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WOUND CARE PROTOCOL
TO BE USED IN CONJUNCTION WITH
AUSTRALIAN MEDICAL SHEEPSKIN

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Endorsing Pressure Reduction, Friction and Shearing

WOUND PROTOCOL

Using Australian Medical Sheepskin

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WOUND PROTOCOL is a directive provided for the prevention of new wounds, treatment of existing wounds, and to maintain healthy tissue growth by using Australian Medical Sheepskin.

Desired Outcome

Pressure reduction, moisture reduction, shear reduction, standard body temperature:

- **Reduce pressure** on the bony prominences of the body, i.e.; heels and malleolus, elbows, coccyx, scapula, cranial, and ears.
- **Reduce moisture** build up at skin interface due to perspiration, incontinence, or wound exudate. Process is called **absorption**.
- **Reduce shearing** on all at risk areas as well as shearing due to spasms. Arthritis sufferers further benefit from this process due to fiber movement at skin interface.
- Maintain **standard body temperature** (98.3 degrees) **maximizing blood flow**. Process is called **insulation**

Anatomy of Sheepskin

- **Fiber content:** Approximately 75,000 fibers per square inch provide pressure reduction to bony prominences when laid on or worn as a garment.
- **Hollow fiber:** All sheepskin wool fibers are hollow allowing for tracking of excess moisture from patient skin tissue while at the same time creating standard blood flow due to insulation through an air space.
- **Fiber movement:** Wool fiber moves with skin tissue as an individual is rolled or turned
- **Leather:** As leather absorbs moisture like a chamois does when washing a car, excess moisture from skin tissue is absorbed into the leather via the hollow wool fiber. Reduction of moisture at the skin interface allows increased blood flow to subcutaneous skin tissue, maintaining proper skin surface turgor.

Causes of Wounds

- Pressure
- Moisture
- Shearing
- Insufficient body temperature (decreased blood flow)
- Trauma
- Infection
- Burns
- Surgery

Pre-assessment of Wounds

- 1 Braden Scale Risk Assessment
 - 2 Pressure ulcer staging – AHCPR (Agency for health care policy and research)
 - 3 Pressure ulcer staging – NPUAP (National Pressure Ulcer Advisory Panel)
- Grade one = reddened skin
 - Grade two = partial thickness skin tissue
 - Grade three = full thickness skin tissue, may erode to deep tissue but not muscle
 - Grade four = full degradation of dermal and muscle tissue degrading to bone
- There are a variety of methods for staging

Areas of Use in Wound Care

Prevention, Treatment and Maintenance (PTM)

- **Prevention** of wounds for at risk individuals rating 12 or lower on the Braden scale at admission (1 x bed pad and 1 x pair heel protectors).
- **Treatment** of pre existing wounds.
- **Maintenance** of skin tissue preventing wounds from returning.

Patient Requirements

- Adequate diet, with higher protein intake (see pages 5 and 6)
- Adherence to prescribed medications
- Circulation (adequate blood flow)
- Care and supervision of qualified medical help

Diet

The human body requires protein in order to sustain growth and repair (granulated tissue). Proteins are made up of smaller units called amino acids. There are about 20 different amino acids, 8 of which must be present in the diet (essential amino acids). This allows for a wide range of food groups and types of foods (see page 6) which contain needed dietary protein.

If you have a finicky eater, try to find something they like to eat from the protein list, there may be an old treat! Where solid foods are not tolerated there are booster drinks and liquid meal replacements, all of which contain high levels of protein, and are available at most supermarkets and health food stores. Quantities of protein and Amino acids will be listed on the label.

Required Protein Intakes

The old *Recommended Daily Amounts* (RDA) have been replaced by the term *Reference Nutrient Intake* (RNI). See below for the RNI for specific age groups.

Where a wound is present at the skin interface, the human body requires up to one third more than the RNI to cope with the healing of that one wound. The increase in protein intake required for multiple wounds and varying grades of wounds should be calculated by qualified medical personnel. It is recommended that protein intake should not exceed twice the RNI.

****REFERENCE NUTRIENT INTAKES (RNI) FOR PROTEIN**

AGE	RNI Grams/Day
Infants & Children	
0 to 3 months	12.5
4 to 6 months	12.7
7 to 9 months	13.7
10 to 12 months	14.9
1 to 3 years	14.5
4 to 6 years	19.7
7 to 10 years	28.3
Males	
11 to 14 years	42.1
15 to 18 years	55.2
19 to 49 years	55.5
50 + years	53.3
Females	
11 to 14 years	41.2
15 to 18 years	45.4
19 to 49 years	45.0
50 + years	46.5
Pregnant women	51.0
Breast feeding women	53.0 - 56.0

****DIETARY SOURCES OF PROTEIN**

FOOD SOURCE	Serving Size	Wht/Vol in grams	Protein Grams
Ground Beef (extra lean)	6 oz./ 175g	170	48.6
Chicken (roasted)	6 oz./ 175g	170	42.5
Fish	6 oz./ 175g	170	41.2
Tuna (water packed)	6 oz./ 175g	170	40.1
Beefsteak (broiled)	6 oz./ 175g	170	38.6
Cottage Cheese	1 cup	225	28.1
Chick Peas	7 oz./ 200g	200	16.0
Cheese Pizza	2 slices	128	15.4
Yogurt (low fat)	8 oz.	225	11.9
Baked Beans	8 oz.	225	11.5
Tofu	5 oz.	140	10.3
Whole Milk	1 cup	244	9.2
Lentils (cooked)	1/2 cup	99	9.1
Skim Milk	1 cup	225	8.4
Split Peas (cooked)	1/2 cup	99	8.1
Muesli	2 oz.	56	7.7
Kidney Beans (cooked)	1/2 cup	87	7.6
Soya Milk	1 cup	225	7.5
Peanuts	1 oz.	30	7.3
Cheddar Cheese	1 oz.	28	7.1
Egg (boiled)	1 large	50	6.9
Macaroni (cooked)	1 cup	140	6.8
Whole Wheat Bread	2 slices	56	5.4
White Bread	2 slices	60	4.9
Brown Rice (cooked)	7 oz./ 200g	200	4.4
White Rice (cooked)	1 cup	158	4.3
Broccoli (cooked)	5 in. piece	140	4.2
Baked Potato	8 oz.	200	3.0
Corn (cooked)	1 ear	77	2.6
Porridge (cooked)	6 oz.	200	2.4
Peanut Butter *	1 tbsp	15ml	2.0

****SAMPLE MEAL PLAN TO MEET THE RNI(45g)
FOR ADULT WOMEN FROM PLANT SOURCES**

	Serving size	Wht/Vol in grams	Protein grams
Breakfast			
Muesli	2 oz.	60	7.7
Milk	1 cup	225	4.6
Lunch			
Toast	2 slices	30	7.0
Baked Beans	8 oz.	225	11.5
Evening Meal			
Brown Rice	7 oz.	200	4.4
Tofu	5 oz.	140	10.3
Total Protein Intake from non-meat source			45.5

**www.hsph.harvard.edu/nutritionsource/protein

**www.vegsoc.org/info/protein

* Jiffy original smooth

Areas of Product Use

Although the following procedure may seem challenging, due to the allied affects of sheepskin, we have seen some success by using the pelt directly on the wounds.

Prevention

- Prevention of wounds is achieved by placing bed pads under the individual when sitting or lying. This provides reduction of pressure, moisture, and shearing while maintaining standard body temperature; Boots, slippers, heel, elbow and palm protectors, used as required, provide protection for the body extremities.
- Prevention of recurring wounds where Australian medical sheepskin is used on the at-risk areas of the body as stated in the first paragraph of this segment, or as dictated by the Braden scale.

Treatment

- Pre-existing wounds from grade two, three and four where the skin tissue is broken would require coccyx pads to be used as a wound dressing. The wool fiber is placed directly in contact with the wound site. Coccyx pads are held in place with sheepskin garments as above or gauze dressing (no adhesives are to be used due to the risk of maceration). A five by five inch pad is used inside foot wear on toes, heels (medial and lateral malleolus), inside incontinence garments, etc. Dressing changes are required when moisture presents on the leather of the pad. More exudate from the wound requires more frequent changing, i.e. venous ulcers. Coccyx pads should be laundered with Skinsan detergent prior to being used as a direct dressing on open wounds to remove any excess fiber. Should wool fibers become involved or dried into the wound, use a saline wash to remove from the wound. Soiled coccyx pads require a pre-rinse prior to laundry. Re-dress wound using a laundered coccyx pad after cleansing wound site with saline. For wounds larger than twenty five square inches, use more than one pad to accommodate wound area. As the wound decreases in size, dressing changes will become less frequent due to less wound exudate.

Note: Mechanical debriding is not necessary with the use of this product, necrotic tissue will self slough when ready. Non-occlusive dressing should be used on skin sensitive areas.

Laundry

- Australian medical sheepskin may be laundered domestically (at home) or commercially.
- Commercial laundering is at 80 degrees centigrade for 8 minutes to achieve thermal disinfection.
- Bacterial disinfection is obtained with Skinsan liquid detergent.
- Tumble dry to 60 degrees centigrade, (if there is no temperature gauge on drier, use lowest setting).
- Skinsan detergent must be used in all laundering scenarios to maintain the integrity of the leather and wool fiber.
- Bleaching of the wool fiber will occur if body fluids are left too long before rinsing or laundering.

LAUNDERING INSTRUCTIONS AUSTRALIAN MEDICAL (GREEN) SHEEPSKINS

MACHINE WASH AT HIGH TEMPERATURE:

- For effective washing and disinfection, always use Skinsan* detergent, which has no enzymes, phosphates, peroxide, alkali or bleach. Use approximately 15ml (1 tbsp) of Skinsan* detergent per kilogram (2.2 lbs) of sheepskin.
- A soiled skin should be immediately rinsed in cold water.
- The washing machine should first be put through a rinse cycle to remove any phosphates, enzymes, peroxide, alkali &/or bleaching agents which could cause irreversible damage the leather.
- Machine wash in hot water, up to 60°C, on gentle cycle for 10 minutes. Set machine for warm water rinse.
- To achieve high level thermal disinfection wash again (without Skinsan) for 8 minutes in 80°C water. Set machine for cold water rinse.
- Spin off excess water.
- Drying: Tumble dry on warm setting – do not exceed 60°C. Avoid over-drying.
- Alternatively, hang dry away from direct heat or sunlight.
- Before leather is fully dry, flex skin vigorously to restore leather softness.

HAND WASH:

- Alternatively, the skin can be hand washed in warm water with Skinsan detergent. Rinse and squeeze to remove excess moisture. Hang dry in away from direct heat and direct light. Before leather is fully dry, flex skin to restore leather softness.

Note: Initial laundering will appear to have excessive fiber loss. This is due to freshly cut sheepskin edge. Coccyx pads should be pre-washed to remove any loose fibers which may adhere to wounds. Fiber loss should not continue after initial laundering. Add a tablespoon of salt to the initial wash to keep the colour vibrant. Velcro straps should be fastened before laundering to minimize fiber entrapment in the Velcro.

- * **Warranty is void if laundered in anything other than Skinsan Detergent.**
- ****Warranty is valid for one year from date of purchase, or 50 in-home washes, or 75 washes in institutional laundry.**