The 3 P’s of Pressure Injury Prevention

You Complete Guide To The Nursing Techniques Universal To All Pressure Injury Prevention And Treatment

✶ What to do
✶ What to not do
✶ Supplies & equipment to use
✶ Supplies & equipment to NOT use
✶ How to find what you need
✶ Cost of supplies and equipment

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A Jewell Nursing Solutions Company dedicated to truth and integrity in wound care nursing

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To talk to a real person, press 1 at the greeting prompt
“You can do a lot of things to stop a Pressure Injury. After you get the pressure off”
Gwen Jewell, Clinical Nurse II, BSN, Certified Woundcare Specialist (CWS)

Introduction

Thank you for taking the time to educate yourself on how to prevent and treat bedsores.

By now you have probably read a hundred different instructions that tell you what to do to prevent pressure ulcers. But in my experience, most of the information out there fails to tell you how to do it.

If you are reading this booklet you have probably already discovered what I did many years ago; The principals of pressure injury prevention are not complicated to understand, they are just difficult to do!
There are literally thousands of medical conditions and special circumstances that can cause a person to be at high risk of developing these terrible wounds. Managing those health conditions is specific to you and your person, and the nursing and doctors working with you.

However, regardless of your specific circumstance, there are 3 essential activities for pressure ulcer prevention that apply to any and all situations. And if you can manage these 3 activities well, you can stop most bedsores in their tracks. They are;

- **Pressure Reduction**
- **Peri-Care Moisture Management**
- **Protection**

This booklet is designed to be a quick reference guide for you to have the information at your fingertips for how to correctly achieve the 3 P’s of pressure ulcer prevention.

You need more than just theory to fight these devastating wounds. You need to know what to do, how to do it and most importantly, you need to know what to use: What equipment and supplies, and of course, what not to use. This booklet also provides the information for where to get supplies and equipment, and how much they cost.

If you have any questions or comments, I am a phone call away (650) 294-8557. Consider me your advice line nurse and confidant in your battle again fight bedsores!

**Disclaimer:** I do not have any affiliations with any of the suppliers or manufacturers of the products discussed in this booklet, except for the positioning cushions I had to make because there was nothing else out there that actually worked correctly; The Backbone™ 30 degree lateral support wedge, The FootBed multi-positional heel floating cushion (aka “The Heelbone”) and the Anybone multipurpose pillow.
The 3 P’s of Pressure Injury Prevention

Pressure ulcers are more than just terrible wounds. They are a reflection of how hard it is correctly and effectively deliver the 3 most basic care activities known to nursing. These are;

1. Pressure Reduction
The first step for pressure injury prevention is always, always, to reduce pressure. This guide reviews the principals and methods for pressure reduction of a person while he/she is in bed.

2. Peri-Care Moisture Management
Not just continence care, but it’s important to keep the skin and wounds clean and well conditioned. Whether the skin is intact or you have a wound, it’s important to maintain conditions that are not too wet, not too dry. Frequent peri-care means frequent incontinence care and washing body skin.

3. Protection
Protect the skin from the 3 M’s (from too much Moisture, Mechanical forces, and Microbes)
1. Pressure Reduction

Nothing is more important to stop pressure injuries than removing pressure. Period.

This booklet focuses on how to reduce pressure from the spots where about 90% of all bedsores occur; the lower spine/buttocks and hips, and the heels.

I focus on how to reduce pressure while a person is in bed because bedsores occur mostly to people who are bedbound.

Information of how to reduce pressure while in a wheelchair is not discussed in this booklet.

Repositioning / Turning

A person should be repositioned (turned) and supported to the side about 30 degrees. I call it a “low profile” positioning because it’s just far enough to remove pressure from the vulnerable areas of the spine, sacrum, coccyx and buttocks, but not too far over as to put pressure to the hip and shoulders.
Once a person is turned 30 degrees over *, he/she must be supported in that position with maximum pressure reduction and enough comfort and stability to sustain that pressure reduced position for as long as possible.

The best way to achieve optimal pressure reduction, comfort and stability is to support the entire back and pelvis evenly.

- The positioning support should not touch the wound or sore spot!
- The support should fit under the body to lift from under, not push from the side as a standard 30 degree wedge does
- The body weight of the person will hold the wedge down, which helps with stability
- By having the his/her entire back and pelvis supported but not twisted, he/she will feel fully supported in a gentle and ergonomically correct position. Shifting and sliding will be lessoned
How often should you reposition/turn a person?

It is important to understand that it is usually not possible to sustain a turned and pressure reduced position forever. Unless the person is totally immobile (unconscious), the natural shifting, reflex or spastic movements that are likely to occur will cause the person to gradually shift off or away from the originally supported position*. So the pressure on the sore spots will gradually increase over time.

How long is that time? You have probably heard that a person should be turned every two hours. But healthcare came up with this frequency only because we don’t really have a better answer. We turn people to reduce pressure. But the truth is, we don’t really know when it’s time to turn someone because we don’t know how much pressure is on the sore spot.

Turning every two hours is a lot. But must be done when the pressure reduction we got when we first turned the person is only lasting a few minutes. Turning every two hours is fine and dandy when you are in the hospital and there is an army of nursing staff to do the job. But when you are at home and likely its just the two of you, every two hours is a completely unreasonable pace. Both the turner, and the Turnee, need your rest.

The good news is, how often to turn is not a question of time, it’s a question of need. It’s time turn someone when there is pressure on the bony prominence, or wound. That’s why it is so important to get good support!

I recommend monitoring for correct position, support, and pressure reduction during the waking hours. You can reposition as needed, usually about every 4 hours. Turning can also be done after peri-care if peri-care is needed.
With the right equipment and a little practice, you and your person can eventually figure out how best to position so that you can achieve lasting pressure reduction. Ideally you should shoot for at least 6 hours through the night before you have to turn again.

* Note: If you are having difficulty with turning or supporting a good turned position (i.e. if it's difficult to turn or stay in the turned position, or your person refuses to be turned, see our “Learn to Turn” training modules, or call me. I have a few nursing tricks under my belt that may help.
Turning and Repositioning Supplies and Equipment

Don’t use pillows!
I know everybody tells you its ok. Most healthcare professionals suggest pillows both because we want to believe they work, and everybody has them. They are cheap and they don’t come with the whole host of “baggage” that typical triangle chunks of foam wedges do (which we discuss next).

But if you are reading this you probably learned what I did many years ago.

We will not stop bedsores until we stop kidding ourselves that simple pillows work.

Lets face it, pillows are not made for this job. They don’t hold a pressure reduced position for more than about 15 minutes, they can’t support the right angle, and the flatten out.

If a device does not sustain pressure reduction, it does not prevent or treat pressure injuries. Period.

When we pay less for the pillows we pay more for pressure ulcers.

How can this flat ol’ pillow possibly work?
Don’t use triangle 1 or 2 piece wedges

I had to design The BackBone(tm) wedge because typical foam wedges don’t work either.

The large single piece triangle wedges are not shaped to conform to the human body and so they push a person to the side, often far more than 30 degrees, instead of supporting under him/her. Pressure is placed on the spots you are supposed to avoid, and the side forces cause the person and the cushion to slide away from each other.

You can fit the two-piece wedges under the body and avoid sore spots, but the tradeoff for using smaller wedges is that they have to be more firm to support the lift. And since they do not provide even support across the back, they are very uncomfortable for your person.

Short wedges do not support the whole back. Also easy to place incorrectly, as in this example. He is turned too far toward his shoulder and hip, and if he rolled back onto the wedge, his lower back would be hyper-extended and very uncomfortable!

Long wedges touch the sacrum. They push from the side and too far toward the side hip and shoulder. There is lateral force from the persons body going onto the wedge. As she rolls back on the wedge, her body weight will push it away from her.
DO USE The BackBone™ 30 degree lateral turning wedge cushion

The Bedsore Rescue BackBone Positioning cushion is the only 30 degree lateral support cushion designed to achieve all the important goals of turning:

- Gentle, ergonomically correct and stable lift
- Support under the body and pelvis.
- No contact with sore spots
- Accurate 30 degree turn.
If you are reading this odds area you already have the BackBone(tm). But if for some reason you don’t, and you really don’t even want to get The BackBone, I have listed other options that will have to do.

Note: Don’t get a cheap wedge! If you are paying less than $45 dollars, odds are its made badly; bad foam, bad angles, not covered or covered with vinyl, cotton sheet. Vinyl is really bad for skin because it makes it sweat and you skin will breakdown quickly. If cotton or uncovered wedge gets solid, the wedge has to be thrown out because you cant wash foam and mold grows in wet foam.

**Alternative Support wedges:**

**No-slip wedge** by Intensive Therapeudics ([www.heelzup.com](http://www.heelzup.com))
This wedge is made with good materials. The design is not as stable and effective as the BackBone(tm) but works longer than pillows. Cost is $50 to $80

**Two Piece wedge systems**

Honorable mention: The PURAP system ([GetPURAP.com](http://GetPURAP.com)) is not a wedge but uses a thin fluid filled base and two supports on either side to distribute pressure. Although it does not remove pressure, it is better than nothing if side turning is not an option. Cost a whopping $390.00
How to Support a 30 Degree Turned Position Using The Bedsore Rescue BackBone™ Positioning Wedge

1. Turn as far as possible to side position

2. Angle the cushion that “tips” point toward bed

3. Press upper tip under scapula (shoulder blade)

4. Press lower tip under buttocks (or under, above or away from sore spot)
How to Support a 30 Degree Turned Position
Using The Bedsore Rescue BackBone™
Positioning Wedge (Cont.)

5. Place to avoid sacrum, or
wound area

6. Roll back onto the cushion

7. Adjust for comfort and relief.

8. May slide hand under the
cushion to assure proper
placement away from pressure
points / wounds.

- Place UNDER moisture control pads/chux and OVER boosting sheets.
- DO NOT cover with standard pillow case sheets, they make the cushion slip
How To Reduce Pressure From The Heels

The heels are particularly vulnerable to pressure injury for 3 reasons;

1. There is naturally excessive pressure on the heels when a person is laying down
2. The skin is very thin over the heelbone and so is more fragile
3. The heels are a long way from the heart, so the blood circulation there is not great, even in an otherwise healthy person.

For these reasons, we need to reduce pressure from the heels, even when immobility is short term or only slightly compromised.

To remove pressure from the heels, you have to remove the heels off the bed. Period.

There are effective ways and ineffective ways to remove the heels off the mattress. The principals to floating the heels are similar to turning: You want to remove pressure for as long as possible while maintaining good muscle-skeletal alignment and support, optimal blood circulation, and of course, comfort.

The actual distance you must lift the heels to get total pressure reduction is only about 3 inches. But people tend to put something under the legs that lifts the heels much higher than 3 inches just to be sure, and this can lead to other problems.

First, the higher the lift, the worse the blood circulation to the feet. And good blood circulation is essential for skin health.

Second, people are not designed to sleep with our legs elevated. Although it can be comfortable for a while, eventually we will need to
return our legs to a more natural, flat position. This explains why people who can will always try to move their legs off pillows and high cushions.

Lastly and most importantly, when the ankles are suspended and dangling for an extended period of time, not only is it painful, it can and does lead to muscle-skeletal and nerve damage and eventual foot drop. Foot drop is a permanent condition where the foot ‘falls’ inward position, making it very difficult to bear weight and walk.

So again, the best heel floating device will achieve a low-profile lift without restricting movement or dangling the ankle. Of course the best solution will maintain pressure relief for an extended period of time.

There are 3 types of heel floating devices people use: 1. Pillows, 2. cushions or pads, and 3. foam boots or wraps.

The best way to explore heel offloading is by type of device; and to understand the pro’s and cons. Yes of course I have a device better designed for this purpose!
Pillows for Heel Floating

Here we are again, trying to use pillows because we don’t have anything better around! Pillows are fine as a short term solution. But again, they are not made for this job and so there are a few problems.

If you have to use pillows;

Do: Use 2 Pillows, lengthwise, one under each leg

Do: Frequently check for movement, shifting and bottoming out

Dont: Put just one pillow under the knees. You won’t get good float and can cut off the circulation

Dont: Put the legs so high are too far behind the foot that the ankles are dangling, or the feet are above the heart

Complications of putting one pillow sideways under the knees

In this example, the right foot has pressure on the heels, and the left foot is dangling without support and is already turning inward, a sign of foot drop

This is the same person in two photos, with one pillow under the knees. As you can see, this person has shifted the legs to the side, and both heels are under max pressure on the mattress
How to Set Pillows To Float Heels

For best results put 2 pillows lengthwise, one under each leg

Both heels are floated but not dangling. Her legs are also supported.

The Anybone pillow is shaped to accommodate the heel. *But the Footbed is best for long term floating!

But watch for bottoming out & shifting!

Over time, the legs shift and the pillows flatten out. Now max pressure on this person’s heels.
Heel Floating Cushions

I prefer Heel Floating cushions/pads over foam boots (which i discuss next).

There are many many brands and styles out there. You may search Google or Amazon using the term “Heel floating cushions”. (You will also find heel floating boots, which i discuss next)

To help you decide what will work best, look for a cushion that is;

- 4” high or less so that you are not elevating the legs too high, and can also use it when your person is on her/his side
- Is at least 26” wide so that when your person moves his/her legs out, the heels are still floating
- Supports the entire length of the lower legs to the knee
- Covered with moisture resistant poly urethan or nylon (NOT Vinyl or plastic!)
- If the cushion can provide some ankle support that would be ideal. To my knowledge, The Bedsore Rescue Footbed by Jewell Nursing Solutions (coming soon!) is the only cushion designed to provide ankle support too.
- I recommend staying away from a cushion that restricts movement. But many people have to use side rales to “block” because your person keeps moving his/her legs off the cushion. Keep in mind that this usually happens because they are tired of having their legs elevated so high. The lower the profile cushion may alleviate this problem.

The price range for heel floating cushions, as low as $30 dollars for a so-so one and as high as $300.00 for a really nice one.
Examples of Heel Floating Pads/Cushions

The Heelbone Version 2 by Jewell Nursing Solutions

Designed to provide low profile support and floats other parts of the foot when person is turned or legs are bent. The Bedsore Rescue Foot Bed by Jewell nursing solutions is coming soon, and will have ankle supporting features.

The Liberty Heel Comfort cushion by Keen. This is a quality cushion with all the essential design elements mentioned above except for ankle support. Cost is $127

The Heelzup cushion by Intensive Therapeudics. Uses good quality materials & 3.5” lift. No ankle support and has the side rales. Cost varies, the lowest I found was $81.
Heel Floating Boots

Trying to figure out if and what kind of Heel Floating boots to get is especially confusing. There are hundreds of variations of products designed to wrap around each foot to protect the heel and in some cases the whole foot.

They are usually made with some kind of foam material with holes and velcro straps to secure the device to the foot. They can be made very well, and when they are, they can be very effective both to remove pressure to the heel, and to provide ankle support. And you will not find a Heel floating boot maker on the face of the earth that will tell you any different. They sell them by the ship load.

In the healthcare world they look like the holy grail of heel pressure reduction. Its an attractive idea because they (theoretically) stay with the foot no matter how the person moves. Securing the device to the foot offers what appears to be a sure fire method to prevent pressure to the heels. But they are not all they are cracked up to be.

In no other case does the term “Buyer beware” apply more than when we are talking about heel floating “boots”.

Don’t get me wrong, I’m not 100% against foam boots. As long as you understand that they are not the 100% solution they pretend to be.
To Wrap or Not to Wrap – Do you need a foam boot?

I recommend using a good foam boot when necessary. That is, when the person needs ankle support and pressure reduction.

- When a person is completely unable to move the feet/legs (unconscious state, total paralysis, braced or casted)
- When you have a very bad pressure wound (Always use a support cushion too!)
- Complain of ankle pain
- As a temporary support to help reduce risk of foot drop

Note: If a person is showing signs of foot drop, they need an advanced brace fitted by a physical therapist. It makes me crazy that these heel floater manufactures get away with claiming their boots can prevent foot drop. It’s not what they are designed for and they have never proven this claim.

Even if you get a good set foam boots, they can be useless if they are not used correctly. They are high maintenance devices and must be checked frequently to make sure they are on right. And they should be removed at least twice a day so that you can check the skin under them.

As for the not-so-good-ones; Well lets just say you have to use heel floating cushion to put under there too, because your still going to need something to take the pressure off. They just don’t work. (more next)
Which Foam Boot Heel Protector is Right For You?

If you have decided that using a foam boot is a good idea, by all means get a decent one/two. Use these criteria to help guide you in the right direction. An ideal foam boot will

- Remove **all** pressure from the heel
- Lowest profile lift (< 2”)
- Support the ankles and Achilles tendon
- Be slippery on the outside, breathable on the inside
- Minimal entanglement, binding and twisting
- Be comfortable enough that the person doesn’t try to get it off
- Not hyperextend the knees
- Be easy to place
- Be washable

Do’s and Donts when using Foam Boots?

- Read instructions for how to put on. It’s really easy to put them backwards/wrong
- Always put support under the lower legs at least (pillows or better yet a heel floating cushion) (Because these boots elevate the feet only, causing the knees to be hyper-extended)
- Check frequently to correct for tangling in the sheets and dislodged from foot.
- Not recommended for people who tend to get out of bed independently and are unaware of their physical limitations and surroundings (they try to walk with them on)
Complications to watch out for with foam boots heel protectors

- Binds the feet, restricts movement
- Tangles in bed sheets & blankets, causes ankle twisting and trapping
- Easy to slip or off and return (see photo)
- Cover up other foot problems (caregivers less likely to notice problems)
  - Possible for a person to try to walk with them on (some makers have addressed this problem but its still like trying to walk on pillows. High fall risk for unsteady people)
  - Difficult to put on
  - Frequently removed because of these problems. (as one of my wound care mentors always said “It doesnt work when its on the window sill)
  - Hyper-extends the knees if no support under the legs is used.

It is common for foam boots to catch and tangle. When they come loose like this the persons heel becomes “stuck” in high pressure. Check boots often to reset.
**Guideline for Foam Boots**
This is an overview of the styles that are out there. It is not a comprehensive list

<table>
<thead>
<tr>
<th>Type (In order of quality)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z-Flex Heel Protector Boot (by Molnlyke)</td>
</tr>
<tr>
<td>Cost ~$210</td>
</tr>
<tr>
<td>Medline HeelMedix</td>
</tr>
<tr>
<td>Cost ~$ 80 ea</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pro’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>✤ Best pressure reduction</td>
</tr>
<tr>
<td>✤ Great ankle &amp; Achilles support</td>
</tr>
<tr>
<td>✤ Minimal hyperextension of knees</td>
</tr>
<tr>
<td>✤ More comfortable</td>
</tr>
<tr>
<td>✤ Easy to place &amp; secure</td>
</tr>
<tr>
<td>✤ Can open to float heel without removing boot</td>
</tr>
<tr>
<td>✤ Good pressure reduction</td>
</tr>
<tr>
<td>✤ Good ankle support when placed correctly</td>
</tr>
<tr>
<td>✤ Nylon exterior reduces catching and tangling</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Con’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>✤ Fluid filled pads harden and so the boot must be disposed of after about 3 months</td>
</tr>
<tr>
<td>✤ Most expensive solution on the market</td>
</tr>
<tr>
<td>✤ Can catch and tangle</td>
</tr>
<tr>
<td>✤ Can become dislodged</td>
</tr>
<tr>
<td>✤ Feels heavy</td>
</tr>
<tr>
<td>✤ Hyperextends knees</td>
</tr>
<tr>
<td>✤ Warm, foot may sweat</td>
</tr>
<tr>
<td>✤ Velcro straps hard to peel on and off</td>
</tr>
<tr>
<td>✤ Catch, tangle and falling off common</td>
</tr>
<tr>
<td>✤ Ankle support not proven</td>
</tr>
<tr>
<td>Type</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>Sage Prevalon Boot and accessory Foot stabilizer</td>
</tr>
<tr>
<td>Heelift Glide foam boot (Heellift)</td>
</tr>
<tr>
<td>Ventopedic Heel and angle protector</td>
</tr>
<tr>
<td>Variations of foot/ankle + calf wrap heel floaters (with air, convoluted foam, Dacron fill)</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Less expensive</td>
</tr>
<tr>
<td>Provides some protection</td>
</tr>
<tr>
<td>Air filled are less sticky and catch less</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variations of foot/ankle + calf wrap heel floaters (with air, convoluted foam, Dacron fill)</th>
<th>Multiple manufacturers</th>
<th>Cost from ~$30 to $80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Super cheap</td>
<td>Inadequate pressure reduction by itself</td>
<td></td>
</tr>
<tr>
<td>Easy to put on</td>
<td>Sticky so does not stay on well</td>
<td></td>
</tr>
<tr>
<td>Fairly comfortable (except foam may be scratchy)</td>
<td>Scratchy on skin</td>
<td></td>
</tr>
<tr>
<td>Ok to use only if legs are floated on pillows of cushions</td>
<td>No ankle support</td>
<td></td>
</tr>
<tr>
<td>Sheep skin feels good on the skin</td>
<td>May hyperextend legs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Catch, tangle and falling off likely</td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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<tr>
<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>A. Wraps around ankle but not foot (cost ~$20)</td>
<td>B. Padded sleeves (cost $5 to $25/pair for gel padded sleeves)</td>
<td>C. Heel sized Gel pads</td>
</tr>
</tbody>
</table>

- A. Good stability and pressure relief, inexpensive
- B. Stays on like a sock, good for restlessness if used with heel cushion
- C. Very unlikely to stay in place

- A. Hyperextend knee, no ankle support, Catch and falling off likely
- B. Little to now pressure reduction, gets twisted
- C. Very unlikely to stay in place
Peri-Care

If you’ll excuse the pun, moisture and pressure are bedfellows of pressure ulcers. Moisture, especially urine and stool, soften and fry skin, making the skin fragile and prone to breaking to an open wound. If you do nothing else but control moisture and pressure, you will cut both the occurrence and healing time down significantly.

How to provide good Peri-care

The number one rule of good peri-care is keeping a person clean and dry from urine and stool. Try to clean urine and stools from skin asap. Best to use soaps and soft wipes that are made for peri-area cleaning. They are easier to use because they come in spray bottles and pre-moistened cleaners.

❖ Always clean front to back
❖ Avoid rough washcloths if possible, they are rough on skin.
❖ Always moisten wipes first (water on paper wipes made for this purpose, or baby wipes)
❖ Minimize wiping, pat to clean as much as possible
What to use and not use for Peri-care

Don’t use

Don’t use harsh disinfectant  chemically treated solutions like Chloroprep, Alcohol based or Hydrogen Proxide based solutions. They may kill bugs but they are very hard on skin. And if there are wounds on the skin they will sting like the dickens and slow healing.

Don’t use harsh soaps. Do not use any soap that advertises strong cleaning features like grease cutting (dish soap) deodorant (Like Dial soap) or Antimicrobial (only creates superbugs!)

Don’t use incontinence briefs (diapers)  while the person is in the bed or chair. Typical incontinence briefs will retain urine and stools against the skin, eventually damaging the skin at best, and leading to a bedsore at worst. Believe it or not it is a lot easier to keep a person clean and dry without them when you use the right supplies. Below are some alternatives to diapers that work much better.

DO NOT use plastic or vinyl backed products. (aka polyurethane). Perhaps the greatest myth in management is that plastic backed chux absorb moisture. They dont. Plastic backed only prevent moisture from getting on the bed. They are only a few thin layers of cotton. Not only will a person sweat when on a plastic backed chux, all moisture puddles, leaving your person soaking in a bath of urine or stool, or both, making the situation much worse.
Do use for Peri-Care

Do use soaps designed for Peri-Care. There are literally thousands of brands of soaps designed for peri-care.

Google or Amazon search terms: “Peri soap”, “Perianal cleansers”

Look for products with these features:

- Gentle
- pH Balanced
- Designed to “emulsify”, or specifically breakdown feces and urine.
- With lotion is better
- The ones that come in trigger spray bottles are easier to use

Do use soft moistened wipes designed for this purpose.

Baby wipes (any brand without harsh chemicals of disinfectants) will do. Or use dry paper wipes that are moistened with warm water or perisoap (such as Attends dry wipes) (search “Dry wipes”)
Do Use alternatives to incontinence briefs (diapers)

Fortunately, there are better ways to keep urine and stools away from the skin as much as possible, and they are easier to manage too.

1. **PAPER backed pads (aka paper chux).**

Place **paper backed** chux under your persons back and trunk at all times. Paper backed chux allow the skin to breath and wick moisture away from your persons skin. When supporting your person in the turned position, place the wedge cushion *under* the paper pad, and *over* any boosting sheet you may have.

There are some really great paper chux out there. They are a little pricey but if you can avoid using diapers it offsets the cost. Also you can cut them in half to save a little more.

Google or Amazon search terms

- Ultrasorb by Medline
- Maxisorb by Medline
- Covidian Pads by Covidian
- Cardinal Health Premium Pads, or stock #UPR3036 (best quality) or #UPPM 1824 (second best quality, or #UPPMX 2436 (Ok quality)

The Medline products work well because they have gel beads in the pad that retain and wick moisture away from the skin. But they are more pricey. Since Medline only sells in bulk, Independent distributors by large quanties and re-package for sale. So prices are all over the board. You should be able to find them for around ~$1.00 per sheet.

Covidien and Cardinal Health pads are good and a little less expensive because there’s no gel in the material. You should be able to find these for about .80 cents per sheet.
2. Do use absorbent pads that insert & remove from the top.
I call them “top loading pads”. You can catch urine from the top and switch out the pads/wraps whenever necessary. And it much quicker and easier. Don’t get me wrong, you still have to do the turning and cleaning, but this way you can keep the skin dry when its necessary as opposed to having to wait until you have time or the help to get to it.

(**** Always use paper chux pads under your person too *****)

My favorite “top loading” incontinence pads are:

**Females:** I like “Poise pads” by Kimberly-Clark. Search “Poise Pads” or they are available at all the big retailers; Walgreens, Rite-Aid, CVS. They are extra absorbent pads shaped like maxi pads. You can put them in place like maxi-pads. Be sure to tuck all the way to the mattress surface. After removing a solid pad, clean from the front using peri-soaps and wipes. Check the incontinence pad below. If its soiled then you know its time to change that too. Yes, you can use maxi-pads but they don’t capture the urine as well.

**Males:** Use products designed to wrap around to cover his parts. Search for “male incontinence wraps”. I like “Urine Guard” by Quest, or “Quickchange Absorbent male incontinence wraps” by Medline. If you are looking for a use for those diapers you bought but cant use any more :), You can always place them sideways and wrap the diaper under and around the male genitalia to keep it from leaking down to the back. Some people even cut a hole in the diaper and put the parts in there, but that can be messy.

**Condom catheters** can work as well. But they are sometimes problematic to put on, they tend to leak a little, and they can damage on the skin that they cover. But if condom catheters are working for you, its still a good idea to use a wrap to catch the leaking.
Protection

Above and beyond good pressure reduction and good peri-care, you are going to have to provide good protection from 3 external threats;

1. Protect from Moisture
2. Protect from Mechanical forces
3. Protect from Infection

Protect from moisture

This is the next level of good peri-care. After each cleaning, it is important to apply a barrier cream film over the peri-skin to protect from the next round of moisture.

You can use basic barrier creams when the skin is healthy. “Health” means if the skin is free from incontinence dermatitis (red, irritated skin) or moisture associated skin damage (open wounds from moisture, looks like really bad diaper rash).

Use advanced and medicated creams when skin is irritated and / or broken. If there is incontinence dermatitis (red, irritated skin) or moisture associated skin damage (open wounds from moisture, looks like really bad diaper rash).

****Always consult a wound care nurse asap if the skin is broken in the peri-area ****

Do Use for moisture protection

There are two types of moisture barrier creams depending on how the persons skin looks.
Standard moisture barrier creams are good when the persons skin is healthy. There are a gazillion barrier creams so they are easy to find.

You can search simply “Moisture Barrier Cream” online or you can get it from any drug store chain; Walgreens, CVS, Rite Aid etc. Be sure it states it is designed to protect against urine and stool.

Use advanced and medicated barrier creams if there is skin breakdown; whether it be from the moisture (called Incontinence dermatitis (IAD) or Moisture Associated Skin Damage (MASD), or stage 2 pressure injury *, you will have to use a more powerful medicated cream with barrier properties.

****Always consult a wound care nurse asap if the skin is broken in the peri-area. This article is not intended to be a wound care instruction article. If your persons skin is damaged, you should have a wound care nurse take a look.
Medicated Moisture Barrier Creams

There are 2 types of medicated barrier creams that I recommend:

1. **Calmoseptine.** I love this stuff. It works great. It is a moisture barrier cream with a high concentration of zinc for antimicrobial action and assists a little with cellular healing. And they added in some menthol for a soothing cooling feel. Plus it is easy to wash off when you are doing peri-care cleaning. (but you don’t have to go out of your way to get it all off. A little leftover residue is fine). Calmoseptine is available online or in Walgreens and CVS.

2. **Coloplast Baza Antifungal moisture barrier cream.** This is a moisture barrier cream that has antifungal medication. Use this if you suspect your person has a fungal infection*. There are other brands out there. Just search “antifungal moisture barrier cream”. Make sure the product boasts moisture barrier protection too.

**Do NOT Use for moisture protection**

Avoid barrier creams designed for babies (Desitin, etc) many of them are designed to stick like glue, and they stick too well.

Do not confuse “Moisture Barrier Cream” with “Barrier films”. Barrier films are designed to protect the skin against tape, but they have little or no moisture resistant properties.

Do not confuse “Moisture Barrier Cream” with simple moisturizers. Barrier creams protect against moisture, but they don’t moisturize the skin. And moisturizers moisten the skin, but they don’t protect against moisture.
Protection from Mechanical Forces

We’ve already covered the mechanical force of pressure. But there are two others that can and do cause pressure injuries. The mechanical forces of friction and shear. Simply put, this means dragging and shifting the skin against the mattress or chair. When this happens, fragile and already compromised skin breaks, or tears, and now you have an open wound.

Avoiding friction and shear is very difficult to accomplish because it is so often depends on circumstances beyond our control. Often we must assist with moving from here to there, and when a person cannot lift themselves, sliding is the immediate option. A person can actually do it by themselves too, such as when a person shifts or spasms. A weak or immobile person will slide/slump down on the bed as the head of the bed is elevated. The slide causes friction and shear.

Even the correction for sliding/slumping can cause a friction and shear injury as we try to help a slumped person (called boosting). So your persons skin is subject to mechanical friction and shear both on the way down and on the way up.

In all these cases you cannot do much about the laws of physics: there will be slumping, sliding and shifting. What we have to do is try to minimize how often the movement happens, and how much resistance, aka friction, is exerted against the persons skin. That means we should try to maintain the persons position so that there is maximum comfort and minimal shifting and sliding, and use mechanical lift equipment whenever needed and possible.
Techniques to minimize mechanical forces

1. Good support and comfort is critical to minimizing shifting and involuntary spasms. Try have the person in a position of best possible ergonomic alignment. This means supporting him / her in good muscle skeletal alignment in a natural position without twisting or forcing the joints either to straight or too bent. Support as much of the body surface as possible. The Backbone is designed to support these ergonomic rules. See my training power point on positioning for more details about ergonomic positioning.

2. Keep the head of the bed flat or as low as possible. The first rule is to keep it less than 30 degrees. But its really better to keep it flat if possible, that way there is no sliding or boosting necessary.

3. If you cant keep the head of the bed flat, then raise it only an inch at a time to prevent momentum. So press the button for a second, stop, then do it again until you get to the minimum height necessary for comfort and breathing.

4. Always encourage the person to do as much as he/she can to assist. A caregiver should not really try to lift more than about 30 pounds of somebody else’s weight.

If you find that the assistance your person requires is more that about 30 pounds, you are going to need lift equipment. Information about lift equipment out of the scope of this article, but coming soon! In the mean time a physical therapist or occupational therapist is the best clinician to consult about lift equipment.
Equipment/Supplies to use and not use to protect against mechanical forces:

**Sacral Boarder Foam Dressings** are foam padded dressings that have a gentle adhesive to stick against the skin. They are very helpful to provide some added protection against friction and shear, and they can be used to protect most wounds, and over most bony prominences.

You can search “Sacral boarder dressings” online. Or now some drug stores carry them. They come many sizes and shapes, so pick the smallest that will cover the body part because they are pricey, and there is a wide range of quality. Even the cheapo ones are about $8 to 10 dollars each.

The cheapo ones work ok but they tend to fall off more easily and they are not as good at protecting wounds. The cheapest brand I know of is the Medline Optifoam brand. The really good ones are Mepilex by Monolike and Allevyl by Smith Nephew.

There are two significant complications to sacral boarder dressings you should be aware of

I. As hard as the manufactures try to design them to seal, all sacral boarder dressings soak up urine and stool like a sponge. So if you are having trouble keeping that area dry and the sacral boarder foam dressing keeps getting wet, you should stop using it.

II. Movement (boosting, sliding, etc) can and do disrupt the dressing and cause it to clump up. If you can straighten it out and re-apply it, great. But lumping and clumping is worse than nothing at all, so if you find you cant prevent it from lumping and clumping, stop using it.
Boosting sheets (aka lift sheets, sliders, transfer sheets)

Boosting sheets are sheets you keep under the person and use as an aid to turn and boost. They are usually equipped with handles and have a slippery bottom that will significantly reduce friction and shear. They are safer for your person and they make things a whole lot easier for you.

There are many types of transfer sheets but not a lot of variation.

Use the search terms

- Lift sheet
- Boosting sheet
- Turning sheet

Look for sheets that say they have

- Friction reducing surface
- Has handles
- Skin friendly or Breathable
- Re-usable and washable
- Do not get sheets designed for use with lift equipment. (lift equipment sheets rarely have friction reducing slippery undersides).

Ideally there are two people using the lift sheet so that the person can be lifted first, and then slide/boosted. But under some circumstances a single person can use them, as long as they have a slippery underside.

For more information about how to boost and turn, refer to my “Learn to Turn” trainings.
Complications with Boosting Sheets

There are a few draw backs to boosting sheets that are important to mention.

I. They can get wrinkled and lumpy under your person, which is bad for their skin (lumps can cause bedsores too!)

II. They can be so slippery that it may be next to impossible to prevent slumping and sliding down. Its really great that its easy to lift up, but not if they just slide right down again!

III. They are have to be re-set all the time because they tend to ride up a little more each time your person is boosted.

IV. The slippery ones don’t “breath” very well, so you have to use absorbent paper chux under your persons entire body to protect their skin.

V. The full length ones get in the way of peri-care. You have to use it to turn the person, then drop the sheet. If your person cannot stay on his/her side without support, then you’ll have to use boosters that fit under the back only. For more information about how to do this, see my Learn to Turn modules
Protection from Microbes

Pressure wounds are scary enough. But the most frightening thing is the threat of infection. It would not be appropriate to try to go into good wound care here. But there are some basic principles of infection prevention that are universal to any situation whether there is a wound or not.

***Always seek the consultation of a wound nurse for wound care ***

1. Keep the wound clean with frequent washing. The best way to prevent infection is to keep things as clean as possible. Clean the linens often, the body often, wear gloves when doing peri-care, and wash your hands before and after contact. It’s always a good idea to wash your person’s hands too. Use soaps that are gentle on the skin, not with strong disinfectants. But wash counter tops and equipment with disinfectant wipes like bleach wipes or alcohol based wipes.

If you’re on a tight budget you can mix 1 part bleach with 9 parts water for a perfect 10% bleach cleaner. Use disinfectant wipes (bleach, alcohol, chlorohexidine or hydrogen proxide base solutions are all fine) to clean your Backbone™ positioning wedge.

Again, If your person has a bedsore a wound care clinician should be consulted and treating it.

My recommendation is to clean wounds at each dressing change and when they get soiled. If its very deep it may only be appropriate to use normal saline rinse, but most wounds can be gently washed with wound soap. Mild soaps like Skintegrity by Medline or Dermal Wound Cleanser by McKesson are good if the wound is clean. If your worried that the wound is getting infected, please notify your wound clinician.
Disinfection solutions made for wounds include Hibicleanse by Molnlycke or I like Vashe cleanser by Steadmead.

2. Cover broken skin. Wounds like to be covered so that they are kept in a moist environment, not too dry, not too wet. So most of the time you will need to change the dressings at least once per day to maintain this environment. Sometimes it’s not possible to put a dressing on periang area wounds, but if that is the case you should ‘cover’ broken skin with a medicated cream such as Calmoseptine or Eumaid.

(Do not apply ointments to wounds that have exposed muscle, tendon and/or bone. Generally these serious wounds require wound vac dressings at best, and at worst, surgical intervention.)

Again, appropriate wound care depends on the wound, and it can get complicated. So I cannot possibly provide all details for you here. If you have wound care questions, please consult a wound care clinician.

Thank you for reading this. I hope you found this article helpful. And I wish you all the best in your battle against pressure injuries. You can do it! If you have any questions, comments please don’t hesitate to contact me!