

Appendix B - Video Script and Text Messages

Video Script

Hi, I'm Dr Finniss, director of the Acute Pain Service at the Royal North Shore Hospital. Our team helps patients like you to get comfortable enough to be able to rest in those first few days of recovery from injury.

It is normal to feel quite tender when you have a rib fracture (or broken rib). When we injure ourselves, our body's produce an inflammatory response, which helps to speed up healing, but can cause the muscles around the ribcage to spasm from time to time, particularly when you take deep breaths. The inflammatory response is often strongest in the first few days after injury, will gradually decrease as your body heals. The sensitivity and muscle spasms caused by inflammation around your ribs will lessen as your body heals.

While the inflammatory response can cause discomfort, it is actually your body's way of protecting your ribcage. Those muscle spasms you might feel are working to stabilise the area. So, when you take a deep breath, you may feel some pain due to muscle spasms, but this does not mean the fractures are getting worse – it simply means that the muscles around your rib cage are protecting the ribs while you take a deep breath.

Even though it might be uncomfortable, deep breathing is very important when you have broken ribs, to reduce your risk of developing a chest infection. We will provide you with different ways of managing the discomfort you're likely to experience while your ribs are healing so that you can breathe more easily, deeply, and comfortably.

The best way to manage pain or discomfort is to tackle it from all sides. We use strong anti-inflammatories to reduce swelling or bruising, which reduces the pain caused by the inflammatory response. We can also use strong opioid analgesics like morphine to reduce your distress, or how much the pain bothers you, when the muscles in your chest spasm to protect your ribs. Together, these medications can help you to take deeper breaths, walk around, and even do simple everyday tasks in the first few days after injury.

There are also many things that you yourself can do to reduce your discomfort and manage your pain.

Pain can also be reduced dramatically using distraction techniques. When you focus your attention away from your pain, it will be less bothersome. Reducing how the pain actually bothers you, as much as reducing the amount of pain itself, changes how you "feel" or "experience" this pain and improves your ability to return to your normal activities more quickly.

Here are some distraction techniques you can try while *taking deep breaths or moving around your room*:

- Try counting forward or backwards by three (for example, 3-6-9-12-15-18, or 100-97-94-91).

- Pick a letter and a topic, for example “L” and “food”. Bring to mind every food you can think of that starts with the letter “L”.
- Watching the television can help, particularly if you are interested in the show.

When you are *resting in your bed*, you might find it helpful to distract yourself by:

- Reading a magazine, the news, or short entertaining stories.
- Alternatively, you can download your favourite book to your phone or other mobile device, which can not only be distracting but also relaxing.
- Puzzles like crosswords or sudoku, or other games can be downloaded to your phone or device.

Having a chat with a friend or family member – even if by text or phone – is a great way to distract you from the feeling of muscle spasms. Partly, this is because texting or talking with a friend over the phone is distracting. And in part, it is because talking with a friend or family member makes us feel safe and supported. Connecting with others who make us feel valued and safe also feels good – we get a shot of natural pain killers called endorphins when we interact with others – even if they are strangers. So be sure to talk with your nurses, doctors, and anyone who checks in on you during your stay.

Endorphins are the body’s natural analgesics and we can increase our body’s production of endorphins in many ways. Sitting or walking in the sunshine, talking with a friend, acquaintance, or someone who is also in hospital, thinking about what you will do when you have healed can all help with the release of endorphins. Eventually, when you return home from hospital, you can increase body’s natural analgesics by doing light exercise, giving or receiving physical comfort from a friend, partner, or family member, and getting fresh air out in nature.

Our tolerance for pain and our pain sensitivity changes from day to day. It can be influenced by your mood or emotions like stress or anxiety. Many people find that if their mood is good, they feel more positive about their recovery and they are better able to tolerate pain. Your mood might be affected by what you read or listen to, who you talk to, what you think about, or even what you eat. What affects your mood? Be mindful of what affects your mood, and try to do something each day that makes you feel good. It will help you to manage pain and help you to recover faster.

It is normal to feel worried or anxious after an injury. However, stress causes tension, increases the intensity of the muscle spasms that cause discomfort, and can slow recovery from injury, so it is important to deal with stress and worry. It can be helpful to talk to someone about your feelings – a friend, family member, or if you are concerned something to do with your injury or your recovery, then speak with a nurse or your doctor when they next come to check up on you.

You can also help yourself to relax by breathing out as slowly as you can after a short inhale. Slow, deep, exhales will relax your body, reduce the strength of those protective muscle spasms when you attempt a deep inhaling breath.

Another helpful strategy for relaxing your body is progressive muscle relaxation. You can best do this while you are lying down, and it may be useful in helping you to get off to sleep at night. Progressive muscle relaxation involves focusing your attention on one muscle at a time, tensing that muscle intentionally, holding that tension for a moment, and then intentionally releasing the tension. Often we don't even realise how tense we are until we focus our attention on a particular part of our body and make a conscious decision to relax those muscles. The process of progressively tensing and releasing the muscles of the body, from head to toe, places the body in a deep state of relaxation.

You might also find that the way that you think about pain influences how much it bothers you. It is important to remember that pain is not always a sign of harm. In fact, pain is an important component of recovery. It protects us from harm by keeping us from overdoing things. It motivates us to stay relatively still and rest. Rest is important, but don't forget to keep up with your deep breathing to keep your lungs healthy. The muscle spasms you might feel when you take deep breaths are not harmful, and the more you take deep breaths, the less difficult these breathing exercises will be.

In summary, we manage pain after rib fractures in many different ways. We provide you with medications, but pain management is most effective when you combine medications with other techniques such as distraction, social connection, mood management, relaxation, seeking social support and connection, doing things to increase your body's natural endorphins, and changing the way you think about pain.

Rest assured, while rib fractures themselves may take several weeks to heal, if you use these techniques, your pain will improve much faster.

Text message content

1. Rib fractures are a very common injury. Approximately 500 people are admitted to Royal North Shore Hospital every year with rib fractures. Our doctors and nurses are very experienced with the treatment of rib fractures and managing your recovery. You are in safe hands.
2. It is normal to feel tenderness and soreness when you have rib fractures. It can be uncomfortable to breathe deeply because your chest muscles are bruised, but it is not harmful. In fact, it is important that you work on taking regular deep breaths, as this will keep you healthy and help you recover. If you find yourself becoming upset or anxious about the soreness in your chest, remind yourself that the discomfort you are feeling is a normal part of the recovery process.
3. The best way to manage pain or discomfort is to tackle it from all sides. Medication helps, but so does slow, deep breaths to help you to relax, and using distraction techniques like naming all the capital cities in Australia, and then the United States of America, and then Canada (if you can!)
4. Remember that the muscle spasms you feel when you take deep breaths are not harmful, and the more you take deep breaths, the less difficult breathing will be, and the faster you will recover.

5. There are many things that can help you to cope with pain and discomfort. Some people find that distraction really helps. You might like to try watching a favourite movie or TV show, or listening to your favourite music or audiobook. If it is relaxing, distracting, and makes you feel good, it will likely help you to cope with discomfort while you are recovering.
6. Pain is like an alarm bell. It is our body's way of reminding us that it has been hurt and needs to recover. It is safe to move slowly and breathe deeply after rib fractures. The "pain alarm bell" is just a reminder not to overdo it.
7. Relaxing your muscles can help with pain. You can help yourself to relax by slowing your breathing. Count to four as you breathe in, hold your breath for four, and breathe out slowly while counting to four. Slow, deep, breathing will relax your body, reduce the strength of protective muscle spasms, and help to reduce pain.
8. Here is another distraction techniques you can try while *taking deep breaths or moving around your room*: Pick a letter and a topic, for example "L" and "food", or bring to mind every food you can think of that starts with the letter "L".
9. It is understandable to feel worried or anxious about pain. But you are recovering from injury, so tenderness and soreness is to be expected, and is not harmful.
10. We manage pain after rib fractures in many ways. Pain management is most effective when you combine medications with other techniques such as distraction, social connection, mood management, relaxation, seeking social support and connection, doing things to increase your body's natural endorphins. Do whatever works for you in the moment.
11. You may be feeling pain and discomfort during your recovery. Remember this is part of the recovery process for everyone.
12. The discomfort that you might feel when you take a deep breath or move around can be reduced dramatically by focusing your attention away from painful sensations. Try counting forward or backwards by 3, 7, or 13 – the harder the task, the better the distraction will work.
13. You might be feeling quite tired – if so, that's because your body is working really hard on healing. It takes a lot of energy out of you. Be kind to yourself – you are on the road to recovery.
14. Tenderness and pain can make it difficult to relax, especially if we are focusing on these sensations. Focusing your attention on something else – like a book, music, puzzle or a game – can help you to relax, and help your body to heal.

15. Endorphins are the body's natural analgesics and we can increase our body's production of endorphins in many ways. Sitting or walking in the sunshine, talking with a friend, acquaintance, or someone who is also in hospital, thinking about what you will do when you have healed can all help with the release of endorphins.
16. Having a chat with a friend or family member – even if by text or phone – is a great way to distract you from the feeling of muscle spasms. Partly, this is because texting or talking with a friend over the phone is distracting. And in part, it is because talking with a friend or family member makes us feel safe and supported.
17. Connecting with others who make us feel valued and safe also feels good – we get a shot of natural pain killers called endorphins when we interact with others – even if they are strangers. So be sure to talk with your nurses, doctors, and anyone who checks in on you during your stay.
18. It is normal to feel worried or anxious after an injury. However, stress causes tension, which increases the intensity of the muscle spasms in your chest, so it is important to deal with stress and worry. It can be helpful to talk to someone about your feelings – a friend, family member, or even your nurse or doctor.
19. You might also find that the way that you think about pain influences how much it bothers you. It is important to remember that pain is not always a sign of harm. In fact, pain is an important component of recovery. It protects us from harm by keeping us from overdoing things.
20. Rest is important, but don't forget to keep up with your deep breathing to keep your lungs healthy. The muscle spasms you might feel when you take deep breaths are not harmful, and the more you take deep breaths, the less difficult these breathing exercises will be.
21. Our tolerance for pain can be influenced by our mood. What affects your mood? Be mindful of what affects your mood, and try to do something each day that makes you feel good. It will help you to manage pain and help you to recover faster.
22. It is normal to feel worried or anxious after an injury. However, stress causes tension, and can increase the difficulty of taking deep breaths. You can help yourself to relax by spending a bit of time on long, slow exhaling before you attempt a deep inhale. Exhaling for as long as you can calms the nervous system, which will make it easier to take a deep inhaling breath.
23. Engaging in activities that we enjoy can be difficult after injury, but doing things that make you happy can release endorphins or "natural pain killers" that will make it easier than you think. Joy = less pain = more joy.
24. Your body releases natural pain killers when you do things that are enjoyable. Light exercise, giving or receiving physical comfort, and getting out into nature.

25. Medications like anti-inflammatories can help to reduce tenderness and swelling, but they don't tend to help with tension in your body, which increases pain. You can release tension in your body and mind using progressive muscle relaxation: intentionally clenching and then relaxing the muscles in your body from head to toe.
26. Your body has been through a lot over the past couple of weeks. How is your mood? Many people are surprised to learn that when we are physically injured, it can affect our mood. Our mood, in turn, influences how well we cope with the healing process. What do you find helps your mood? Even simple things like getting some fresh air and sunshine can help your mood and help you to cope with the healing process.
27. At this stage, your ribs will be healing nicely, and you won't have nearly as much inflammation as you did in the early days following injury. You might have a niggle in your chest for a little while longer, but it will get less and less over time – particularly if you keep up with your deep breathing and continue using strategies like distraction, relaxation techniques, and activities that encourage your body to release endorphins or “natural pain killers”.
28. It has been approximately 2 weeks since your injury, and our PainSupport service is ending today. We hope that you have found our messages helpful. You can keep checking back over your messages for a few weeks, but if you want to keep them in the long term, you might like to take screen shots of the messages you found most helpful. Tomorrow, we will send you a feedback survey. We look forward to your feedback on the PainSupport service.