St Michael's House

A Resource for Staff - February 2022

Introducing Francis

Francis is a 66 yr old gentleman with an intellectual disability who had to go to hospital to be treated for an infection. He lives in a residential unit with 5 other people and at the time of admission he was the most independent resident.

He was independently mobile and only required verbal prompting with his personal care needs.

It took some time for the infection to be treated and after discharge from hospital, due to Covid 19 hospital discharge restrictions, he also had to self isolate in his room for 14 days.

His overall life skills deteriorated to the extent he was

x unable to walk on his own,

x he needed someone to help with his personal care needs and

x required help with his eating and drinking

Unfortunately there were significant consequences on Francis's life

x Increased clinical interventions and supports

x Needed oxygen when walking even around the house

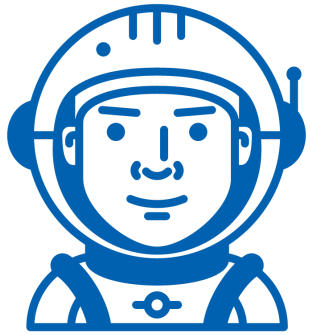
x Change of residential unit and day service

x Move away from the family, friends and community he had lived in for many years

What is Deconditioning?

Deconditioning is a very harmful syndrome which affects multiple systems in a person's body leading to a decline in their overall day to day function. Deconditioning occurs because of inactivity. Most commonly this happens when a person is on bed rest or spends long periods of time sitting. Inactivity leads to a loss of muscle strength, tone and mass in all of the muscles of the body. Deconditioned muscle is directly related to a lack of exercise and activity.

The physical effects of deconditioning can happen in people of any age. Even astronauts! When in space, astronauts experience an environment with no gravity. Without gravity their muscles are not challenged and the muscle strength is lost. Astronauts while in space need to exercise daily to prevent a loss of their muscle mass and strength. If they didn't then they would not be able to stand upon returning to earth. For us, when sitting or lying for long periods of time the muscles also lose strength.

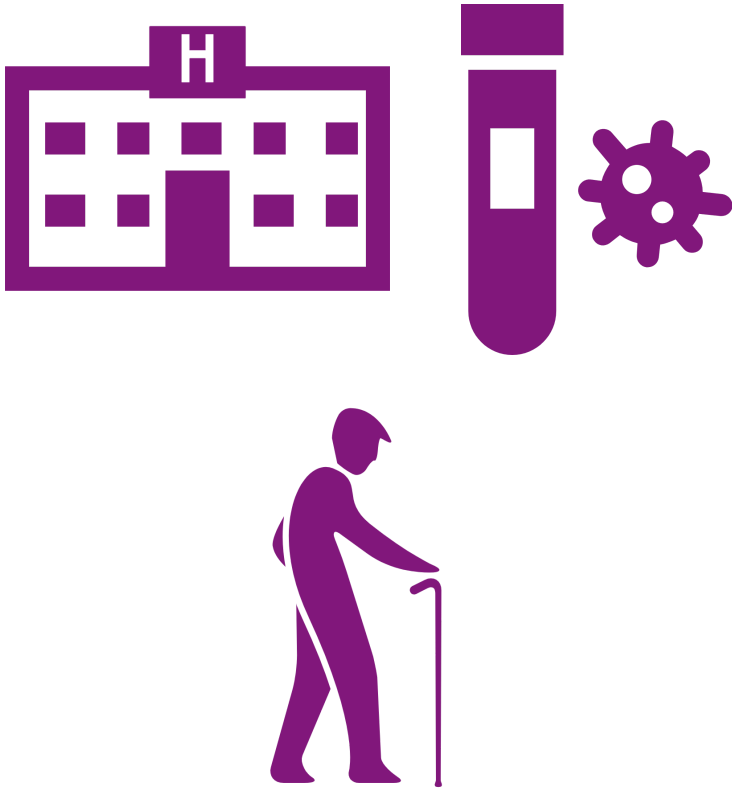


We are familiar with the catchphrase 'move it or lose it'. We must use our muscles, maintain our strength and all our abilities or we will lose them.

What is Deconditioning?

Deconditioning is most dangerous in the frail, older population. People with an Intellectual disability can be perceived as frail from as young as 40 years of age. It can arise even after a very brief period of immobility, particularly within a hospital setting but also at home.

This deadly syndrome is being reported worldwide during this Covid pandemic due to cocooning and isolation within houses.



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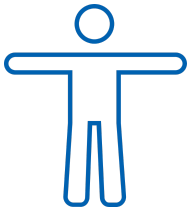
Deconditioning

What happens to the body with a period of bed rest during hospitalisation or increased sitting during pandemic?



1. Muscle strength decreases 1.5% per day; up to 10% in the first week, with legs most affected. The physical size of your muscles (mass) also decreases.
2. Bones weaken from the loss of calcium due to lack of weight bearing exercise.
3. The body gets dehydrated. This often occurs alongside bed rest and so the person feels faint when they stand up.

These 3 together combine to increase a person's risk of falling and of being injured in a fall. For example due to dehydration the person feels faint when they stand up, they may lose balance but be unable to react quickly enough to save themselves due to their decreased muscle strength and then they fall, suffering a fracture due to lost bone density. All due to being deconditioned!

Deconditioning

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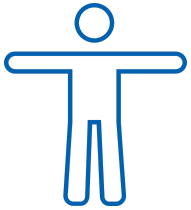
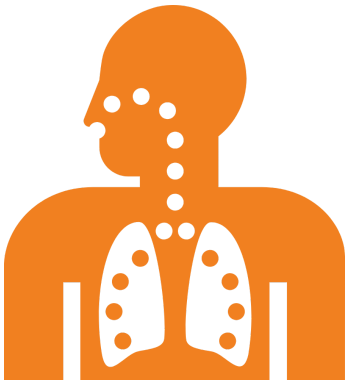


4. Less oxygen is required to nourish inactive muscles. As a result the body takes shallower breaths. Muscles that control breathing weaken through reduced use. Due to dehydration and shallower breathing there results a build up of secretions in the airways and lungs. As the breathing muscles have weakened coughing become less effective. Secretions cannot be cleared and linger in the airways and lungs. This is a perfect environment for developing infections such as ***pneumonia***. When we move and are active, our body demands more oxygen, so we take deeper breaths, becoming stronger in our ability to prevent a build up of infection-causing secretions in our lungs and airways.



5. 40-50% older people can become ***incontinent*** after 24 hours in hospital leading to kidney infections, skin breakdown and disorientation. ***Constipation*** can also become an issue.

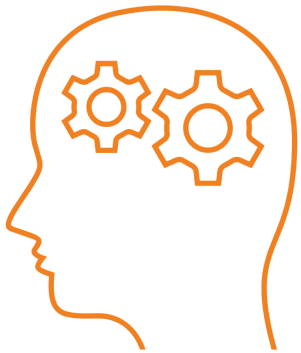
Deconditioning

What happens to the body with a period of bed rest during hospitalisation or increased sitting during pandemic?

6. Lying in bed can affect appetite and digestion.

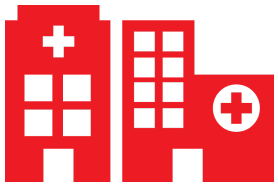
7. Increased risk of swallowing problems adds to the risk of *pneumonia*.

8. Reduced dignity, self confidence, independence, quality of life and choices ensue.

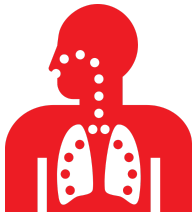


Some Interesting Facts

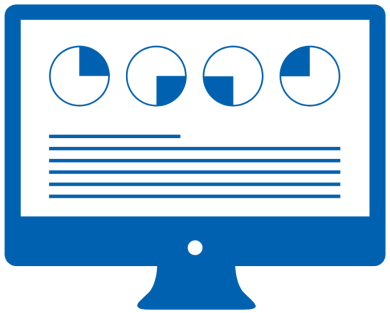
World Wide



· Physical inactivity **kills 5,300,000 people every year**. where as Shark attacks kill 10!!!
46% of over 85 year olds in general population die **within 1 year of a hospital admission**. Unknown at present for those with an intellectual disability.
· Please Note 60% of older patients have **no medical reason to be on bed rest when in a hospital**.
· There are **20% greater admissions to hospitals from falls** than from car accidents.
· **Impact of Covid 19 Pandemic on older people** - 1 in 5 less steady/confident in their mobility as opposed to prior to lockdown, 1 in 4 can't do the same as they could pre-pandemic (Statisitics from EndPJParalysis, Summit 2021)



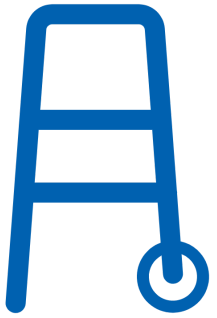
What about St Michael's House?



In 2020, the physiotherapy department ordered **1** rollator to aid mobility and balance for service users. In 2021 they ordered **21** rollators. This is a 2000% increase!! This may be slightly skewed due to lack of referrals during 2020 but you can see the difference.

The main reason for a service user to attend a hospital emergency department over the last 3 years has been for review of falls/ orthopaedic issues

A number of service users have had to move to a different residential unit as a result of deterioration in their abilities to support themselves.



Did you know that deconditioning can have an impact on emotional well being?

When we stop or slow down our activity levels, it can affect how we feel emotionally also. We can feel sad or depressed that we are not able to do the same activities as before. This may affect our chances to meet our friends and socialise. It can make us feel lonely or isolated. All of these feelings can make it hard to find the motivation to get up and get going. Recognising these feelings is the first step in reducing the effects of deconditioning.

Did you know good nutrition can influence deconditioning?

Protein is responsible for building muscle, particularly its shape and it dictates how well the muscle can move. The body requires a certain amount of protein and this is calculated based on a body weight for your height. As we age we become less efficient at using protein, therefore we need more as we become older.
Timing of taking protein: it is recommended that the allowance of protein per day is spaced out at each meal. A suggested amount is 25-30g with each meal. This has been shown to help retain muscle.

Calcium: Inactivity can cause the bones to lose its calcium, therefore weakening the bones. Ensure you are meeting your body's requirement for calcium.

Vitamin D: This is essential for absorption of calcium into our bones, avoids muscle wastage and helps the body utilise protein. Vitamin D is associated with muscle strength and physical performance. Vitamin D supplementation has been shown to reduce fall risk by 17%.

Did you know good nutrition can influence deconditioning?

People who move less are more likely to suffer from **constipation**, therefore choose a diet high in fibre, rich in fruit and vegetables.

Metabolism: inactivity leads to a progressive drop in the metabolic rate (the amount of calories your body needs to function, otherwise known as basal metabolic rate, BMR). This can fall after just 10 hours of immobility (6.9 %). If more calories are consumed than what is required, weight can be gained and make activity harder to achieve. Likewise if the body does not get enough calories, the body can lose weight, this can lead to muscle breakdown and further weight loss. It is important to get the balance right.

Deconditioning is Preventable!!

It is not an inevitable part of ageing!!!

Small Changes = Big Impact

Small increases in exercise being seen to make a big difference in muscle strength

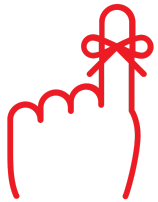
So how can we prevent deconditioning?

1. Get up, get dressed, and get moving every day
2. Limit prolonged bed rest unless clinically advised to rest
3. Dressing includes wearing hearing aids or glasses, your watch or having your phone beside you so you can communicate with others. Clothes make us feel more ready to sit up/out/move etc. **Shoes should be worn not slippers**
4. Even if they are slower than usual, encourage service users to be as independent as possible. They may need a wheelchair to make it to the bathroom on time, but can they walk slowly back to bed/room/living room etc.
5. Facilitate a good sleep pattern and daily routine.
6. Have a daily expectation of exercise and activity. It could be a walk, or build exercise into things we do everyday e.g. ad break challenges, cuppa challenges, use of support tools e.g. resistance bands, weights, water bottles, tins etc
7. Set realistic, achievable goals My goal today is ..... to sit out of bed, to do 5 sit to stands, to walk to bathroom unaided. It may vary depending on service user.
Find the right motivational tool to encourage service users to be active.

'Make Every Movement Count'

So how can we prevent deconditioning?

8. Discuss how to increase activity levels not just going for a walk. There needs to be a balance – strength work and some flexibility as well as aerobic work.
Think **FABS** - **F**lexibility, **A**erobic, **B**alance and **S**trength.
9. Create a safe environment to help support the maintenance of muscle strength – this will help to decrease the risk of falls. There is always a fine balance between falls prevention and mobility promotion.
10. After illness build someone's activity up slowly – getting dressed and sitting out; even moving someone's legs and arms for them in the bed is activity , any movement forces the lungs to take a deeper breath thus decreasing the chance of pneumonia. If a SU is in a wheelchair, can they push down through their arms and lift their bottom up a bit.
11. Don't kill someone with kindness by bringing everything *to* them. Activity is crucial.
12. Sprinkle exercise throughout the day especially during any period of decreased mobility levels



'Make Every Movement Count'

Let's Do This

Ad Break Challenges

Ad Break Challenges are movements and exercises that can be done during a TV ad break. Here are some examples:

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· 5 sit to stand to sit in quick succession.
· Marching on the spot for the length of ad break (or start with half the break, or even a few steps)
· Air boxing in standing or sitting
· Raising arms out in front (holding an object such as a tin of beans)
· Wall push ups
· Heel raises in sitting or standing
· Knee raises in sitting
· Straighten one leg out and hold for a few seconds and repeat on other side
· 5 deep breaths
· When sitting, lift bottom up by using arms of chair.

see separate handout on these challenges

Let's Do This

Cuppa Challenges

Cuppa Challenges are movements or exercises that can be done while the service user or staff member is boiling the kettle e.g. 5 squats and 5 heel raises (holding onto counter top) and then 5 arm raises.

Or why not try an **8 Week Challenge** – You can test the ability to do an exercise or movement at the beginning of an 8 week period and then at the end. Each person chooses their own exercises for the 8 weeks. It is helpful to measure what you can do at the start and then see how that number increases. Even a small amount of exercise performed regularly will show an improvement. Could it be a friendly competition between friends, service users, staff, family, units?

see separate handout on these challenges

Health & Safety

Before Starting Consider the Following

Before starting on your challenge, pause to consider the following:
How long has it been since the person has done exercises that are part of the challenges. It so important to start slow and focus on doing the exercise correctly, no matter how small/easy the exercise seems to be, we need to give our muscles time to adapt.

If the person has had a recent fall, surgery, Covid 19 etc it might be good to check with the Health care Professional who has been supporting the person after their fall, surgery etc. This is to ensure you are picking the right time to start the challenges.

How is Francis now?

So what happened to Francis? *It is 10 months since he was in hospital and things are going well for him but this did need work from Jim and his support staff.*

Francis was given an exercise routine shortly after coming out of the hospital. Staff helped him understand that these exercises would help him get better over time.

Francis understood this and started doing the exercises himself.

So where is Francis now?

· He can now walk around the house with just a rollator

· He only needs oxygen when walking longer distances

· Francis can go on longer walks

· He still needs some help with personal care needs but he is working on this

· Francis enjoys going on outings with the staff in his residential unit and also loves going out with his family

· He is starting to explore a new day service and also a Men's Shed in his new local community

Francis himself is the main reason he is where he is in terms of his health because he was determined to get better and wanted it for himself. His staff team have helped him and overall Francis's health has improved so much since he was in hospital. This means he will be able to experience more and choose what he wants to do for the future.

Francis is not limited now to what he can do.

Other Resources

Remember Make Every Movement Count

YouTube videos recommended by physiotherapists e.g. **St. Michael's House Resources - Niamh Quinn 3 Minute Movement Exercises**

Video 1 https://www.youtube.com/watch?v=ryIgQFdiDRg
Video 2 https://www.youtube.com/watch?v=_kP1ad99Pzk
Video 3 https://www.youtube.com/watch?v=FsATHNjWkn8
Video 4 https://www.youtube.com/watch?v=ZZZvhzBH3Pk
Video 5 https://www.youtube.com/watch?v=bt4sSBF0ogw

Make Movement Your Mission (https://www.youtube.com/watch?v=PjUqXg3Ky6s)

Get Up Get Dressed Get Moving (https://getupgetdressedgetmoving.yourchallengeapp.com/users/login?next=/)

Please note: This does not replace a prescribed exercise programme that has been given to the service user by a physiotherapist.

Acknowledgements

Development Team

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