

# **ACI Statewide Burn Injury Service**

# Physiotherapy and Occupational Therapy Clinical Practice Guidelines

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Street address: Level 4, Sage Building 67 Albert Avenue Chatswood NSW 2067 Postal address: Agency for Clinical Innovation PO Box 699 Chatswood NSW 2057

T +61 2 9464 4666 F +61 2 9464 4728 info@aci.health.nsw.gov.au www.aci.health.nsw.gov.au 15 Octob er 2012 **Acknowledgements** These guidelines were developed with the collaboration of the members of the Physiotherapists and Occupational Therapists of the ACI Statewide Burn Injury Service; from Royal North Shore Hospital (RNSH), Concord Repatriation General Hospital (CRGH) and the Children's Hospital at Westmead (CHW).

Jessica Allchin	Occupational Therapist CRGH
Jennifer Baldwin	Physiotherapist CRGH
Stephanie Ball	Physiotherapist CHW
Clare Batkin	Occupational Therapist CRGH
Lisa Bowker	Occupational Therapist RNSH
Julie Bricknell	Physiotherapist RNSH
Anne Darton	Network Manager (Physiotherapist) ACI SBIS
Rachel Edmondson	Physiotherapist RNSH
Emily Lawrence	Physiotherapist CRGH
Frank Li	Physiotherapist CRGH
Andrea McKittrick	Occupational Therapist RNSH
Michelle McSweeney	Occupational Therapist CRGH
Cheri Templeton	Physiotherapist CHW
Claire Toose	Physiotherapist CHW
Stephanie Wicks	Physiotherapist CHW

AGENCY FOR CLINICAL INNOVATION Level 4, Sage Building 67 Albert Avenue Chatswood NSW 2067

Agency for Clinical Innovation PO Box 699 Chatswood NSW 2057 T +61 2 9464 4666 | F +61 2 9464 4728 E info@aci.nsw.gov.au | www.aci.health.nsw.gov.au

Produced by: Anne Darton ACI SBIS

Ph. +61 2 9463 2105 Email. anne.darton@aci.health.nsw.gov.au

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# **TABLE OF CONTENTS**

1.	INT	RODUCTION	1
	1.1	Purpose	1
2.	тн	ERAPY FOR BURN INJURIES	1
	2.1	Exercise	3
		2.1.1 Background/Rationale	3
		2.1.2 General Principles	3
		2.1.3 Intervention	4
		2.1.4 Precautions and Contra-indications	6
	2.2	Splinting and Positioning	7
		2.2.1 Background/Rationale	7
		2.2.2 General Principles	8
		2.2.3 Precautions	11
		2.2.4 General Issues	12
	2.3	Skin care	12
		2.3.1 Background/Rationale	12
		2.3.2 Procedure	12
	2.4	Massage	12
		2.4.1 Background	12
		2.4.2 Procedure	12
		2.4.3 Precautions/Considerations	13
	2.5	Compression	13
		2.5.1 Background/Rationale	13
		2.5.2 Procedures	15
		2.5.3 Precautions/Considerations	16
	2.6	Silicone products	17
		2.6.1 Background/Rationale	17
		<b>2.6.2</b> Procedures (for sheet silicone)	17
		2.6.3 Precautions/Considerations	17
3.	CO	SMESIS	18
	3.1	Camouflage make-up	18
	3.2	Tattooing	18
4.	RE	CONSTRUCTIVE SURGERY	18
5.	5. WEBSITE LINKS		19
6.	BIBLIOGRAPHY/FURTHER READING		20

## 1. Introduction

#### 1.1 Purpose

A burn injury has a very unique and significant effect on the individual's skin and whole body. The specialist knowledge and skills of the multidisciplinary team are essential to successfully treat a patient with burn injuries to reach their full potential recovery.

The following guidelines were developed by the Physiotherapy and Occupational Therapy specialist staff working within the ACI Statewide Burn Injury Service (SBIS) from the tertiary Burn Units at the Children's Hospital at Westmead (CHW), Royal North Shore Hospital (RNSH) and Concord Repatriation General Hospital (CRGH). The three Severe Burn Units that make up the NSW ACI Statewide Burn Injury Service treats approximately 2500 burn cases per year, 900 of those being admitted in these units for their treatment.

Physiotherapists and Occupational Therapists as part of the specialist burn multidisciplinary team have many overlapping skills and roles in the care of burn patients. The information in the guideline is for 'burn therapy' which may be either or both Physiotherapists and Occupational Therapists. However the emphasis during different phases of care and for individual patients during their rehabilitation may change between the two disciplines.

The guidelines specifically concern burn therapy and can be read in conjunction with other information that can be found on the <u>ACI Burn Injury Service web pages</u> to give more extensive background on pathophysiology, surgical and non-surgical wound management, psychosocial care, nutritional care and speech pathology. There are <u>NSW Health Burn</u> <u>Transfer Guidelines</u> that are used to ensure the right patient is treated in the right facility.

This guideline is a consensus document and describes the principles of burn therapy used in NSW Burn Units. The guideline is intended to be useful to support therapists new to the area of burn care. The guideline is not intended to be prescriptive but aims to give sound principles of burns therapy. The guidelines are always to be used with sound clinical reasoning.

If further explanation or clarity is required in regard to this guideline it is important to contact therapists in the burn units.

Royal North Shore Hospital Severe Burn Unit	Concord Repatriation General Hospital			
Ambulatory Care/Burns Unit	Ambulatory Care/Burn Unit			
Tel. 9463 2108 (b/h), 9463 2112 (a/h)	Tel. 9767 7775 (b/h), 9767 7776 (a/h)			
Fax. 9463 2006	Fax. 9767 5835			
The Children's Hospital at Westmead				

Ambulatory Care/Burns Unit Tel. 9845 1850 (b/h), 9845 1114 (a/h) Fax. 9845 0546

## 2. Therapy for Burn Injuries

Scarring from burn injuries leads to many adverse consequences, including limitation of normal function and mobility, restriction of growth, altered appearance and adverse psychological effects.

Burn therapy starts immediately or as soon after presentation for treatment as possible and continues till scar maturation which is commonly 12-18 months. The time to reach scar maturity varies between individuals.

**Scar Management and Burn Therapy** are broad terms that cover the principles and aspects of therapy that are described below and include:

- Exercise
- Splinting and positioning
- Skin care
- Massage
- Compression garments
- Silicone and scar softening products

It is essential for any burn therapist to view the burn injury without dressings or coverings to properly assess the depth and location of the injury, particularly with respect to joints and effect of any movement

The underlying pathophysiology of scarring is not fully understood but can be explained in simple terms as the laying down of disorganised connective tissue in the newly forming scar. As the scar forms it can become raised, tight, dry, firm, painful and itchy. This type of scar is known as a hypertrophic scar, and is characterised by erythematous, pruritic, raised, fibrous lesions. Hypertrophic scars typically do not extend beyond the boundaries of the initial injury and may undergo partial spontaneous resolution.

These properties of hypertrophic scar tissue are what underpin the principles of scar management and burn therapy. Hypertrophic active scars more commonly affect flexor surfaces of joints, high movement areas such as the face, and concave areas such as axillae and web-spaces between digits.

Burn injuries, as a consequence of the damage and the body's repair processes, commonly causes significant pain and pruritus (itch). The pain can be varied in its manifestation from the acute phase to longer term chronic pain that can be neuropathic in nature and related to hypersensitivity and vascular issues. Therapy for burn scars addresses the management of this pain and itch through all areas including exercise, skin care, massage, compressing and scar softening.

The consideration of psychological factors potentially affecting participation in burn therapy is also important including pre-morbid life experiences of trauma, personal resilience, availability of external supports and lack of motivation due to falling into the "sick role" (see SW guidelines on website)

Paediatric patients often have some differences or exceptions that are highlighted at the end of each section.



#### Hypertrophic scarring

#### 2.1 Exercise

#### 2.1.1 Background/Rationale

Exercise aims to maintain and restore range of movement, strength, exercise tolerance and function.

- Deconditioning and impaired physical condition is a common complication following burn injury due to the hyper-metabolic response seen in severe burn coupled with the effects of pain and prolonged bed rest. High metabolism and poor oral intake associated with severe burn injury exacerbate muscle wasting if there is no physical stimulus.
- It is common for burns patients to experience a reduction in exercise performance, tolerance and strength due to prolonged intubation, prolonged bed rest, immobilisation to protect new grafts and sedation, as well as poor awareness and compliance. Other factors such as pain, slow wound healing, wound breakdown etc. impact active participation in exercise.
- Exercise can assist with oedema management.
- Splinting and exercise need to be done in combination.

#### 2.1.2 General Principles

Exercise includes ambulation, functional retraining, joint range of movement, strength, and aerobic training. Any form of physical activities can be a form of exercise.

- Exercise should commence as early as possible upon presentation/admission. (refer to contra-indication/precautions) Early mobilisation of the affected area and the entire person is the key to an optimal recovery.
- Continue exercise across acute, intermediate and long term phases of care, with exercise prescription differing according to patients' needs and abilities. NB range of motion maintenance will be necessary until scar maturation commonly 12-18 months post-burn, however this varies according to the individual
- Burns over a joint need extra vigilance to maintain range of motion (ROM) in combination with splinting. Stretches do not have to be in anatomical range
- Where possible combine stretches to include stretching over multiple joints. Remember skin is a continuous and a large multi-joint tissue.
- It is essential that stretches are observed without dressings/garments in place to identify and optimise lengthening/stretching on contracture banding.

- Exercise prescription is dynamic and dependent on wound healing, grafting, patients' medical condition, co-morbidities and age. Exercise frequency, intensity, time and type are all individualised. Performance is dependent on patient's pain tolerance, scarring, and patient's motivation. Aim to perform exercises several times a day.
- Pain is commonly associated with exercise therefore consideration of pain tolerance, medication regime and source of pain is important
- Encourage independence and self-management as early as possible. Patient and family/carer understanding and education are essential. Integrate exercise into activities of daily living. More frequent exercise is better than just one long session.
- Patient goal setting is important to encourage participation and monitor progress
- Liaise with multidisciplinary team (MDT) regarding choice of dressings to best facilitate ROM and exercise

#### 2.1.3 Intervention

#### 2.1.3.1 Range of Movement

- Range of movement (ROM) to end of range is essential. Active ROM is encouraged as soon as possible. Active-assisted ROM and passive ROM are useful adjuncts to obtain end of range particularly if the patient is unable to actively participate. Stretches need to be low repetitions but long in duration to provide a sustained stretch.
- The location of the burn is important to consider in terms of predicting potential scarring and contracture of joints. Areas of the body to be particularly aware of are;
  - o Face
  - o Neck
  - o Axillae
  - o Elbows
  - o Hands and wrists
  - Knees flexor surfaces
  - o Ankles and feet





Axilla stretch

**Neck stretch** 



#### Hand exercises - full flexion and extension

#### 2.1.3.2 Mobilisation/ambulation

- Commence ASAP dependent on post-op protocols
- Commence mobilisation in ICU (with intubated patients where possible) planning around dressing changes, surgery and sedation.
- Educate on donor site healing and issues such as blood rush when standing and walking (donor sites are commonly located on the lower limbs)
- Combine breathing exercises with mobility.
- Frequency of mobilisation is dependent on wound location, wound size (%Total Burn Surface Area) and amount of oedema
- Only consider wheelchairs and walking aids when normal walking is not yet possible. Aim for independent pre morbid ambulation as soon as possible



#### Hip extension stretch over exercise ball for burns to anterior hip region

#### 2.1.3.3 Functional Re-training

- Encourage independence with activities of daily living (ADLs)/function as soon as possible. Aim for full independence rehabilitation. Only use adaptive devices for early success for the patient and wean off as soon as possible.
- Incorporate exercises into the patient's daily routine.
- Incorporate specific exercises as indicated e.g. proprioception, balance and plyometrics
- Aim to return to work, sport, school, pre-morbid activities as early as possible.
- Individuals with severe burns may require a fit to drive assessment from the Road and Maritime Services and patients with smaller burn injuries will require medical clearance for driving from their GP or treating doctor. Link to NSW Road & Maritime Services <u>RMS</u> regarding fitness to drive

#### 2.1.3.4 Strength

• The principles of strength training after burn injury are no different to strength training following other injuries e.g. musculoskeletal injuries.

Antigravity functional exercises should be used as soon as possible. Use the patient's own body weight as resistance. Resistance can also be created by such adjuncts as; – Theraband®, Therafoam®, pegs, free weights.

• Bed exercises can be used when the patient is unable to perform other more effective strengthening exercises.

#### 2.1.3.5 Aerobic exercise

- Participation in aerobic exercise is dependent on the patient and wound status. Common types of aerobic exercise include walking, cycling and jogging. Swimming must only be commenced once all wounds are healed.
- Long-term restrictive lung injury is common in patients with inhalation injury, and should be considered as appropriate

#### 2.1.4 Precautions and Contra-indications

 Post-operative instructions, consultant and multidisciplinary team (MDT) advice should be followed. Period of immobilisation immediately following skin grafting must be observed. Seek advice as appropriate. Precaution is necessary with wounds – but continue exercise program with awareness and monitoring wound location and status. Careful hand placement/position is important to avoid shearing the wound. Donor sites are painful but not a contra-indication to exercise.

- Some potential precautions to consider are exposed tendons, flaps, reconstruction, regrafting, k-wires, medical condition e.g. low Blood Pressure, infections, graft fragility, related trauma i.e. fractures (#),heterotrophic ossification (HO), peripheral neuropathy and wound breakdown
- The impact of overheating, and sweat on skin integrity must also be considered. Modify the environment as necessary, for example air-conditioned room, removal of garments

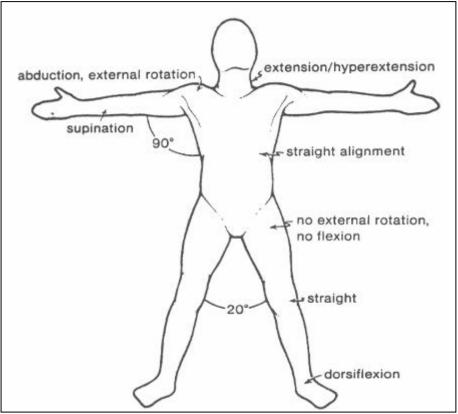
### 2.2 Splinting and Positioning

#### 2.2.1 Background/Rationale

As burned skin and active scars contract over hours rather than over days or weeks, splinting and positioning are important aspects of burn therapy. Splinting and positioning may be required depending on the location and severity of the injury and the patient's ability to cooperate in active therapy. Indications for splinting are influenced by the potential to scar and contract and the ability for the patient to maintain the range of movement with exercise alone.

Aims:

- To immobilise a skin graft after surgery Splinting can be used post grafting to allow the graft to take, normally 5-7 days.
- To protect vulnerable structure e.g. exposed tendon
- To prevent skin and tendon contracture
- To maintain the joint range when the patient is unable to do so e.g. post op, intubated in ICU with ventilation and sedation, young children
- To prevent long term deformity



Positioning principle diagram

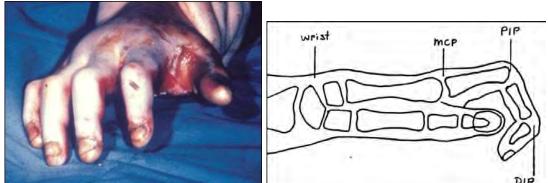
When determining the use and application of splinting and positioning, consider the location of the injury. Splinting and positioning must be applied to maximise the lengthening of the skin of the affected area.

A clear schedule and routine which is individual to each patient is important. The plan must be communicated to the other MDT members and education of the patient, family and carers to ensure compliance with the regime.

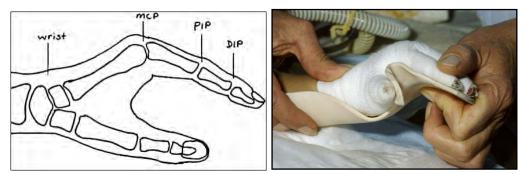
The splinting regime is determined by the patient's ability to maintain the maximum range with active exercise. For example, following a skin graft procedure the splint may remain on until the graft is stable and then may be reduced to night time wear.

Advice should be sought from experienced burn unit therapists if unsure.

- Splints used for burn injured patients may not be in a 'functional' position as they may be for other types of patient groups. Where possible, splint a joint or joints at the end of range to maximise the stretch of burn scars or pull on burn area to prevent contractures.
- Special considerations for difficult joints such as axilla, hips, neck (collar, pillow), palms, hands, knees, wrists, toes



Acutely burned edematous hand: metacarpal phalangeal joint (MCP jt.) hyperextension, inter-phalangeal joint (IP jt.) flexion



Hand splint "functional" position



Thumb webspace "C" splint



Palmar extension splint (for palmar burn)



Alternate palmar extension splint





**Dorsal toe contracture** 

'Toe down' thermoplastic splint



Custom made soft collar



Watusi collar





Neck extension pillow used for anterior neck burn





3 point knee extension orthosis Zimmer® knee extension splint & bed block for ankle positioning

- Refer to <u>SP guidelines</u> for mouth splinting
- Other relevant injuries or conditions are to be considered, and consultation with other teams caring for the patient should occur as appropriate.
- Splinting and exercise are used in conjunction, so incorporate exercise therapy into the splinting regime according to the recommendation from therapists.
- Types of splinting materials that can be utilised are varied e.g. plaster of Paris (POP), thermoplastics. Topical Negative Pressure dressing can act as a splint by immobilising the area
- If the joint is losing range, consider serial casting

#### Paediatrics

- The principles of splinting in the paediatrics population differ to those in adults with splinting generally done more frequently, for longer periods in any given 24 hours and for longer over the course of active scar management period.
- Splint if the wound takes longer than 2 weeks to heal as it may scar, and scarring will decrease movement.
- Splinting position at end of range or close to can be tolerated well in children e.g. children can be positioned in axilla splints that hold the shoulder in a position greater than 90° abduction. Splinting can be closer to 160deg in most children and involves some degree of forward flexion and external rotation
- Initially splints are worn 24 hours and removed only for exercise and dressing changes. This guarantees both child and parents becoming accustomed to the splints early in the admission. Maintaining full range of movement and prevention of any contractures are of primary importance.
- Splints will be worn at night for up to nine months and during the day initially. Gradually the day regime includes more periods with splints off e.g. two hours on two hours off. Splinting regimes are balanced with activities during the day e.g. meal times, bath times, swimming. Splints are always on for a day sleep



Paediatric axilla splints

#### 2.2.3 Precautions

- Splint care:
  - Continual checking and remoulding needs to be done to ensure that the goals of the splinting regime are being achieved.
  - Check for issues that will require possible adjustment of the splint such as;
  - changes in oedema, breakdown, fragile skin, changes in ROM, maceration
    Ensure appropriate hygiene and cleaning of splints and skin
- Special consideration to prevent brachial plexus injury from axilla by ensuring sufficient forward flexion at the shoulder, especially for adults.

• Check circulation and general observations as per any other splinting regime.

#### 2.2.4 General Issues

- If the patient is not fitting into the splint, the splint will require remoulding.
- Although there is a degree of discomfort in wearing splints, the targeted body parts should not need to be "forced" onto the splint
- There are special considerations by therapists in fabricating the splint. Do not modify the splint unless consulting with the treating therapists
- Environmental factors such as the need for extra padding to absorb sweat in hot weather
- Shifting of the splint during movement may produce shearing especially at the edges

#### 2.3 Skin care

#### 2.3.1 Background/Rationale

A burn can impair the thermoregulation of the skin, temporarily or permanently. The skin loses its ability to sweat or heat up and naturally moisturise skin from sebaceous glands producing oils. Therefore skin hydration needs to be replaced by applying regular moisturiser and controlling the environmental temperature. There is also a greater risk of developing skin cancer, as the UV barrier function can also be impaired/ damaged during a burn, and risk of skin discolouration with sun exposure.

#### 2.3.2 Procedure

- Daily washing/showering and diligent cleaning of any wounds
- Moisturising at least daily
- Before the re-application of moisturising cream, the area should be cleaned properly to reduce the settlement of residual cream
- Daily sun protection: clothing, wide brim hats, SPF 30+ until scars are mature

#### 2.4 Massage

#### 2.4.1 Background

Massage is used to break up the collagen bundles that form to make a scar. The aim is to soften and desensitise the skin, prevent adhesions, and decrease pruritus, as well as stretch the skin/scarred tissue.

#### 2.4.2 Procedure

- Encourage patient's participation, if in an area they can reach. Otherwise carers/parents need to be taught
- It is recommended to massage the scar with moisturiser several times per day; the skin is dry more frequent massage with moisturiser will be required
- If the patient has a large scar area, or difficulty donning/doffing garments, it is impractical to massage several times during the day; for these patients, massage can be incorporated into skincare when moisturisers are applied.
- Massage with firm pressure so the skin blanches
- Massage in slow circular motions using a flat hand/fingers. If very thick use a pinch and roll technique
- Massage should be continued until the scar is mature. Ceasing massage before scar maturation may result in contractures
- It is not expected that therapists see patients for the provision of scar massage, as often the review of ROM, splinting or function requires higher priority for therapy time. For this reason it is important that patients are taught how to complete massage themselves.



Scar massage

#### 2.4.3 Precautions/Considerations

- It is important to continue with firm massage to assist with desensitisation, with time the discomfort will reduce Pain / discomfort will occur if scar is hypersensitive and/or very tight, or patient is anxious; educate the patient so they understand this.
- Care with skin irritation from cream should be observed.
- Fragile skin can break down if massage commences too early, gentle massage may be indicated initially. Cease temporarily if skin breakdown occurs
- Massage does not have an immediate effect on scar appearance or softening, but may assist to alleviate itch immediately.

#### 2.5 Compression

#### 2.5.1 Background/Rationale

The aim of compression garments and other methods of compression is to keep developing scars flat and prevent raised scarring. It is hypothesised that compression reduces the excessive blood flow that delivers scarring mediators. Compression can be achieved in a variety of ways e.g. Coban®, Tubigrip®, bandaging, compression or pressure garments (customised or off the shelf) Compression garments can also be used to assist with holding scar softening products. It is recommended that pressure remain between 24 and 40mmHg and be replaced or tightened regularly to maintain this pressure.

The type of compression used depends on wound healing, area of body affected, time since healing and individual patient needs.





Tubigrip<sup>™</sup> stocking

Coban<sup>™</sup> finger/hand glove





"Ready to wear" stocking and glove



"off the shelf" Shop bought stretchy vest





Custom made pressure garment

Custom made pressure garment

#### 2.5.2 Procedures

- It is recommended compression garments are worn at all times except showering/bathing, massage and moisturising. This equates to approximately 23hrs per day.
- Clients/patients always need at least 2 sets of compression garments for hygiene purposes.
- Education to the patients and carers is essential
- It is recommended that compression garments be worn whilst the scar remains active, approximately 12-18 months in adults. Children may require compression garment for a longer period.
- Garments need to be washed and rinsed daily
- Garments can be worn over minor wounds and thin dressings, please check with therapists if in doubt
- Measurement and prescription of custom made pressure garments is a specialised skill and will be done by the primary treating burn therapist
- Compression garments will need to be re-tensioned/replaced/remeasured every 3-6 months based on wear and tear. Replacement is required due to material loosing tension and no longer providing adequate compression..

#### **Paediatrics**

Young children grow rapidly and require regular assessment of fit e.g. 3 monthly when compression garments would be remeasured due to growth and fabric fatigue. Re-tensioning garments is not advisable.

To aid dressing and undressing of young children zippers are put in arms and leg garments Typically vests are given back closure for easy donning and prevention of a small child being able to remove the vest themselves. Velcro closures allow for weight fluctuations. Additions such as 'nappy straps' to hold down the lower edge of a vest to prevent the garment riding up over a typical toddler 'round belly', this is only possible if the child is still wearing nappies. Suspenders on pants are essential for children at least in the under 10yr olds. In the very small hand we tend to use Coban® gloves as custom gloves are difficult to make and fit the hand adequately. When using gloves, mid dorsal zippers placement assists with easy donning.

Separate vests and pants are more suitable than all in one garments, due to growth and toileting etc.

#### Links to websites for pressure garment companies:

Second Skin Custom Made Garments

Jobst Ready to Wear Garments

Jobst Custom Designed Garments

Therapy Support Laboratory TSL Garments custom made and ready to wear

#### 2.5.3 Precautions/Considerations

- Ensure the garment is fitting correctly. Compression should be even, snug but not constrictive or wrinkled.
- It is expected that seam lines and zippers will leave a temporary indentation in the skin. This is normal and does not indicate stopping of garment use.
- Persistent swelling of areas distal to pressure garments may indicate uneven compression. The method of compression should be reviewed; it may be necessary to involve the distal area in the garment (e.g. add a glove with an arm-sleeve) to manage the swelling.



Distal swelling to compression on right hand, left hand had extended distal pressure

- Care should be taken when donning/doffing compression garments to prevent shearing of the skin. Aids are available to assist with donning and doffing of garments.
- Skin must be checked daily as scars can have different sensation and the wearer may not be aware their skin has broken down.
- Young children and cognitively impaired people must have parents/carers monitoring use of the compression garments and skin integrity, if unable to monitor daily do not use.
- Compression garments may need to be temporarily stopped based on skin deterioration, infection, deep venous thrombosis, excessive swelling, and surgery or as advised. Contact burns therapists if concerned.
- Particular consideration and close monitoring should be given for patients with decreased sensation or impaired circulation. E.g. peripheral neuropathy, cardiac history.

- The psychological impact of compression garments cannot be underestimated. Thorough patient education, understanding and possible psychosocial support is important.
- Small areas may not require a full garment e.g. small 50 cent area on chest. In this case more localised products can be used e.g. Duoderm®, silicone
- If garments are not correctly washed it may cause skin irritations or breakdown
- Changes in weight and body shape may influence need and timing for measuring/ remeasuring. Burn patients often lose a lot of weight acutely and ideally the patient's weight should be stable before measuring for expensive custom made garments.
- Garments are to be worn no matter the weather. Garments can be worn during exercise; sport and swimming and therefore require more frequent change and laundering.
- Most custom made garments do not provide full sun protection so additional precautions for sun protection should be used.

#### 2.6 Silicone products

#### 2.6.1 Background/Rationale

Medical grade silicone products are generally used to soften red, raised or thickened (hypertrophic) scars. Silicone is available in sheet, putty and liquid forms. It is usually used in sheet form e.g. Cica-Care® Liquid silicone e.g. Kelo-cote® is usually used on areas where it is difficult to secure the sheet form (e.g. the face or digits). Silicone putties can be used to fill concave areas to both give extra pressure and softening (E.g. Otoform K2® in the palm of a hand).

Silicone preferably should be used in conjunction with pressure garments and splints.

#### 2.6.2 Procedures (for sheet silicone)

- Skin must be fully healed before commencing use of the product.
- To be applied on clean dry skin (wipe off excess moisturiser with a damp cloth)
- Gradually increase hours of wearing depending on skin tolerance, as the skin requires time to breathe. Silicone is not to be worn for 24hours per day
- Silicone is to be cleaned under warm or cold water with hand soap, thoroughly rinsed, air dried or patted with a lint free cloth each time it is removed. Store in an airtight container in a cool dry area out of the sun.
- To be removed for all water based activities, or heavy exercise that causes excessive perspiration
- To be continued until scar is matured
- Reference to manufacturers of products:
  - o <u>Cica-Care®</u>
  - o <u>Dermatrix®</u>
  - o <u>Kelo-cote®</u>
  - o <u>Silon-SES®</u>
  - o <u>Mepiform®</u>
  - o <u>Caroskin®</u>

#### 2.6.3 Precautions/Considerations

- To be ceased temporarily if a wound develops or signs of breakdown
- To be ceased if a reaction occurs; red rash, irritated, itchy in the area where the silicone is applied only
- Young children and cognitively impaired people must have parents/carers monitoring use of the products and skin integrity, if unable to monitor daily do not use products

• It is unnecessary to use two products on the same area at the same time e.g. liquid with sheet on top



#### Cica-Care® silicone gel sheet

#### **Paediatrics**

The routine for wearing silicone products needs to be individually tailored for children. Products are usually worn by night for school age children as they get hot playing sport etc. at school whereas younger children may be able to wear by day.

A combination of products may be beneficial for various areas as well as one area.

### 3. Cosmesis

#### 3.1 Camouflage make-up

Some patients may choose to use camouflage make-up for special occasions particularly when scarred areas are on faces and other exposed areas. There are companies that specialise in camouflage make-up e.g. Veil® Dermablend<sup>™</sup> Microskin<sup>™</sup>

#### 3.2 Tattooing

Medical tattooing can be an option for changing the appearance of scars particularly with pigment loss after burn injuries. This is not a service provided by the burn units but is up to individual patients to pursue. Seek advice from a burns specialist

### 4. Reconstructive surgery

Preventing the need for reconstructive surgery is always the first aim. This is done through careful primary surgery and rehabilitation including early debridement and grafting, avoiding wide meshed skin grafts where ever possible, early healing, early mobilisation, therapy, compression etc.

However the need for reconstructive surgery despite best efforts cannot always be avoided. The indications for reconstructive surgery include;

- functional restrictions contraction
- role of growth in children

- tissue loss
- cosmetic enhancement

Types of surgery that are done in reconstruction include excision of scar tissue and grafting, *z*-plasty, full thickness grafting, skin and muscle flaps.

To gain the optimal result from any reconstructive surgery scar management as above needs to recommence and be followed through till scars are mature and optimal range of movement gained.

## 5. Website Links

ACI Burn Injury Service web pages <u>www.aci.health.nsw.gov.au/resources/clinician-resources#burn</u>

NSW Road & Maritime Services www.rms.nsw.gov.au/licensing/healthmedicals/health\_professionals.html

Second Skin Custom Made Garments www.secondskin.com.au

Jobst® Ready to Wear Garments and Custom Designed Garments<u>www.smith-</u> <u>nephew.com/australia/healthcare/products/product-types/jobst--compression-garments</u>

Therapy Support Laboratory TSL Garments custom made and ready to wear www.tslaustralia.com.au/products-overview/burns-scar-management-overview/

Cica-Care® www.smith-nephew.com/australia/healthcare/products/product-types/cica-care

Dermatrix®<u>www.dermatix.net</u>

Kelo-cote® www.kelocote.com

Silon-SES® www.silon.com/products/scar-management/silon-ses

Mepiform® www.molnlycke.com/patient/en/Products/Wound/Mepiform

Caroskin® www.caroskin.com/scarcare.html#siliconesheet

NSW Speech Pathology Burn

Guidelines http://www.aci.health.nsw.gov.au/resources/clinician-resources#burn

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Street address: Tower A, Level 15 Zenith Centre 821-843 Pacific Highway Chatswood NSW 2067

Postal address: Agency for Clinical Innovation PO Box 699 Chatswood NSW 2057 T +61 2 8644 2200 F +61 2 8644 2151 info@aci.health.nsw.gov.au www.health.nsw.gov.au/gmct/