl.
- 8 Keep your elbow tucked in close to the body when doing this movement.
- 9 You will repeat this action as many times as possible within 30 seconds.
- 10 The test will be stopped at 30 seconds.
- 11 The result is the number of times your hand reaches your shoulder.

---

### Arm Curl Assessment results

	No. of curls	Arm used (right/left)
<b>Date</b>		
<b>Date</b>		
<b>Date</b>		
<b>Date</b>		
<b>Date</b>		

## ASSESSMENT 4: TIMED UP AND GO MEASURES FUNCTIONAL MOBILITY AND BALANCE

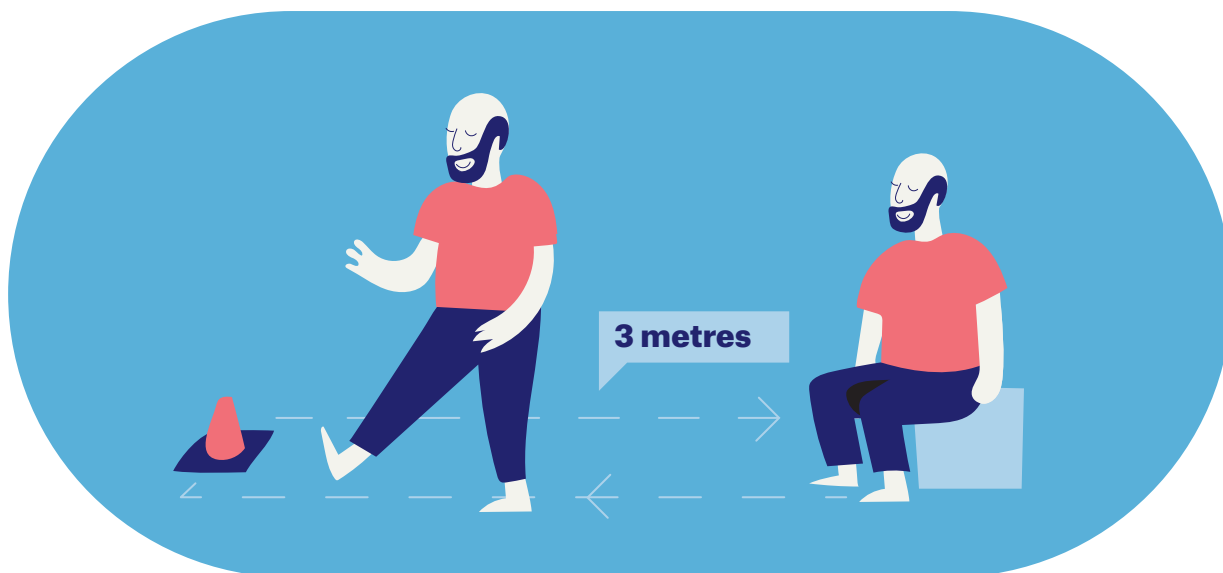
This assessment involves rising from the chair and walking to a marker on the floor three metres away, turning and returning to the chair. The assessment is recorded using a stopwatch. It starts as soon as the participant rises and ends when the participant's buttocks meet the chair.

### Equipment includes:

- Standard arm chair
- Measuring tape
- Timer/stopwatch
- Floor Markers/Cones
- A person to instruct and time the test.

### Set Up

- Measure and mark a 3 metre (9.8 feet) walkway, starting from the leg of the chair. Alternatively, this can be done using an estimated step width, i.e. 1 step equals 1 metre.
- Place a floor marker at the end of the 3 metres.



## Assessment instructions

- 1 Sit on the chair and place your back against the chair, resting your arms against the chair's arms.
- 2 If you need to use an aid, please have it located nearby.
- 3 Rise from the chair, walk to the floor marker/cone that is three metres away, making tight, brisk circle around it (180 turn) and return to your chair, walking as quickly as you can.
- 4 The assessment starts when you rise from the chair and ends when your bottom is completely on the chair.
- 5 You will only walk up and down once. Record your results on the table below.

### Timed Up and Go Assessment results

		Time
Date		
Date		
Date		
Date		
Date		

## **SECTION 7**

# **EXERCISE PRESCRIPTION & PHYSICAL ACTIVITY LOGS**



## AEROBIC EXERCISE

Type of exercise	How often should I exercise	How long should I exercise	How hard should I exercise

## STRENGTH EXERCISE

Exercise description	what page	How many times per week	Reps	Sets	How heavy (what weight)	Precautions

## CORE/BALANCE EXERCISE


# EXERCISE TRACKING SHEET

**CIRCLE EACH DAY YOU EXERCISE**

Month	Day											
	1	2	3	4	5	6	7	8	9	10	11	12
	13	14	15	16	17	18	19	20	21	22	23	24
	25	26	27	28	29	30	31					
	1	2	3	4	5	6	7	8	9	10	11	12
	13	14	15	16	17	18	19	20	21	22	23	24
	25	26	27	28	29	30	31					
	1	2	3	4	5	6	7	8	9	10	11	12
	13	14	15	16	17	18	19	20	21	22	23	24
	25	26	27	28	29	30	31					

## TRACK YOUR EXERCISE FOR EACH DAY

Date	Step count	Exercise (what type)	Intensity (how hard)	Time (how long)	Notes

## TRACK YOUR EXERCISE FOR EACH DAY

Date	Step count	Exercise (what type)	Intensity (how hard)	Time (how long)	Notes





## TRACK YOUR EXERCISE FOR EACH DAY

Date	Step count	Exercise (what type)	Intensity (how hard)	Time (how long)	Notes

## TRACK YOUR EXERCISE FOR EACH DAY

Date	Step count	Exercise (what type)	Intensity (how hard)	Time (how long)	Notes



## TRACK YOUR EXERCISE FOR EACH DAY

Date	Step count	Exercise (what type)	Intensity (how hard)	Time (how long)	Notes

# TRACK YOUR EXERCISE FOR EACH DAY

Date	Step count	Exercise (what type)	Intensity (how hard)	Time (how long)	Notes

## **SECTION 8**

# **INFORMATION ABOUT SPECIFIC ILLNESSES**

In this section we want to give some specific and practical advice about common illnesses that some people with cancer may also have. The advice is set out as 10 messages for different illnesses. Remember however that the general advice covered in the sections earlier of the booklet apply to all the illnesses discussed in this section. The messages given here are extra points to consider about each illness. Please consider them in conjunction with the full booklet, and not on their own.

## **TYPE 2 DIABETES**

- 1 Type 2 (adult onset) diabetes occurs when the body's insulin (the hormone which helps move sugar out of the blood stream into muscle and other organs) becomes less efficient so that **blood sugar levels rise**.
- 2 Type 2 Diabetes is much **more common in people who are overweight and/or inactive**.
- 3 **Prolonged high blood sugar levels cause serious damage** to small blood vessels and nerves throughout the body. Impaired eyesight and kidney function are common. In addition, there is a higher risk of heart disease.
- 4 A particular problem with Type 2 Diabetes is **poor wound healing**, caused by poor blood supply and damaged small nerves.
- 5 **Treatment is usually with medication and exercise**. Sometimes insulin injections are needed.
- 6 **Exercise is known to help shift sugar out of the blood stream** and to improve the efficiency of insulin. It is therefore a critically important part of managing Type 2 diabetes.
- 7 If you commit to an exercise programme and stick with it, **you could avoid using any medication and you could actually be able to stop using insulin completely** (if you are already on it).
- 8 If you are on insulin, be careful to **reduce the insulin dosage before an exercise session**.



- 9 **Foot hygiene** is especially important for Type 2 diabetics, for 2 reasons:
- You must be vigilant about any small cuts (because you may not feel them due to the nerve damage) by actually inspecting your feet regularly or getting someone else to look at those parts of your feet which you cannot see. If there is a small cut or wound, it must be treated extremely carefully
  - People with diabetes have an increased risk of infection entering through skin wounds. This can lead to serious skin infection called cellulitis.
- 10 When exercising, **be careful about knowing the signs and symptoms of high and low blood sugar levels**. It is important to check your blood sugar levels before and after exercise sessions, especially when you are starting off on an exercise programme or if your class structure or exercise intensity changes. Always have a sweet drink to hand.
- High blood sugar causes a sweet smell for the breath and also causes thirst, poor vision, fatigue and excessive urinating.
  - Low blood sugar causes tingling around the lips, confusion, shaking, dizziness, hunger, and headaches slurred speech.

## HEART DISEASE

- 1 The **heart is a hollow pump** with a wall of specialised muscle that contracts and relaxes automatically and continuously. The heart muscle receives its own blood supply through blood vessels called coronary arteries.
- 2 **Angina is a condition where the coronary artery is partially blocked** by fatty tissue stuck onto the side wall. Often the artery can get the required amount of blood to the heart muscle at rest but cannot increase the blood to the required level when the heart muscle needs more blood during exercise. The effect of this is that the heart muscle then works without enough oxygen. This causes chest pain which eases with rest. No permanent damage is done to the heart muscle. This is angina.
- 3 A heart attack occurs when the lack of oxygen to the heart muscle is severe enough or lasts long enough to cause **permanent damage to part of the heart**. The long term effects of a heart attack depends on the exact size and location of the damaged area of heart muscle, but can include badly damaged function of the heart pump (called heart failure), disturbed heart rhythm and sudden death.

- 4 **Exercise is absolutely essential** in the treatment of heart disease. Start low, go slow: Do a long slow warm up and gradually increase the intensity. Also at the end of the exercise, gradually reduce the intensity before you completely stop.
- 5 **Aerobic exercise**, carried out every day in whatever way you enjoy (walking, cycling, swimming, aerobics classes etc), should be an essential part of your daily life. The guidelines for understanding how hard to exercise are explained elsewhere in this booklet.
- 6 **Strength work** is also very important, and has been shown to be very effective, especially in people with heart failure. If you have heart failure, you may feel quite frail and weak and you may get breathless quite easily. Focusing on a period of strength work for a few weeks (and doing very little aerobic work) can be a good starting point then moving on to add in some aerobic exercise.
- 7 A common occurrence after a heart attack is loss of confidence about exercising. If you follow a common sense approach of gradually increasing the amount and intensity of exercise, and if you are patient, **your confidence will return**.
- 8 **We recommend that you do not lie flat on the ground for exercise** if you have significant heart disease, including heart failure.
- 9 You must also address the **other risk factors for heart disease** (smoking, high blood pressure, high blood cholesterol levels and stress levels).
- 10 **Red flags** are warning signs to get immediate help and are thankfully very rare. Please stop exercising immediately and seek medical advice if you experience any of the following:
  - Unfamiliar chest pain, neck pain or arm/shoulder pain (almost always left-sided) during exercise.
  - Dizziness or fainting.
  - Extreme breathlessness, making it difficult to speak.
  - Nausea or vomiting during exercise.
  - Extreme and unusual headache.

# ARTHRITIS

- 1 **Arthritis is very common** – especially in older people – and is a major cause of pain and disability.
- 2 While some types of exercise may cause a flare-up of pain in an arthritic joint, this is not inevitable and, if it does happen, it usually settles quickly. This allows you to **achieve the vital health benefits of the exercise without worsening the arthritis**. Furthermore, there are ways to reduce or eliminate this temporary pain, with the correct planning.
- 3 **It is vital to NOT take the approach of resting the muscles around the arthritic joint**. The reason for this is that if a joint is painful and stiff because of arthritis, you naturally tend to use it less and therefore to move it less. This means that the muscles around that joint weaken and become smaller (because they are not being used). The result is that the joint is less supported and the arthritis progresses more rapidly, feeding into a downward cycle.
- 4 If you have arthritis, **exercise has very specific benefits** and can help you to:
  - strengthen the muscles around your joints.
  - maintain a good range of movement in the affected joints.
  - maintain bone strength.
  - reach or maintain a healthy weight, which is a vital factor in reducing the pressure on the affected joints.
  - prepare for joint replacement surgery, if you have decided to have this operation, which means you are less likely to suffer complications at the time of surgery and are likely to recover from the operation more quickly.
  - get a good night's sleep.
- 5 Apart from exercise for general health (explained elsewhere in this booklet), **the important EXTRA types of exercise to carry out if you have arthritis are:**
  - Flexibility exercises for the affected joint(s) and the surrounding muscles, which is critical in keeping the joint(s) mobile. If carried out in the evening, this can be particularly helpful in reducing morning stiffness in rheumatoid arthritis.
  - Strength exercises for the muscles around the affected joints, which increases support for the joints.
  - Balance work, which counteracts the tendency towards increased risk of falling when the arthritis affects lower limb joints.

- 6 If doing weight bearing exercise, it is advised to **avoid high-impact rotational activities** (such as 5-a-side soccer or squash) because the stress on the joint in these sports will increase the progression of the arthritis. Also, avoid any exercise which you know specifically flares up your pain (such as squatting if you have knee pain).
- 7 **Non weight-bearing exercise** such as cycling, swimming or using a rowing machine in the gym are very good for arthritis because they place less pressure on the joints.
- 8 **Using heat treatments** (warm towels, hot packs or a shower) before exercise can be very helpful, and ice afterwards for up to 20 mins, especially if a joint becomes swollen.
- 9 **Start slowly and gently** and ease into the exercise session. This is why your warm-up is so important.
- 10 **Red Flags**, which would cause us concern (and for which you should see your doctor), include:
  - sudden very severe and unusual pain during or after exercise.
  - bad joint swelling.

## DEMENTIA / COGNITIVE DECLINE

- 1 Dementia and cognitive decline are conditions that cause **distress for the person affected and also for families and carers**. Dementia can be accompanied by an element of anxiety.
- 2 Regular physical activity is known to protect against getting dementia and also has a role in **delaying the progression of the condition** once it starts.
- 3 A separate critical factor in prevention dementia/cognitive decline and delaying progression is **regular social engagement**, which occurs naturally in group exercise classes, or in small group exercise sessions carried out as part of a home programme, or in community based larger scale events (like the Park Run or Park Walk).
- 4 Social interaction in the context of exercise carried out in the home itself is more challenging and requires planned actions such as **phone call or peer support or scheduled visits** by friends and neighbours who may come to join the session.
- 5 The third main intervention which is helpful is to **challenge the brain** with a new activity or hobby such as knitting, painting, crosswords or reading.
- 6 It is recognised that the **level of stress and worry for carers is greatly under-appreciated**. This includes the time and financial commitments, which can be extreme.
- 7 Very often **a person with dementia can be relatively well physically** and well capable of taking part in exercise.
- 8 All types of exercise (aerobic, strength and core stability/balance) are beneficial, but the **focus should be on aerobic exercise**.
- 9 It is always helpful and sometimes essential to **have an exercise companion** to assist the person with dementia to follow an exercise session.
- 10 With dementia, there are **no specific red flags** other than issues which arise for a general ExWell class (i.e. chest pain, fainting, severe headache etc) which should prompt a visit to the GP.

## LUNG DISEASE

- 1 **Exercise-based rehabilitation (called pulmonary rehabilitation) is known to be very beneficial in many lung conditions**, including chronic obstructive pulmonary disease (COPD) and pulmonary fibrosis.
- 2 **Some measures of fitness (such as your quadriceps strength) are good predictors of how often you will suffer setbacks** (called exacerbations) requiring admission to hospital for people with COPD.
- 3 In particular exercise can help to **improve your breathlessness**, which can be very distressing.
- 4 During exercise, try **breathing in through your nose (which warms, moistens and filters the inhaled air) and out through your mouth**, pursing your lips as you exhale.
- 5 As a general rule, **try to take twice as long breathing out compared with breathing in**. A good rule of thumb is to aim for 2 seconds breathing in and 4 seconds breathing out. When you experience shortness of breath during an activity, it is often caused by an inability to exhale fully. If you slow your rate of breathing and concentrate on exhaling slowly through pursed lips, you may find that this can help.
- 6 If you are doing any physical activity at home like lifting, remember to **“Blow as You Go”** try and exhale as you make the effort. This also applies when you are lifting a weight in an exercise session.
- 7 **To relieve breathlessness, it can help to sit on a chair and lean forward**, or to face a wall and lean forward, placing your hands against the wall.
- 8 If your lung disease causes your breathing to be so difficult that you are not able for any aerobic exercise at all such as walking, our advice is to **focus instead on strength exercises for a few weeks**. This approach is easier on your breathing and will allow you to build your confidence. It has been shown that after a period of just doing strength work like this, your ability to do gentle aerobic exercise actually improves, and you can then add this in.

- 9 With lung disease, it is important to **pace yourself and take regular rests** during the exercise session. Instead of trying to do 5 minutes continuous exercise on an exercise bike or walking (which may be impossible for you), instead do 1 minute at a time (at the same speed) and take a short rest before starting again. You end up doing the same time on the bike or walking (5 minutes).
- 10 For safety, **we do not want you to become dizzy or light headed or to feel that you cannot breathe enough to be able to talk.** Learn to judge the exercise intensity to avoid this.

## **INTERMITTENT CLAUDICATION**

- 1 **Intermittent Claudication is like angina of the leg.** Claudication occurs when one of the main arteries into the leg becomes diseased and narrowed because of the growth of material called atheroma on the inner surface of the arterial wall.
- 2 The **damaged blood vessel** can carry enough blood into the leg at rest but is unable to carry the extra blood needed to meet the demand for extra oxygen (which is carried in the blood) to the exercising leg muscles during walking.
- 3 **The effect of this is that the muscles must do the work without enough oxygen. This causes the pain that people with claudication experience.** The pain is described as being like a cramp and commonly affects the calf or thigh area. The pain stops when you rest for a few minutes, but comes on again after you resume walking. Typically you will know from experience how far you can walk before the pain starts, and also how long it will take to go away when you rest.
- 4 One of the biggest risk factors for developing claudication is **smoking**.
- 5 It is very important to understand that if the problem (atheroma) is affecting the arteries in one leg, it is likely that **it may also be affecting other body areas** (including the heart) even if you have no symptoms in these other areas. One explanation for this may be that the leg pain stops you exercising before pain can come on in other areas.
- 6 **Leg claudication may be treated by surgery** (which unblocks or bypass the damaged artery), but for various reasons surgery may not be possible for some people.

- 7 **Exercise is known to help claudication.** The aim is to walk until the pain comes on and to then keep walking through the pain for as long as possible. The theory is that forcing the leg muscle to work in this way will actually cause new small blood vessels to grow which bypass the damaged area.
- 8 In claudication **the doctor actually wants you to have pain** and it is one of the very unusual medical conditions where this is the case.
- 9 A good guideline is to **pick a walking speed that causes pain to come on between 3-5 minutes after starting and forces you to stop after about 10 minutes**, meaning you continue walking in pain for 5-7 minutes if possible.
- 10 Apart from walking, it is also important to **stop smoking** and also to add in the other exercises (strength and balance) described elsewhere in this booklet.

## MENTAL ILLNESS

- 1 Mental illness can have a negative effect on your mood and motivation and it can be very hard to find the will to exercise. Exercise, however, is known to have a **positive effect on mood**. Therefore the days when you feel least like doing exercise are the days when you will get the most benefit.
- 2 The beneficial effect on mood is related to the production of internal chemicals called **endorphins**. Exercise causes increased release of endorphins and one of their effects is to improve mood and well-being.
- 3 The **endorphin effect** explains why serious athletes or footballers who are forced to suddenly stop exercising because of injury almost always suffer a period of low mood or depression, even if they often do not recognise it as depression.
- 4 Many people report that **regular walking or jogging is essential for their mental health** and that they usually experience a lower mood if they cannot exercise.
- 5 If you have anxiety or mild to moderate depression, regular exercise can make an enormous contribution to your health and can **reduce or even eliminate the need for medication**.



- 6 The main exercise that brings this benefit is **aerobic exercise**, but other exercise types (strength and balance) should be included.
- 7 To get the benefit, our advice is that you should aim to exercise for at least an hour every day (not necessarily all in one session) and that you should try to exercise hard enough to **feel at least a little breathless**.
- 8 **Exercise for mental wellness can also work in different ways** (other than the endorphin pathway). Exercise can be a very important distraction from stressful situations, or it may act by giving you a pathway to take control of your own health (this is called mastery). It may also act by enhancing social interaction if you exercise in a group setting.
- 9 **The medications used can having difficult side effects** for people with some mental illnesses like schizophrenia and psychosis, weight gain and related metabolic changes, which bring health risks such as hypertension (high blood pressure), diabetes and heart disease. For these people, regular exercise is really vital, not just for the mood enhancing effects but also to reduce these other health risks.
- 10 **Exercise contributes to improving self-confidence and self-esteem**, which is hugely important to everyone, but especially so for people with mental illness

## FRAILITY

- 1 **Frailty is defined as** some combination of 3 or more of the following:
  - Weakness
  - Slowness
  - Low level of physical activity
  - A feeling of exhaustion
  - Unintentional weight loss
- 2 Frailty can occur **with or without other illnesses**.
- 3 Frail people commonly become **socially isolated** and this may lead to loneliness and low mood.
- 4 A common knock on effect of frailty is **loss of confidence**.
- 5 The **risk of falling is higher** in frail people.
- 6 **Exercise can have a vital role** in tackling frailty. Becoming fitter and stronger can greatly increase confidence and can counteract the effects of frailty.
- 7 **Strength work** can reverse weakness, particularly in the main muscle groups that affect mobility (the trunk, pelvic and leg muscles).
- 8 **Balance and core stability** exercises will reduce the risk of falling.
- 9 **Aerobic exercise** will increase general mobility and may also improve appetite and help tackle weight loss.
- 10 Exercise for frail people can **greatly improve resilience** which means having a positive attitude, optimism and mental toughness despite the challenges of frailty.

## MULTIPLE SCLEROSIS

- 1 **Multiple Sclerosis (MS)** is a disease where the immune system attacks the central nervous system (CNS), causing internal scar tissue, nerve damage and impaired ability to send signals from one part of the CNS to another.
- 2 **The effects can be different for everyone** who has the disease. Some people will have mild symptoms and won't need treatment. Others will have trouble getting around and doing daily tasks.
- 3 People with MS may experience **symptoms** such as fatigue, muscle weakness/spasms, blurred or double vision, disturbed balance, falls, difficulty focusing, poor memory, poor bladder or bowel control, and low mood.
- 4 The **benefits of exercise** far outweigh the challenges of doing exercise for people with MS. Some of these benefits include improvements in:
  - Cardiovascular fitness
  - Strength
  - Bladder and bowel function
  - Fatigue
  - Mood
  - Cognitive function
  - Bone density
  - Flexibility
- 5 **The key ADDITIONAL types of exercise to carry out if you have MS** apart from exercise for general health (explained elsewhere), are:
  - Flexibility exercises take your muscles and joints through their full range of motion. For people with MS, this can help reduce pain in muscles that tend to get tight and spasm.
  - Resistance and aerobic training improves connectivity between brain regions in people with MS. It is thought that increased brain connectivity can protect against fatigue and cognitive decline. These exercises also greatly help functional mobility - your ability to get around and carry out daily tasks and routines.
  - People with MS can be at greater risk of falling due to impaired balance and coordination. Specific balance exercises can help to improve coordination, balance and posture, which decreases this risk of falling and improves functional mobility.

- 6 **Start low, go slow:** Do a long, slow warm up and gradually increase the intensity. Start each exercise at an intensity you can manage comfortably.
- 7 **Safe environment:** When exercising, make sure the area is clear. Avoid slippery floors, poor lighting, rugs/mats and other trip hazards.
- 8 **Overheating:** For some people with MS, symptoms reappear or become worse when the body temperature rises. If you notice any symptoms that you didn't have before you started exercising, slow down or stop exercising until you cool down. Drink plenty of cool water.
- 9 **Fatigue:** Exercise is one of the best ways to combat fatigue. However, you should never exercise until you are exhausted. Take plenty of breaks between and during exercises as necessary. Pacing is also important here. This means not doing too much exercise when you are feeling energetic, as this will take your body longer to recover afterwards.
- 10 **Flare Ups:** Everyone's flare ups are different. Increased symptoms like pain and muscle spasms can interrupt sleep and keep you up at night. When flare ups happen it is important to rest. Take a break from your exercise programme and consult with your doctor to get your symptoms under control.

## STROKE

- 1 **A stroke** occurs when a blood vessel that carries oxygen and nutrients to the brain is either blocked by a clot, or bursts (causing bleeding). In both situations, the area of the brain beyond the clot or the bleed is damaged because it no longer gets a blood supply.
- 2 **Every stroke is different.** Each person affected by stroke will have different problems and different needs. The way in which you might be affected depends on where in the brain the stroke happens and how big the stroke is.
- 3 If you have experienced a stroke, **some of the complications you might experience** include paralysis or loss of muscle movement (perhaps on one side), difficulty talking or swallowing, memory loss or thinking difficulties, self-care ability, pain and emotional problems.

- 4 The **benefits of exercise** far outweigh the challenges of doing exercise for people who have experienced a stroke. Some of these benefits include:
  - Reducing the risk of another stroke
  - Improving walking ability, balance, strength, fitness and heart health
  - Improving ability to perform daily activities
  - Improving function in affected limb(s) (arm/leg)
  - Lowering blood pressure
- 5 **Aerobic exercise** improves the heart's pumping efficiency and reduces blood pressure. **Strength training** can improve functional ability such as walking up a stairs, getting out of a chair or reaching overhead.
- 6 **Flexibility exercises** such as stretches can help keep your muscles relaxed and joints moving, making it easier to carry out tasks such as getting dressed.
- 7 **Balance exercises** can help you move about in your home and in your community, and reduces your risk of falling.
- 8 If some days you are struggling to complete exercises, simply **moving about a little** is very beneficial i.e. standing up intermittently, or reducing bed rest.
- 9 Exercise in **short periods with rests in between** and gradually increase your activity levels.
- 10 Stroke is a complex condition, which can impact your ability to exercise safely. Depending on your ability levels, a member of the ExWell team will advise you on **exercise adaptations which are suitable for you.**

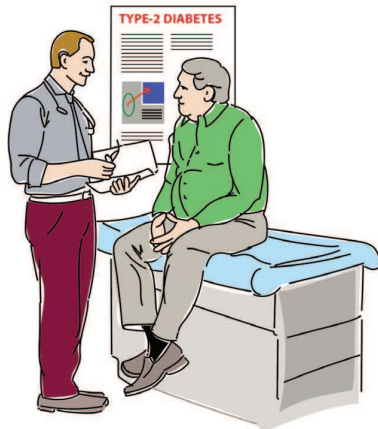
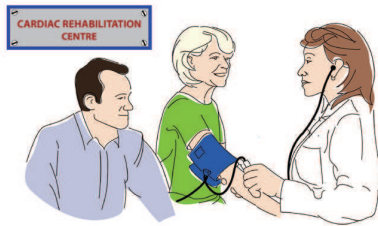
## PARKINSON'S DISEASE

- 1 **Parkinson's Disease is a progressive nervous system disorder that affects movement.** When you have Parkinson's, the levels of dopamine (one of the important chemicals that carry messages around your brain) reduces, making it more difficult for you to control smooth body movements.
- 2 Though **symptoms vary from person to person**, what starts as a small tremor may progress and affect the way you walk, talk and sleep.
- 3 Some of the **complications you might experience include** a tremor, slowed movement, rigid muscles, impaired posture and balance and loss of automatic movements (blinking, swinging arms while walking). Sometimes 'freezing' occurs, which means you get stuck in one position and find it very difficult to start any movement for a short period
- 4 If you have Parkinson's, exercise can be as important as your medication to help you take control and manage your symptoms. **Benefits of exercise can include** improvements in:
  - Walking
  - Balance and posture
  - Tremors
  - Flexibility
  - Motor coordination
- 5 **Flexibility exercises** bring your joints through their full range-of-motion. These exercises can help offset the muscle rigidity that comes with Parkinson's. Balance and coordination exercises are very important to help decrease your risk of falling and improve the way you move.
- 6 **Aerobic exercise and strength training** are important to maintain a good level of fitness and improve functional ability, for example getting around your home and community, and carrying out daily tasks.
- 7 If you have **limited mobility**, these exercises can be carried out sitting down. A member of the ExWell team will advise you on exercises most appropriate for you

- 8 **'Random Practice' exercises can be very beneficial** if you have Parkinson's. These exercises challenge you in different ways. For example: changing direction e.g. stepping from side to side or reaching from one side to the other (left to right); changing activity e.g. switching between exercises; or changing the speed of the exercises.
- 9 **Rhythmic stimulation** can be very beneficial if you are having difficulty moving. This can include counting '1-2-1-2' out loud, or using the beat from a song you like. This can help improve your walking speed and stride length
- 10 If you are distressed or embarrassed by a **very visible hand tremor while walking**, this can be reduced by carrying a modest weight (1 kg) in the affected hand.



# THE EXWELL STORY



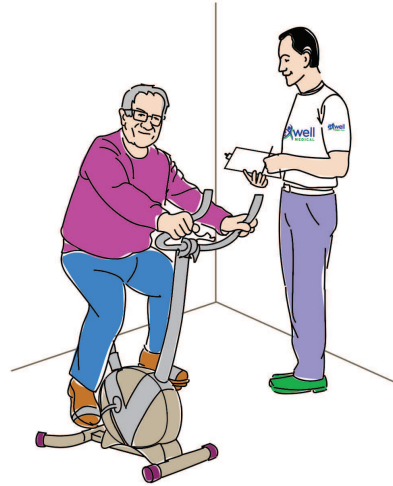
**Referral:** ExWell Medical offers medically-led exercise rehabilitation programmes to patients with any chronic illness, on medical referral.



**Induction:** Induction involves an educational talk and baseline testing, done either in group meetings or online.

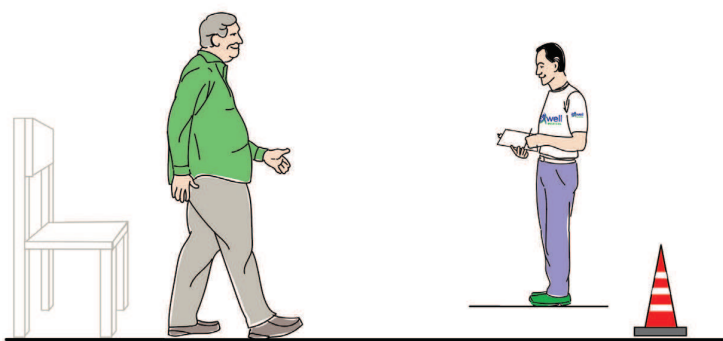






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**The Programme:** Participants take part in supervised group classes or individual sessions, or carry out exercise at home, with telephone support from ExWell staff.



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**Re-testing and reports:** Re-testing is done to measure improvement and give feedback.

# ANY QUESTIONS? GET IN TOUCH

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**website**

**[www.exwell.ie](http://www.exwell.ie)**

