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## Conscious Patient Proning Guide

Laha, Chohan, Liebermann and Leinhardt 2021

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**Dr Shondipon Laha**

BM BCh MA (Oxon) FRCA FFICM  
Consultant in Intensive Care Medicine  
Lancashire Teaching Hospitals NHS  
Foundation Trust  
Honorary Secretary and Chair of  
Professional Affairs Division  
Intensive Care Society  
President Association of North  
Western ICU's

**Dr. Shondipon Laha is a Consultant Anaesthetist who has been working on the front line with the team at the Royal Preston Hospital in the fight against Covid-19.**

National COVID-19 treatment guidance recommends the use of prone positioning (lying on your front) to improve oxygenation in patients. This redistributes lung expansion and allows blood flow to be more closely matched with ventilation. In combination with non-invasive respiratory support (CPAP or High Flow Nasal cannulae) it can improve the chances of avoiding intubation which is associated with much higher levels of mortality.

*“We’ve seen clear evidence of success in using proning – a technique that is more commonly used for patients with pneumonia and on ventilators – in the fight against COVID-19.”*

Prior to COVID-19, prone positioning was predominantly used in sedated, mechanically ventilated patients however clinicians started using it widely in awake patients. As Intensive Care units across the country and beyond are facing huge challenges, helping patients that are conscious to lie on their front for sustained periods of time as they simply can't tolerate it. Many patients struggling to breathe are also fatigued, uncomfortable, scared, overweight, elderly or wearing oxygen apparatus such as CPAP (Continuous Positive Airway Pressure) hoods making it incredibly challenging for staff to re-position them throughout the day.

*“Recognising the benefits of prone positioning we approached Dr Ambreen Chohan and the MedTech Solutions Group at University of Central Lancashire to help us find a company that could create a solution and that's when we were introduced to the team at Posture Care. In two short months we are now using the Conscious Patient Prone Kit across the ICU and Respiratory wards here at Royal Preston Hospital.”*

*“I would like to take this opportunity to thank our Trust and Lancashire Teaching Hospital charity for all their effort in bringing this project to life. Never has there been a time more poignant for Trusts, Universities and industry to collaborate for the benefit of patient care.”*



**Dr Ambreen Chohan**

Research Fellow (Biomechanics)  
University of Central Lancashire )  
(UCLan)  
Allied Health Research Unit

**Dr Ambreen Chohan, is a Research Fellow at the University of Central Lancashire, who has been key in setting up our research collaboration to evidence our Conscious Proning Kit.**

The University was approached to help the Lancashire Teaching Hospital (LTH) link up with a specialist healthcare company to develop kit to help improve oxygen levels in patients that have contracted the virus. The University has worked with Posture care and then Levitex over the last five years on a number of research projects to help highlight the clinical benefits of their product range through an independent scientific evidence base.

***“We were approached by Dr Shondipon Laha and were delighted to help with such a vital project. Having previously researched a range of Posture Care and Levitex products, we contacted the companies and now the Conscious Patient Proning kits in use at the trust are being researched to better understand the benefits to the patients.”***

*“In the last decade my team and I have worked collaboratively with over 30 companies, to independently research and evidence new product innovations, many of which have addressed the key role posture plays in optimising Patient care. As my specialist area is in biomechanics with a specific interest in spinal care and posture, it’s refreshing to see this important aspect of patient care finally getting the attention it deserves.”*

The University of Central Lancashire is renowned for its integration within both the health and industrial sectors, working in partnership to produce high impact evidence to support improved public health.





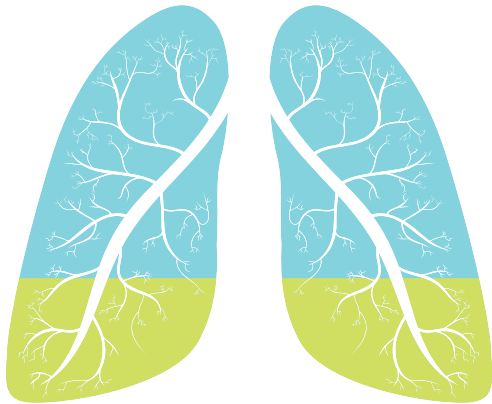
**Dr Ilan Lieberman**

MBBS, FRCA, FFPMRCA  
Pain Medicine Consultant and  
Clinician with The University  
Hospitals of South Manchester  
(UHSM)

**Dr. Ilan Lieberman is the medical director at our sister company Levitex and during the first wave jumped back on the front line with the team at Wythenshawe Hospital in the fight against Covid-19.**

*“We found that using Levitex pillows made it easier for nursing staff to prone ventilated patients as the foam was firmer and provided improved pressure relief when turning patients. It is our hope that if patients are able to self-prone at home and tolerate the therapy that we may see a reduction in hospitalisation of Covid-19 patients suffering with breathlessness.”*

Using his experience in Critical Care, Ilan has put together a guide and a short video demonstrating the best way to self-prone. You can find the video at [www.levitex.co.uk/self-proning](http://www.levitex.co.uk/self-proning) as well as an explanation from Ilan about what proning is and why it may be beneficial.



*“Patients with bad pneumonia spend a long time lying on their backs on a ventilator.*

*When this happens the fluid in their lungs tends to pool at the back of their lungs, and the air they breathe-in tends not to mix well with the blood flowing through the lungs. This is because of the pooling of fluid and the collapse of lung tissue it causes.*

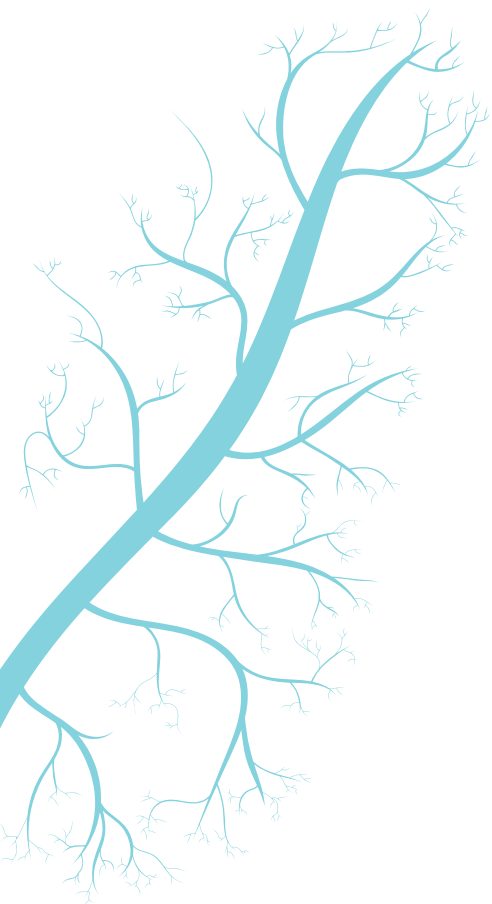
*Think about it like this...*

*Your chest is like a pint glass with your lung tissue and the airspaces - like a sponge filling the glass.*

*If that tissue becomes soggy with infection the blood flows poorly through it and the oxygen from the air you breathe in doesn't get transferred efficiently into the blood flowing through your chest.*

*So, if you are lying on your back the lung tissue towards the back of your chest will get soggy with infection and this causes a problem, as the oxygen transferred to the blood can be dramatically reduced.”*





*“Ultimately with COVID-19, or any other lung infection, the patient tires of breathing and becomes exhausted with the effort to keep the blood sufficiently oxygenated. Currently, when patients are not able to tolerate lying in a prone position, the best way to treat this is to put the patient on a mechanical ventilator and support their breathing.*

*For many reasons being on a mechanical ventilator is a last resort as it can, and often does, unfortunately, damage the lungs of the patient and increases mortality rates.<sup>[1]</sup>*

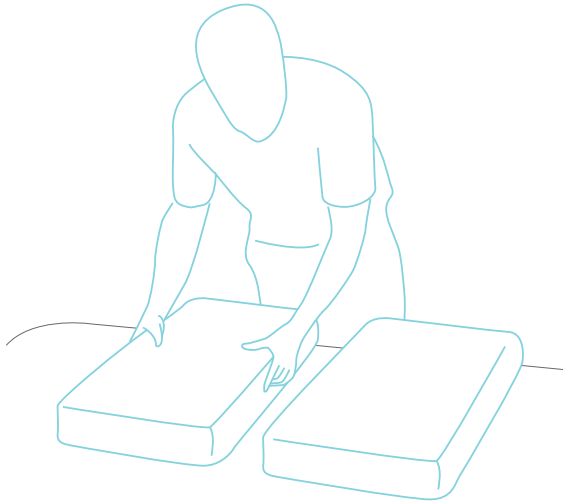
***Since the first wave we have encouraged wider use of self proning. Proning can affect the areas of sogginess of the lung tissue and can open up collapsed airways, helping patients breathe more easily.***

*Proning helps the lungs better distribute oxygen rich blood around the body. The effect is almost instant on patients who use proning. This is in part why it's worth trying if you are struggling with COVID-19 related breathlessness at home.*

[1] ICU and Ventilator Mortality Among Critically Ill Adults With Coronavirus Disease Sara C. Auld et al 2019

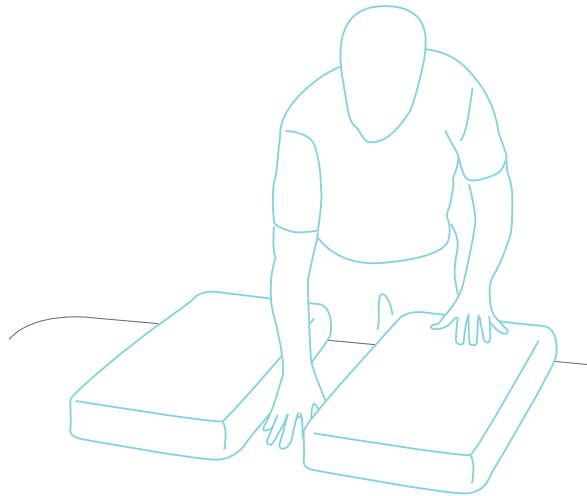
# How to self-prone at home

*“The key is to support the chest and pelvis with firm pillows and leave the tummy free to move in and out as you breathe.”*



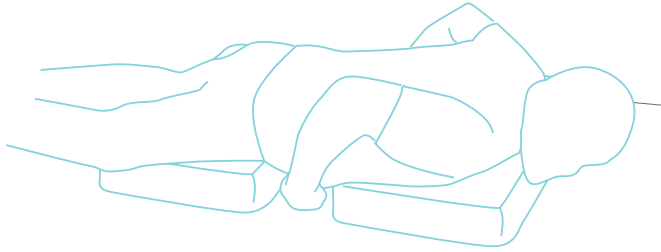
## Step one

Place two pillows in the middle of your bed in position to support your chest and pelvis.



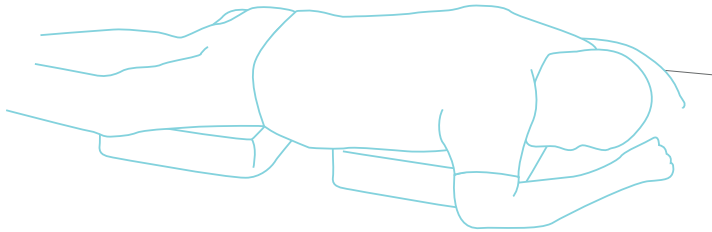
## Step two

Separate the pillows so your stomach will be able to lie inbetween them. At least a hand's width apart.



### Step three

Lie face down on top of the pillows ensuring your chest and pelvis are supported with your stomach in between to allow you to breathe. If you feel increased strain on your lower back bring the two pillows closer together.



### Step four

Position your head comfortably below your chest level, your head may rest on either side.

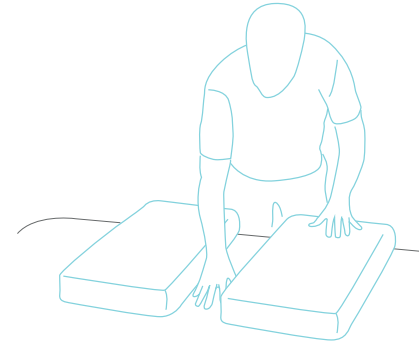
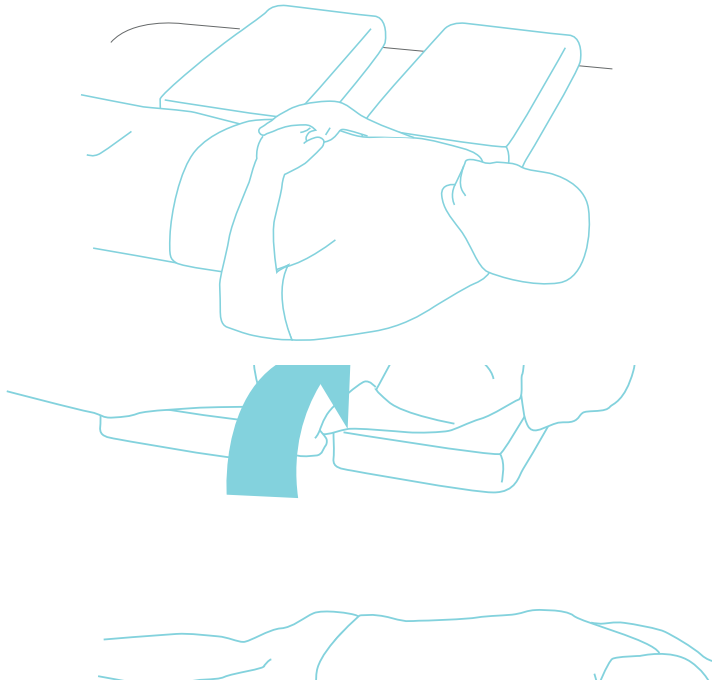
**Levitex®**



[www.levitex.co.uk/self-proning](http://www.levitex.co.uk/self-proning)

Please watch our videos where Dr. Ilan demonstrates how to self-prone.

# How to self-prone at home with reduced movement



## Step one

Arrange your pillows as before, or ask a carer if needed.

## Step two

Lie on your back next to the pillows aligning them with your chest and pelvis.

## Step three

Roll yourself over onto the pillows ensuring that your chest and pelvis are supported and there is room for your stomach to breathe.



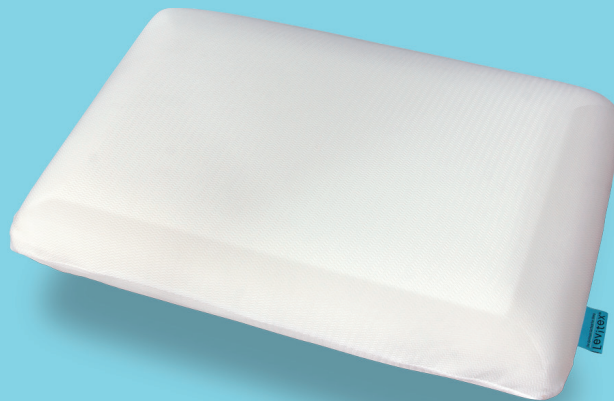
**The Optimum Surface for Sleep**

# Levitex®

**[www.levitex.co.uk](http://www.levitex.co.uk)**

    LevitexSleep

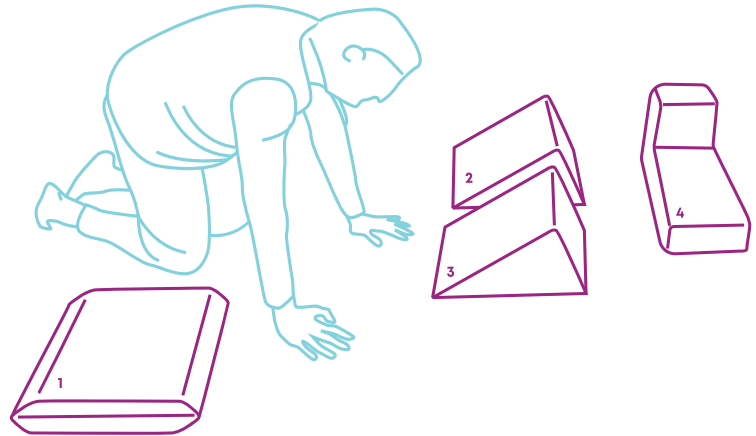
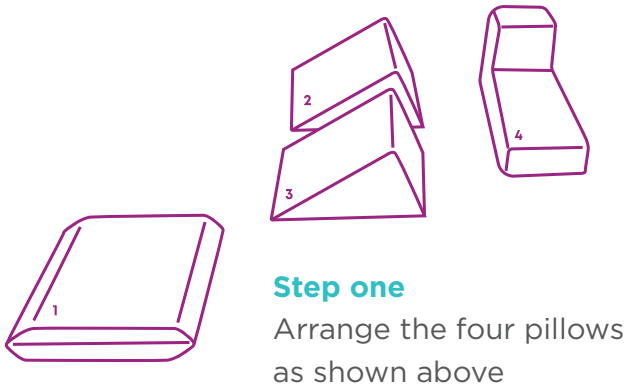
Levitex Foams Ltd  
Greenheys Building  
61 Pencroft Way  
Manchester M15 6AY

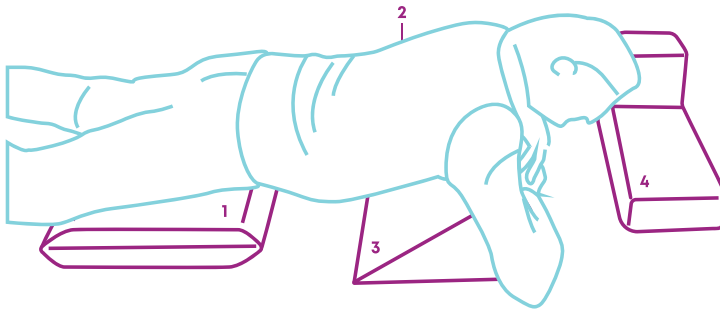


**Levitex® pillows are firm, but comfortable, and are designed to avoid creating uncomfortable pressure areas, making them great for proning - which is why they have been used in the intensive care units across the North West.**

**Levitex® pillows are designed to fit a standard pillowcase and available to buy in four depths depending on your height and sleeping position, from our website at [www.levitex.co.uk](http://www.levitex.co.uk)**

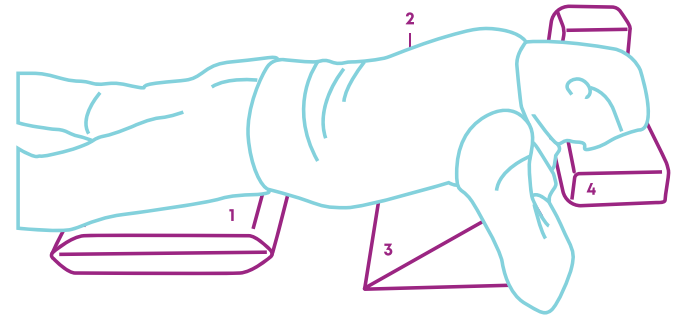
# Clinical self-proning with a Conscious Patient Proning Pack





### Step three

Support your chest with triangular pillows 2 and 3 with your arms at the back. Place pillow one under your hips, below your stomach to allow your stomach to move.

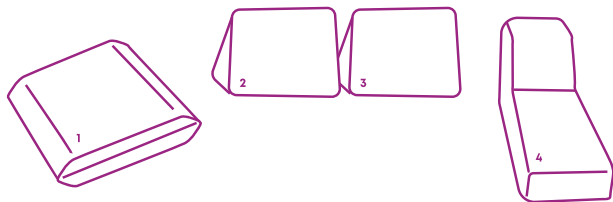


### Step four

Move pillow four into position to allow you to rest your head comfortably without moving your body from step three.



# Side-lying option

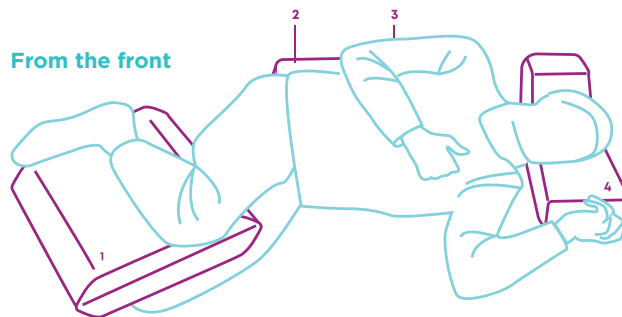


## Step one

Arrange the four pillows as shown above

## Step two

Position your back against pillows 2 and 3 with your head placed comfortably on pillow 4. Place pillow one between your lower legs from knees to ankles in order to maintain your side-lying position.



## From the rear







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