ESSENTIAL CLINICAL SKILLS IN NURSING

EDITED BY
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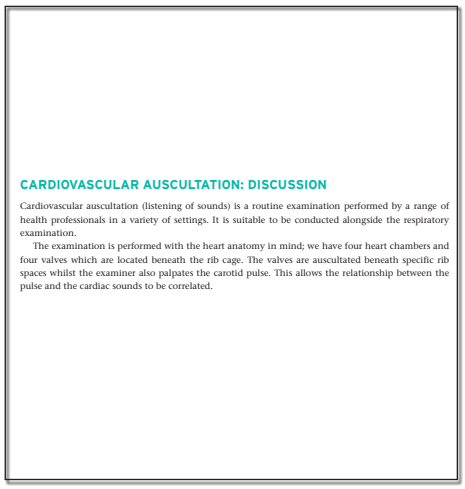
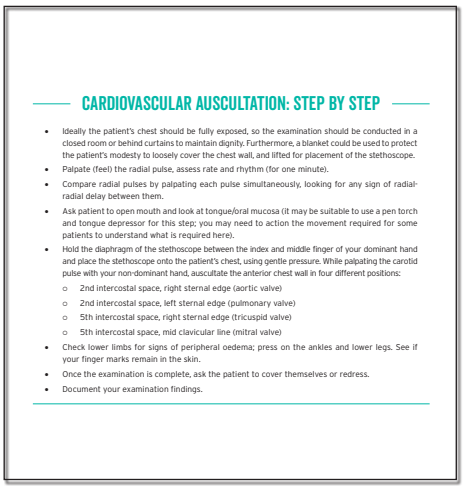


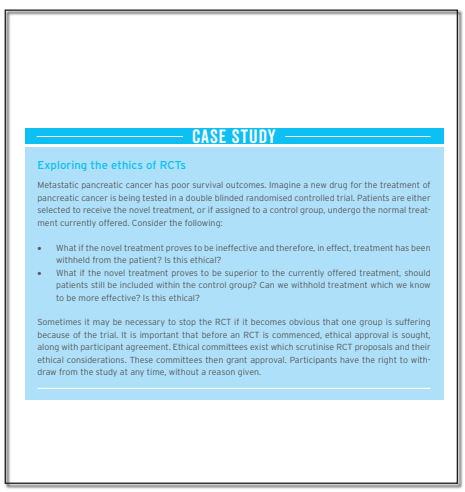
CLINICAL SKILLS: DISCUSSION

Brief discussions on the relevant theory, rationale and person-centred considerations behind each skill.



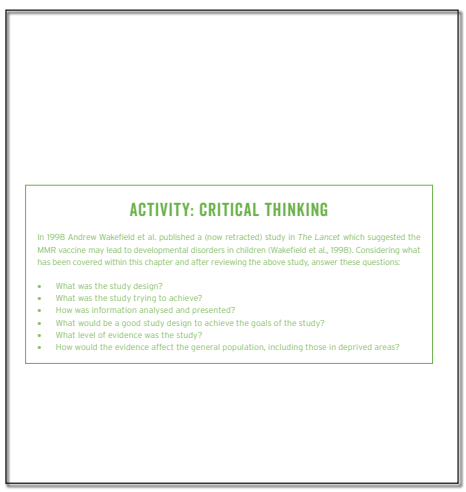
CLINICAL SKILLS: STEP BY STEP

Step-by-step instructions for performing each skill.



CASE STUDY

Real-world examples of clinical skills in practice, showcasing the experiences and requirements of a range of patients.



ACTIVITY

Practical activities that help you to hone your skills and reflect on what you have learnt so far.

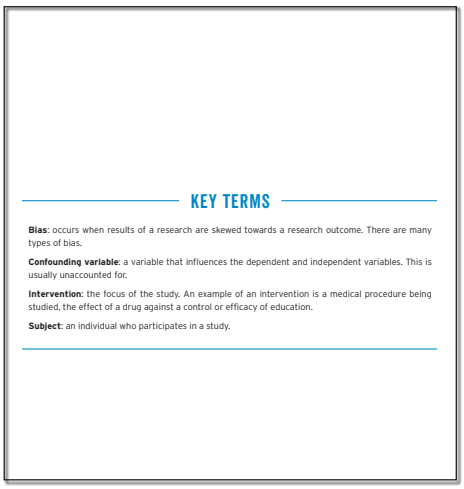
GO FURTHER

Read the below sources to learn in more detail about appraising evidence:

- Cathala, X. and Moorley, C. (2018) 'How to appraise quantitative research', *Evidence-Based Nursing*, 21 (4): 99–101.
- Moorley, C. and Cathala, X. (2019) 'How to appraise qualitative research', *Evidence-Based Nursing*, 22 (1): 10–13.
- Moorley, C. and Cathala, X. (2019) 'How to appraise mixed methods research', *Evidence-Based Nursing*, 22 (2): 38–41.

GO FURTHER

A selection of relevant resources, including journal articles, websites and videos, that enable you to go one step further in your studies.



KEY TERMS

Bias: occurs when results of a research are skewed towards a research outcome. There are many types of bias.

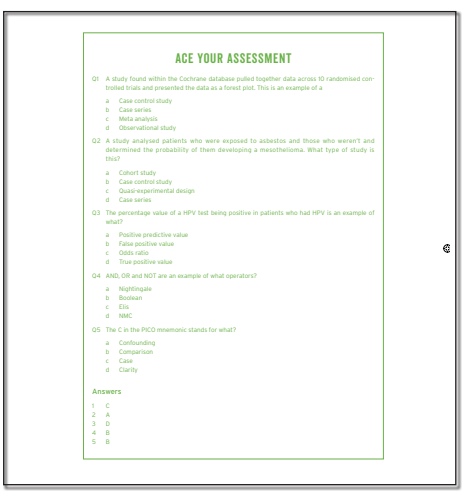
Confounding variable: a variable that influences the dependent and independent variables. This is usually unaccounted for.

Intervention: the focus of the study. An example of an intervention is a medical procedure being studied, the effect of a drug against a control or efficacy of education.

Subject: an individual who participates in a study.

KEY TERMS

Technical terms or key concepts highlighted within the text and accompanied by short explanations.



ACE YOUR ASSESSMENT

Q1 A study found within the Cochrane database pulled together data across 10 randomised controlled trials and presented the data as a forest plot. This is an example of a

a Case control study
b Case series
c Meta analysis
d Observational study

Q2 A study analysed patients who were exposed to asbestos and those who weren't and determined the probability of them developing a mesothelioma. What type of study is this?

a Cohort study
b Case control study
c Quasi-experimental design
d Case series

Q3 The percentage value of a HPV test being positive in patients who had HPV is an example of what?

a Positive predictive value
b False positive value
c Odds ratio
d True positive value

Q4 AND, OR and NOT are an example of what operators?

a Nightingale
b Boolean
c Elis
d NMC

Q5 The C in the PICO mnemonic stands for what?

a Confounding
b Comparison
c Case
d Clarity

Answers

1 C
2 A
3 D
4 B
5 B

ACE YOUR ASSESSMENT

A selection of multiple-choice questions at the end of each chapter allowing you to test your understanding of the content.

ONLINE RESOURCES

Students and instructors can visit **https://study.sagepub.com/rowberry** to access over **25 videos** demonstrating clinical skills in practice, from oxygen administration to venepuncture, cannulation and more.

A **video teaching guide** is also available to instructors and features chapter overviews and questions relating to each video.

USING THE QR CODES IN THE BOOK

QR codes have been placed throughout the book to direct you straight to relevant video content.

Got an iPhone?

- Open the camera app on your phone
- Hold the camera over the QR code of the video you want to watch
- Tap the notification when it appears

Got an Android?

- Open the camera app on your phone or download a QR scanner app
- Hold the camera or open the app over the QR code of the video you want to watch
- Tap the notification when it appears

ABOUT THE EDITORS

EDITOR

Deborah Rowberry is a Senior Lecturer at Swansea University working in the Department of Nursing. She has over 20 years clinical experience in a variety of settings including, neurology, acute medicine, cardiac ITU and nephrology and moved into education almost 15 years ago. Deborah is a Fellow of the Higher Education Academy and a double recipient of the University's Excellence in Learning and Teaching Award. Deborah has previous experience as a Clinical Skills Educator for postgraduate medicine and undergraduate Medical Students. Deborah's specialist and research interest areas include Simulation Based Education and Interprofessional Education.

CO-EDITORS

Dr Lee Gauntlett is a trainee anaesthetist working in South Wales with experience in intensive care medicine. His career began working as a healthcare support worker in several hospitals in the Midlands and volunteering within the British Red Cross, starting medical training in 2013. He came to the medical profession as a mature student from a marketing background and recognises the value in diversity. He is keen to teach nurses, medical students, and allied health professionals, strongly believing that a multidisciplinary approach to learning can lead to beneficial patient outcomes.

Dr Libor Hurt was born in the Czech Republic and moved to the UK aged 11. He began working as a hospital porter in the summer holidays and evenings after college and carried on doing this whilst reading Medical Sciences at De Montfort University. Following this, he pursued a further MSc by Research in Learning Technology there, before eventually going on to study medicine at Swansea University. He rotated through several medical and surgical specialities and ultimately began working as a general surgery speciality trainee. Dr Hurt enjoys teaching and mentoring, actively participating whenever given the opportunity to do so. He has presented his research at both a national and international level on a wide variety of topics, such as antibiotic treatment of appendicitis during the Covid-19 pandemic and outcomes of hepatic metastasectomy in patients with anal squamous cell carcinoma. In his spare time, Dr Hurt enjoys exploring the diverse Welsh landscape.

ABOUT THE CONTRIBUTORS

Helen Beckett is a Senior Lecturer in Children's Nursing at Swansea University working in the Department of Nursing. Helen is a Registered Children's Nurse and has over 18 years clinical experience in a variety of paediatric settings including burns, medicine, surgical and High Dependency Care (HDU). Helen holds a Master's degree in Education for Health Professions and is a Fellow of the Higher Education Academy. Helen is field lead for Children's Nursing Pre-registration Nursing at Swansea University, and has specialist interest in Acute care, clinical skills, and Simulation Based Education.

Wendy Churchouse (BEM – MSc Cardiology, RGN, ENG, DipN, Cert Ed, FETC, NNEB) is a Senior Lecturer in Non-Medical Prescribing, Swansea University. Her extensive clinical background encompasses haematology, diabetes and vascular surgery. However, for over 30 years, she has focused on cardiac care working in primary, secondary and tertiary care. Wendy has been fortunate to work with highly motivated teams and has pioneered various service developments and innovations. She was involved in the development of the Welsh NSF for CHD and acted as clinical expert on NICE heart failure and ICD/CRT guidelines. In 2016, she was awarded the Queens British Empire Medal for developing patient focused services and patient support groups. She regularly speaks at national conferences and has numerous publications related to the above specialties.

Lisa Duffy has advanced experience and knowledge of the practical and theoretical issues relating to Infection Prevention and Control practice and education. Lisa's clinical experience spans several roles, from Senior Clinical Nurse working as a member of the IP&C Team capturing all aspects of prevention, investigation, surveillance and control of infection. She has also promoted the provision of safe environments of care for service users, the public and staff in terms of Infection Prevention and Control. Lisa has been a Senior Lecturer at Swansea University for six years and as well as Programme Director for Undergraduate Nursing. She has also worked with Health Education and Improvement Wales (HEIW) focusing on IP&C education and workforce transformation. Lisa made a substantive contribution to the assessment and supervision of pre-registration nursing within the fields of adult, child and mental health. Additionally, Lisa is the regional education officer for the Infection Prevention Society which provides the opportunity to collaborate with other IP&C professionals both nationally and internationally.

Louise Giles (MAEd, PGDip, BSc (Hons), RGN, SFHEA, FNF Scholar) has been a practising registered nurse for the past 35 years with experience in several care environments, clinical roles, managerial roles, leadership roles, practice development and education roles. This has provided Louise with a great depth of knowledge and skills that offer a solid foundation to current and future professional practice along with writing for journals and books.

Jemma Gustafson (RGN, BAc, BSc, PgCertHE) is a clinical skills Lecturer in the Faculty of Medicine, Health and Life Science at Swansea University, teaching a range of modules on pre-registration courses, a healthcare certificate course and return to practice. Jemma currently leads on the first module for the BSC

Pre-registration Adult Nursing course, working collaboratively and informing teaching within local health boards. Previously an educator in practice as a clinical skills trainer with a speciality in vascular access, Jemma is a registered adult nurse with a background in acute care, clinical decision. Jemma has expertise in teaching nursing skills and simulation at all levels of the pre-registration programme with a particular interest in developing contemporary support mechanisms for students to gain quick access and information.

Nicola Henwood is an Adult Registered Nurse. She qualified from Swansea University in 2009 and has since worked in a variety of inpatient and community areas in the UK and Australia. She has gained additional qualifications in teaching, as well as a master's in Public Health and Health Promotion. For a short time, she returned to Swansea University as a lecturer, before moving to Children's Mental Health Services.

Sarah Kingdom-Mills is a Learning Disability Nurse, working as a Care Home Education Facilitator at Health Education Improvement Wales. Her clinical experiences vary from acute inpatient assessment and treatment, specialist learning disability and autism services to complex behavioural challenges and continuing healthcare needs. Sarah had two decades of clinical experience within the learning disability field of nursing within health and social care settings prior to working in practice education. Sarah is an alumnus with the RCN and has been a finalist in the Nurse of the Year Awards for the category of 'Supporting Education and Learning in Practice'; she also chairs the All-Wales Practice Educator Forum and is a Bevan Commission Exemplar for her work in creating student nurse placements within care homes. Key interest areas are effective communication, advocacy and best interest; she has been involved in these areas for many years. She feels that the profile of learning disabilities is being positively raised through several forums, and this is work that she continues to champion within her professional career.

Deb McNee is a Child Nursing Lecturer at Swansea University predominantly teaching undergraduate nursing students. She has held this position for four years and teaches across many other disciplines including public health, paramedics and osteopathy. Her background is in child health with over 30+ years' experience. Most of this experience was within primary care, first as a children's nurse and then as a Health Visitor. She holds an MSc in Specialist Community Public Health Nursing and has a specialist interest in vulnerable groups, health promotion, paediatric palliative care and end of life care.

Trudi Petersen (RMN, BSc, PgDip, MSc.Econ) trained as a psychiatric nurse between 1987 and 1990. She has worked in substance misuse and dual diagnosis, health promotion and both acute and longer term mental health settings. She has worked as a clinician, a manager, a lecturer and a research practitioner. She has worked in NHS, third sector and private settings. She currently works as the Projects and Innovations lead for Welsh care provider Fieldbay Ltd. Her interests include behaviour and behaviour change, psychological aspects of physical health conditions, brain injury, effective engagement and knowledge transfer and innovations in nursing. Trudi holds an honorary lecturer's position with Swansea University.

Lovely Sajan is a highly motivated and enthusiastic educator with great passion for clinical skills teaching. She gained her clinical expertise from her experience in the NHS in medical and cardiac areas, continuing healthcare and haemoglobinopathy settings for 16 years. She also has six years of background in teaching in higher education and is currently working as a lecturer at Swansea University. She holds an MSc in Nursing Science, with additional teaching qualifications and accreditations. She is devoted to her career and loves to support and develop students in gaining knowledge, skills and expertise required in their profession as a qualified nurse.

Peter Sewell (MSc Advanced Practice, BSc Critical Care, Dip Nurs. RGN. FICM Assoc.) is an Advanced Critical Care Practitioner and part-time Senior Lecturer in Advanced Practice and Non-medical Prescribing at Swansea School of Health and Social Care. He qualified as a RGN in 2003 and has worked in Acute and Critical Care services since. He was an Intensive Care and Critical Care Outreach charge nurse until 2013, when he trained to become an Advanced Critical Care Practitioner in Morriston Hospital, Swansea.

Sarah Tait is a Senior Nurse Lecturer in the Mental Health Department of the School of Health and Social Care at Swansea University. She began her nursing career in 1991 and qualified as a Registered General Nurse (RGN) in 1995 and a Registered Mental Health Nurse (RNMH) in 2001. In 2014, Sarah became recognised as a Fellow of the Higher Education Academy (FHEA). Sarah completed a MA in Education for Health Professionals in 2016. Sarah predominantly teaches within the pre-registration nursing curriculum and is an academic mentor to pre-registration nursing students on a variety of full-time and part-time programmes. Sarah also teaches and leads a module on the postgraduate, Advanced Practice and Education – MSc in Advanced Practice. Sarah is the Mental Health Field Lead for the BSC Mental Health Nursing Programme.

Hywel Thomas has been qualified as a mental health nurse since 1997. A 25-year mental health nursing career has been a mixture of clinical practitioner working in several inpatient and community settings notably within the older persons mental health speciality and pre-registration education delivering on the current Nursing and Midwifery Council (NMC, 2018). Hywel has been employed at Swansea University initially as a Lecturer and now Senior Lecturer from January 2012 to the present date. His responsibilities as a senior lecturer involve delivering teaching on the current pre-registration, part time and masters nursing programmes and curriculum development as module and field lead. He is currently the Mental Health Undergraduate Admissions Tutor within the Faculty of Medicine, Health & Life Science, Swansea University.

Gabby Wilcox is a sister in a busy emergency department in Swansea with responsibility for teaching and assessing. She registered in 2005 and began her career in respiratory nursing. Since then, she has worked in burns, critical care and emergency nursing, spanning several UK hospitals as well as spending time working in France and the Middle East. Gabby has a Masters in Critical Care from Cardiff University and a PGCE from Swansea University. She is incredibly passionate about clinical skills teaching and patient assessment; her special areas of interest lie in major incident response, trauma care and resuscitation.

Nerys Williams is an Adult Nursing Senior Lecturer in the pre-registration and the master's level nursing programmes at Swansea University. Nerys has a clinical background in burns and reconstructive surgery, working in burns intensive care, burns theatre, plastics trauma and as a Plastics Trauma Nurse Practitioner and Burns Outreach Clinical Nurse Specialist.

Jamie Wheeler is a Lecturer in Mental Health Nursing. He has worked in several clinical settings and has a wealth of experience. Jamie is Lead for Manual Handling training for the faculty as well as responsible for Violence and Aggression education.

HYGIENE AND SKIN INTEGRITY

6

NICOLA TINGLE AND NERYS WILLIAMS, WITH SARAH KINGDOM-MILLS (LEARNING DISABILITIES CONTRIBUTION)

NMC STANDARDS COVERED IN THIS CHAPTER

ANNEXE B NURSING PROCEDURES

4.1 Observe, assess, and optimise skin and hygiene status and determine the need for support and intervention
4.2 Use contemporary approaches to the assessment of skin integrity and use appropriate products to prevent or manage skin breakdown
4.3 Assess needs for and provide appropriate assistance with washing, bathing, shaving and dressing
4.4 Identify and manage skin irritations and rashes
4.5 Assess needs for and provide appropriate oral, dental, eye and nail care and decide when an onward referral is needed
4.6 Use aseptic techniques when undertaking wound care including dressings, pressure bandaging, suture removal, and vacuum closures
4.7 Use aseptic techniques when managing wound and drainage processes

LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- Understand the anatomy, physiology, and functions of the skin
- Assess and implement effective care for the patient in relation to hygiene needs, whilst promoting independence
- Effectively assess, prevent and manage common compromises to skin integrity
- Ensure aseptic management of wound dressings and some advanced wound care procedures

STUDENT VOICE

Assisting with personal hygiene and assessing skin is very personal and can be a bit intrusive. It is important that you put the patient at ease and maintain their dignity. Also, make the most of the time that you have with the patient because you can assess other things at the same time. When you are in a busy ward, it is the most quality time that you get with the patient – ask them questions, get to know them, assess their needs.

Johnson, 2nd year, Adult Health

INTRODUCTION

In this chapter, you will learn about the importance of hygiene and maintenance of skin integrity. Hygiene is a fundamental basic need, and some patients will inevitably need varying levels of assistance with this. There should be a careful balance between nurse assistance with personal hygiene, and promotion of independence. High standards of personal hygiene are important in maintaining physical, psychological, and social health; it prevents infection, maintains skin health and quality of life.

There are many factors which threaten skin integrity, particularly in higher risk groups with risks increasing proportionately with age, with underlying medical conditions and with polypharmacy. Chronic wounds are largely preventable, particularly within the healthcare setting. The methods for prevention are simple and require no complex interventions. The variety of compromises to the integrity of the skin are extensive, and beyond the scope of this chapter. Therefore, the focus of the second half of this chapter will be the assessment, prevention, and management of the two most common manifestations – pressure damage and moisture damage.

The skin is the largest organ of the human body, and serves many protective functions; care of the skin is a fundamental skill required within nursing. Breaches in skin integrity can at best cause minor discomfort for the patient; extreme cases of skin damage can lead to sepsis, loss of limbs or even loss of life. Prevention and management of skin integrity problems requires no complex interventions, and is the responsibility of everyone, with prevention always better than cure. Simple measures such as effective hygiene, management of incontinence, frequent repositioning and skin assessment can prevent onset of or prevent deterioration of existing skin integrity issues. There are adjuncts which can help in prevention of moisture lesions and pressure damage, but these should not be viewed as a replacement for basic nursing care.

ANATOMY AND PHYSIOLOGY RECAP

The skin

The skin is a complex organ, covering approximately 1.67 meters squared. It is the body's largest and heaviest organ (Figure 6.1); 15% of the total adult body weight is comprised of skin and its thickness ranges from <0.1mm at its thinnest part found on the eyelids, to 1.5mm at its thickest part which is found on the soles of the feet and palms of the hands. An average square inch of skin contains 650 sweat glands, 20 blood vessels, and more than 1,000 nerve endings (Yousef et al., 2022).

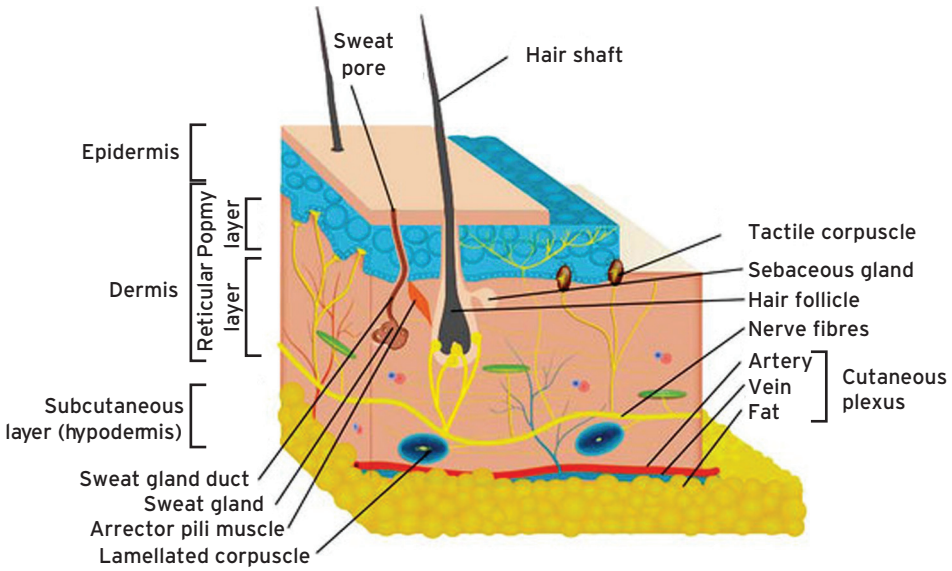


Figure 6.1 Structure of the skin

The skin is divided into several layers (Figure 6.2) including the epidermis which is composed mainly of keratinocytes. Beneath the epidermis is the dermo-epidermal junction, which is a multi-layered structure that anchors the epidermis to the dermis. The layer below the dermis, the hypodermis, consists largely of fat (Lawton, 2019).

Epidermis

The epidermis is the outer layer of the skin, defined as a stratified squamous epithelium. Humans shed around 500 million skin cells each day. The outermost parts of the epidermis consist of 20–30 layers of dead cells. Keratinocytes produce the protein keratin and are the major building blocks of the epidermis. The epidermis is avascular and therefore contains no blood vessels, it is entirely dependent on the underlying dermis for nutrient delivery and waste disposal through the basement membrane. The epidermis constantly makes new cells in its lower layers. Over the course of around four weeks, these cells make their way to the surface, become hard, and replace the shedding, dead cells (Kolarsick et al., 2011).

The primary function of the epidermis is to act as a physical and biological barrier to the external environment, preventing penetration by irritants and allergens. At the same time, it prevents the loss of water and maintains internal homeostasis. The colour of the skin comes from a pigment called melanin, which is produced by melanocytes. These are found in the epidermis and protect the skin from UV rays. The epidermis is composed of layers; most body parts have four layers, but those with the thickest skin have five (McLafferty et al., 2012).

The layers are:

- Stratum corneum (uppermost layer)
- Stratum lucidum (present in thicker skin only)
- Stratum granulosum
- Stratum spinosum
- Stratum basale (deepest layer)

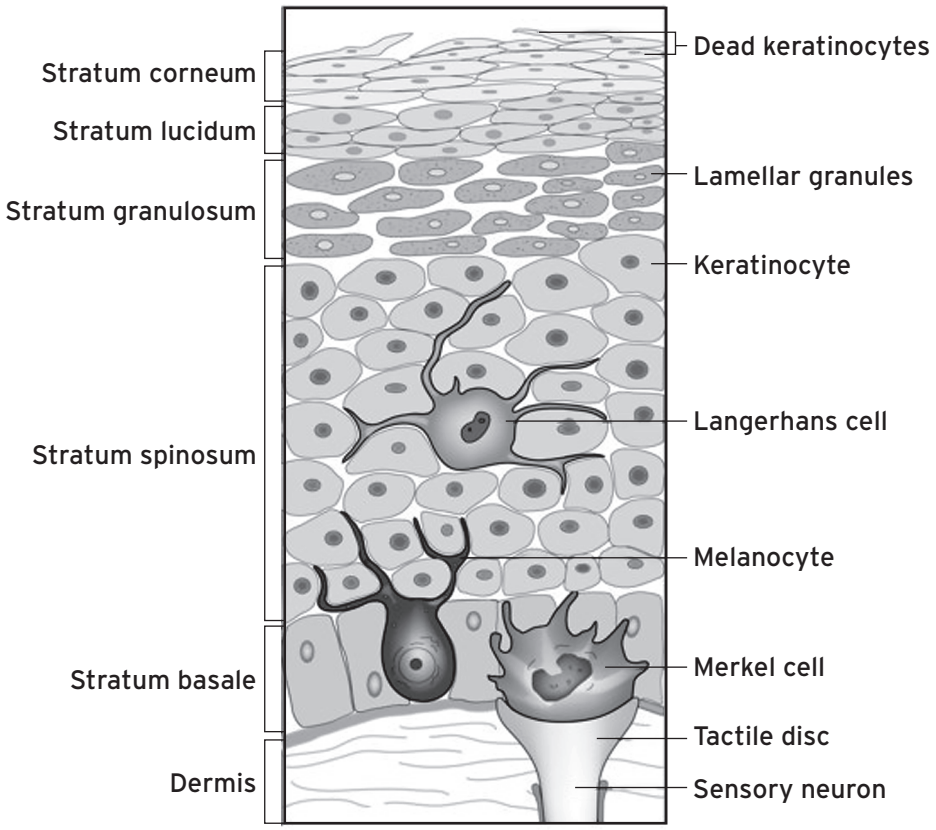


Figure 6.2 Layers of the skin

Dermis

The dermis forms the inner layer of the skin and is much thicker than the epidermis (1–5mm). It is situated between the basement membrane zone and the subcutaneous layer, and the main role of the dermis is to sustain and support the epidermis. The main functions of the dermis include:

- Protection
- Cushioning the deeper structures from mechanical injury
- Providing nourishment to the epidermis
- Wound healing

Hypodermis

The deepest layer of the skin is the subcutaneous tissue, the hypodermis, or the subcutis. It is not technically part of the skin, but it helps attach the skin to the bones and muscles. Subcutaneous tissue also provides the skin with nerves and blood supply. The hypodermis contains mostly fat, connective tissue, and elastin, which is an elastic protein that helps tissues return to their normal shape after stretching. The fat layer acts as protection, padding the bones and muscles whilst the high levels of fat help insulate the body and prevent a person from losing too much heat.

Functions of the skin

Skin is the 'sense-of-touch' organ that triggers a response if we touch or feel something, including things that may cause pain. This is important for patients with a skin condition, as pain and itching can be extreme for many and cause great distress.

One of the skin's important functions is to protect the body from cold or heat and maintain a constant core temperature. This is achieved by alterations to the blood flow through the cutaneous vascular bed. During warm periods, the vessels dilate and beads of sweat form on the surface. The secretion and evaporation of sweat from the surface of the skin also helps to cool the body. In cold periods, the blood vessels constrict, preventing heat from escaping.

The skin has a variety of other functions, including:

- Provides a protective barrier against mechanical, thermal and physical injuries and hazardous substances
- Prevents loss of moisture
- Reduces harmful effects of UV radiation
- Acts as a sensory organ (touch, detects temperature)
- Helps regulate temperature/thermoregulation
- An immune organ to detect infections
- Production of vitamin D

PATIENT EXPERIENCE

I always thought that pressure ulcers only happened to those people who were confined to bed. I have diabetes but apart from that, I am fit and well. I broke my leg and had to have surgery, and during that surgery I developed a pressure ulcer on my heel. Six weeks after discharge, I was readmitted to hospital with extreme pain in my leg, it had turned red and started to turn black in parts, I had sepsis. I ended up having a below knee amputation. A pressure ulcer brought an end to my career, my independence and meant that I could no longer care for my husband.

Anon

CLINICAL SKILLS RELATED TO HYGIENE AND SKIN INTEGRITY

Management of hygiene needs: Discussion

Communication

During personal hygiene, communication should underpin the interaction and facilitate the development of a rapport between the individual in receipt of care and yourself. It is an opportunity for you to provide undivided attention and can allow the individual to feel comfortable to share otherwise undisclosed thoughts and feelings, including details of themselves or circumstances that may otherwise remain untold. This requires the nurse to adopt good listening skills as much of the information disclosed can inform the nursing process of assessment, planning, implementation, and evaluation.

Developing an awareness of a patient's psychological needs and spending quality time with them allows you to note non-verbal cues, including the experience of pain through facial grimacing or establishing a general mood or emotion through noting changes in eye contact (eye contact and maintaining eye contact can be subjective and affected by a range of behaviours or conditions). It is also vital to be sympathetic to individual preferences and sensitive to individual choice. Some patients may

prefer not to speak or communicate directly during procedures that are invasive, for example hygiene of intimate areas, therefore it is crucial you remain aware and are sensitive to these preferences.

When there is more than one team member involved in providing personal care, they must ensure that all conversations include and involve the individual in receipt of care and do not exclude them from the proceedings. The conversation should reflect the needs and experience of the patient, not the staff, whilst in the context of an acutely ill patient, it may be more appropriate to maintain verbal communication at a minimal level.

In the context of providing personal care to the unconscious patient, communication remains important. Whilst the patient may appear unaware of their surroundings, the importance of communication through non-verbal means, including touch, becomes of greater significance.

In some situations, it may be appropriate to include family in the process of assisting with personal hygiene needs. This can prove especially important when caring for children or individuals with learning disabilities (also termed intellectual disabilities). It can also prove significant in reducing levels of anxiety and allow family to feel involved in the process which can prove comforting and feel empowering.

Assessment

When assisting patients with meeting their personal hygiene needs there are several aspects to consider. Firstly, establish what the patient can do for themselves and encourage them to do as much as they can, aiding with tasks that they find difficult to achieve. Examples of this include encouragement to wash their own hands and face and to wash all areas that they can safely and comfortably reach. Prior to starting the process, ensure you have gained the patient's informed consent. Please refer to Chapter 3 to learn about gaining informed consent. Be mindful of how you obtain consent and ensure you have communicated your intentions clearly, allowing the patient to decide based on accurate information.

Dignity and privacy

Upholding and maintaining patient dignity and privacy should be at the forefront of your care and practice. Preventing the loss of dignity should underpin the intervention, and you should be mindful of the fact that many of the patients with whom you are working will find the experience invasive and potentially embarrassing. People who have been independent throughout their lives may find it difficult to come to terms with having to rely on such assistance that invades their personal space. Equally, providing care for a person of the same age as yourself can prove difficult for the recipient, who may experience a range of feelings including self-consciousness and embarrassment.

Be aware of the fact that you are providing care for people who are at a vulnerable point in their lives and as such your approach should be underpinned by respect and compassion. Remember, providing partial or full assistance to perform personal hygiene is not the sole domain of unregistered staff, it forms part of fundamental nursing care, and should be regarded as an opportunity to develop relationships, to communicate, to assess and note important changes or deterioration in the individual's condition.

Risk assessment

During the process, you should also complete a risk assessment and make decisions that relate to your approach in relation to Personal Protective Equipment (PPE). Please refer to Chapter 11 to learn about PPE. Be mindful of infection control policies and procedures and how the decisions you make might impact the self-esteem of the patient. Each area in which you work will have local policies and guidelines that relate to risk assessments. You should ensure that you are aware of the document's whereabouts, when and how to complete and how to implement the findings.

Spiritual and cultural preferences

Consider the needs of patients who have cultural and spiritual preferences and requirements. For example, fulfilling personal hygiene is important for meeting physical and spiritual needs within the Muslim community, and enabling individuals to access running water is an important aspect of providing appropriate and culturally sensitive care (Rassool, 2015). Religious and cultural practices and beliefs should also be taken into consideration when removing clothing for the purposes of providing or facilitating hygiene needs, and therefore you should develop self-awareness and cultural awareness to avoid insult or offense. Applying good communication skills is crucial in this context to ensure you have established the correct approach before proceeding.

CASE STUDY

Mr Aman

Religious and cultural awareness is a fundamental necessity in order to provide appropriate and effective nursing care. Consider the following case study and reflect on the approach you would adopt.

Mr Aman has been admitted onto a cardiac ward for routine surgery. The surgeon has asked for the patient to be prepared for theatre, and part of the preparation involves shaving the chest area. Mr Aman's Islamic religion requires he is not alone with the opposite sex and touch is prohibited unless between family members. Consider how you might facilitate the preparation required for the surgery. Consider also the religious and cultural needs of Mr Aman.

Remember, all actions should be underpinned by respect for the individual: establish how they would like to be addressed, communicate directly with them, establish how they would like to proceed and maintain the patient's centrality throughout.

ACTIVITY: COMMUNICATION SKILLS

Effective communication is essential to ensure patient dignity is maintained and to uphold patient centrality. Reflect on how you can maintain patient dignity throughout the process of undertaking or assisting with personal care when working with a patient who has communication needs. What type of communication skills would you adopt in this context? Consider the impact of non-verbal communication. Can non-verbal communication be as effective and powerful as verbal communication?

Consider a patient who has:

- Auditory hallucinations
- A hearing impairment
- Learning difficulties who has no verbal communication

Please note, the above examples are examples, and you may wish to use your own example.

Let's move onto step by step skills.

Bathing

BATHING: STEP BY STEP

When all preparations are made, including gaining informed consent, organising appropriate staffing levels and environment, it is necessary to gather all the required equipment for bathing a patient in bed. Ensuring you have prepared all necessary equipment will mitigate the need to halt proceedings and prevent unnecessary delay or loss of dignity. Be aware, this may be the first time the patient has experienced such care and may be feeling anxious about the process. Uphold dignity and privacy and maintain appropriate communication throughout the process.

EQUIPMENT

- A single used plastic bowl placed inside a plastic bag, or a single use disposable bowl depending on local policy.
- Towels, preferably the patient's own if available. Patients generally feel more comfortable when utilising their own belongings when performing personal hygiene, and the sight and feel of familiar belongings can aid the feeling of reassurance.
- You will require separate cloths/wipes for facial, torso, genital, and perineal areas.
- You will require soap or whichever solution is recommended by local policy, and toiletries, ensuring the products used are appropriate and that the patient is not allergic to any of the ingredients.
- Ask the patient what they would like to use, and which parts of the body they want washed with which particular items. Not all patients will want to wash their face with astringent soaps.
- Check the cultural, religious or spiritual preferences and establish how much the patient would like to do for themselves, encouraging them to be self-determined and as self-caring as possible.
- Gather either towels or light sheets to cover the parts of the body that are not being washed to maintain privacy and dignity.
- Use warm water and ensure to change the water when washing genital and perineal areas.
- You will also need to gather clean clothing or nightwear and clean bedding, and a receptacle for the collection of used or soiled clothes or bedding.

THE PROCESS

- Wash your hands and don appropriate PPE, including apron, and have gloves to hand for washing the genital and perineal regions.
- Ensure the curtains are fully drawn and the patient is lying in a comfortable and preferably semi recumbent position.
- Observe the patient for any signs of distress, anxiety or deterioration throughout the process.
- Arrange the furniture and equipment to enable easy reach and ensure that the patient's safety is maintained.

- Ensure easy access to the patient by removing unnecessary items and working within uncluttered space free of potential hazards including cables.
- Raise the bed to a working height that is safe for all members of staff, always ensuring the safety of the patient.
- Remove the patient's clothing having gained informed consent and maintain privacy and dignity by covering exposed areas with a towel or light sheet.
- Check the temperature of the water, ensuring it is neither too hot nor cold, aim for 35º–40º.
- Provide individualised care by establishing how much the patient will undertake and which areas they like to wash with soap.
- Wash, rinse off soap/solution and dry the patient's face, neck and ears.
- To reduce cross infection, a separate cloth should be utilised to wash the remainder of the patient's body.
- Wash, rinse and dry the patient's torso including upper limbs, chest and abdomen, followed by lower limbs and back, washing the limb furthest away from you first. To wash the patient's back, they will need to be safely rolled from side to side, taking this opportunity to remove soiled sheets and insert clean bedding. This action can cause some anxiety and therefore maintain good communication throughout offering reassurance whilst also upholding dignity and privacy.
- Wash the genital areas and perineal areas last, changing the water following washing of the perineal area. This will help prevent cross infection. Provide a disposable cloth and encourage the patient to wash their own pubic area to promote independence and dignity. Discard the cloth before moving onto washing the perineal region. If the patient has a catheter in-situ, clean the catheter at this point and discard the cloth immediately.
- Ensure the patient feels clean and dry in all areas before removing remaining soiled bed linen and remaking the bed with clean sheets.
- Throughout the process, observe the skin for any blemishes, rashes, discoloration or signs of trauma.
- If necessary, ask the patient whether they would prefer to have their hair washed as part of the process. If they would like to do so, gather the appropriate equipment, and complete this process.
- Then, offer the patient a brush or comb, however if they are unable to fulfil this task, brush or comb the patient's hair ensuring not to apply too much force as to cause pain, but ensure the removal of tangled hair. **Remember:** Not all hair will require a brush or comb. Hair type and style is individualistic, and it is important to recognise that different hair requires different grooming or treatment. Discuss with the patient how they prefer to care for their individual hair type and work with them to facilitate achieving the appropriate care. Hair care is discussed in greater detail in the Hair Care: Step by Step box below.

ACTIVITY: PAUSE AND REFLECT

- How did you feel when you participated in full personal hygiene for the first time?
- How would you do things differently in future if at all?
- How do you think the patient felt throughout the process?

Dressing

DRESSING: STEP BY STEP

- Always ask the patient what they would like to wear following bathing. It is important to include the patient in decisions about preferences and facilitate choice.
- Encourage the patient to dress in alternatives to nightwear during the day to avoid 'pyjama paralysis'. Enable and empower through providing choice and encourage the patient to do as much for themselves as possible.
- If the patient is not getting out of bed, it is likely that nightwear is most appropriate, however avoid using surgical gowns as this can undermine self-esteem and disempower individuals.
- Place soiled or used clothing in a patient property bag, labelled accurately, and place in the patient locker.
- Inform family, friends or carers of any laundry that needs to be undertaken and any requirement for clean clothing, including underwear, nightwear, and day clothing. It is also important that patients have access to appropriate footwear whilst in hospital. If the patient is unable to do so for themselves, speak with family, friends or carers and ask them to provide well-fitting and non-slip footwear. As the patient mobilises around the bed and ward area, it is crucial that they can do so safely. Loose or ill-fitting slippers and shoes can prove hazardous and lead to trips, slips and falls.
- Some underlying conditions will have an impact on a patient's ability to dress themselves, in which case they will rely on the nurse to assist them. It remains important to ensure the patient has a choice and should be encouraged to decide what they would like to wear. Conditions that have resulted in a dense weakness should be approached by dressing the weaker side first, this will allow the patient to push their dominant arm through sleeves and arm holes with greater ease.
- Assisting an adult to dress must be approached like all other fundamental needs. It should be underpinned by patience, compassion and understanding. It should be respectful of people's choice and should not undermine self-determination or disable. It can prove difficult for some to ask for help and you should approach the process with compassion always maintaining the individual's dignity.

Oral care

ORAL CARE: STEP BY STEP

ASSESSMENT

- Before undertaking the process of oral hygiene and mouth care, ensure you have gained informed consent.
- Any unexpected issues or problems you note during the procedure or an inability to undertake the intervention should be documented and assistance sought from other members of the multidisciplinary team such as the dental team, a specialist nurse or the speech and language therapist.

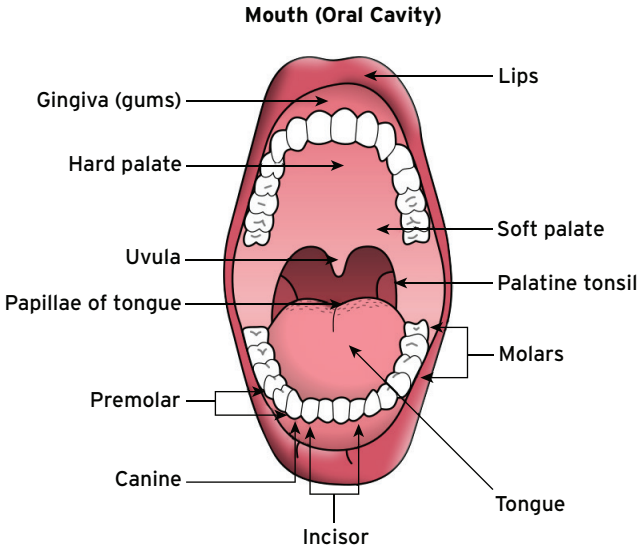


Figure 6.3 The mouth

Source: Wikimedia Commons

- Assessment should underpin the procedure and should alert the nurse to the needs of the patient, maintaining individualised care.
- Monitor the patient throughout for signs of distress, anxiety or changing condition.
- Establish if there is any relevant medical history or medication that might impact your ability to complete the process.
- The oral cavity, lips and teeth should be thoroughly assessed, looking for lesions, broken areas or signs of infection.
- A small pen torch is useful for use during an oral assessment. Poor oral hygiene, immunosuppression and ill-fitting dentures can all lead to a common infection, Candida albicans (thrush). This fungal infection presents as small white spots, coating the patient's tongue, mucosa and at times the palate. If you suspect the patient has developed this infection, it should be reported and documented, and treatment started as soon as possible.
- An initial assessment should be followed by ongoing reassessment. As with all aspects of care, firstly establish how much the patient can and would like to do for themselves.
- Enable them to achieve as much as they can without assistance, offering support and encouragement, and if available offer the use of adapted toothbrushes with wider handles for example for use by patients who have reduced dexterity because of an underlying condition.

DEPENDENT PATIENTS

- The unconscious patient will require all aspects of oral care to be provided on their behalf. They may have an Endo Tracheal Tube (ETT) in-situ, but this does not mean that toothbrushing cannot or should not be undertaken.

(Continued)

- If the patient has all their own teeth in place, approach the intervention with care and apply the same underlying principles as you would when brushing teeth for patients who require assistance.
- You may require support from a colleague to ensure you do not dislodge the ETT and to provide suction of excess toothpaste and secretions to avoid ingestion.
- Assessment of the oral cavity and condition of the teeth is vital for the fully dependent patient and oral care should be provided regularly, hourly if indicated.
- The condition of the patient may impact on the overall condition of the oral cavity and the lips, and therefore great care should be taken to avoid dryness, cracked lips, sores or infection.
- Document all findings in the nursing notes and report any changes to the nurse in charge.

DENTURE CARE

- If the patient is fully conscious, establish whether the patient has their own teeth or partial or full dentures.
- Ask the patient how they would like to proceed. Some patients will be happy to offer their dentures in a denture pot for cleaning at a basin, whilst others may prefer to keep dentures in-situ. It is important to discuss with the patient the need to regularly remove dentures for the purposes of cleaning, especially following mealtimes.
- It is also advisable to encourage patients to remove dentures overnight, placing them in a denture pot; this allows the mouth and delicate oral membranes to recover.
- It is essential that the denture pot is clearly and accurately labelled to ensure dentures are returned to the correct owner, and that water is changed daily. Some patients may feel self-conscious when their dentures are removed, and therefore it is crucial to offer privacy and uphold dignity throughout the process.
- Enable the patient to undertake this aspect of personal hygiene in the privacy of a bathroom or with the curtains drawn if they prefer.
- Ask the patient if they have their own toothbrush and toothpaste, some patients may not have been prepared for a hospital admission and therefore the equipment should be provided by the ward.
- When cleaning dentures, use a soft toothbrush and toothpaste, and be careful to avoid dropping into a basin as they can break.
- Clean the entire denture including the surface that fits the denture in place. Prior to reinserting, encourage the patient to gently brush the gum and oral cavity and rinse with cold water to aid the removal or prevention of plaque build up and tartar.

BRUSHING TEETH

- If the patient is unable to undertake their own tooth brushing, you will be required to undertake the process on their behalf.
- Prior to starting the process, clearly explain to the patient what you intend to do and ensure you have gained consent.
- Make sure the patient is in a comfortable position, and that you have all the necessary equipment to hand.
- Provide the patient with a towel to cover the chest area. If the patient has partial dentures, ask for consent to remove them for cleaning in the same way as full dentures.
- Apply a small amount of toothpaste to the brush (the same size as a pea is sufficient). Position yourself behind and slightly to the side of the patient supporting the patient's head and proceed

to brush the teeth without applying too much pressure. This will avoid causing any bleeding of the gums or oral cavity.

- Avoid applying too much pressure to loose teeth to avoid the risk of dislodging and potential swallowing or choking.
- Use small strokes at an angle of 45 degrees ensuring to brush all areas, top and bottom, inside and out including the tongue, palate, gums, and cheeks. Brushing should occur for 3–4 minutes. Ask the patient to rinse their mouth as vigorously as possible to remove any debris and toothpaste and provide them with a small cloth or towel.
- Flossing or use of intra dental sticks should be encouraged to remove plaque and food from between the teeth. If the patient is used to doing this at home, ensure to maintain. If the patient consents, apply some soft paraffin or lip salve to avoid dry cracked lips, that can arise following use of a face mask or within a dry environment.
- Rinse and dry the toothpaste and store in a clean area or return to the patient's toiletry bag or a toothbrush holder.
- Do not store wet or damp to avoid possible infection.
- Safely discard disposable equipment in line with local policy and document the care provided, noting any changes or new findings that have resulted as part of your overall oral assessment.

ACTIVITY: HAVE A GO

Ask permission from a friend or family member to brush their teeth then ask them to do the same for you. How does it feel to be the recipient of such a process? How did you feel undertaking the process? Does experiencing a similar procedure enhance your empathy?

Shaving

Assisting or enabling a patient to shave is an integral aspect of personal hygiene and provides the nurse with an opportunity to develop relationships and can also be undertaken at any point throughout the day, either during the process of washing and bathing or as a separate activity. As with all aspects of hygiene, the starting point is to establish how much the patient can do for themselves, encouraging and enabling the individual to participate partially or fully. Encourage the patient to utilise their own and preferred toiletries and provide them with appropriate space and enough time that they do not feel rushed.

Be mindful of differences in cultural and religious preferences and ensure that you do not offend by offering to support a patient to shave when not advocated within their religion.

SHAVING: STEP BY STEP

EQUIPMENT

- Towel to place across the patient's chest area
- Basin of warm water if not in a bathroom at a basin

(Continued)

- Patient's own face cloth or disposable wipes
- Shaving foam/soap/gel
- Shaving brush (if not available, use hands to generate foam)
- Patient's own razor or new razor provided by the ward (dispose of this following use) – ensure that razors both manual and electric are not shared between patients to avoid cross infection and ensure safe disposal of sharps in line with local policies and procedures

or

- Electric shaver

PROCEDURE

- If you are shaving the patient, ensure they are sitting comfortably either on a chair or in the bed at working height that is suitable and safe.
- Prior to starting, ensure you have gathered all the equipment required. Check before shaving if the patient is taking any prescribed medication such as Warfarin or has any underlying conditions that may affect blood clotting such as Haemophilia. A cut or nick in the skin during the shaving process will need monitoring.
- When you have gained informed consent from the patient, you should check the overall condition of the skin, looking for blemishes, lesions or any signs of infection or trauma. This should be done whether you are undertaking a wet shave with shaving gel and razor or a dry shave using an electric shaver (Ette and Gretton, 2019).
- When undertaking a wet shave, ensure the water is warm enough to open the hair follicles and generate a foam either using gel or shaving foam.
- Apply to the face and then using short strokes, shaving in the direction of the hair growth.
- You should hold the skin taught to maintain purchase and avoid discomfort. Achieving a clean shave will reduce the possibility of the patient developing any skin abrasions and will add to the general feeling of wellbeing.
- Ensure that excess soap or foam is removed regularly and rinse the blade to avoid clogging with hair and foam. These actions should be repeated until the whole area has been shaved and then rinsed with warm water and dried thoroughly.
- The patient may want to use aftershave or a soothing balm, in which case enable the patient to apply themselves or apply on their behalf.
- Whilst it is predominantly men who require assistance with shaving, it is not exclusively the case. You may be required to assist female patients with the removal of facial hair.
- Excess facial hair might be a side effect of medication or underlying conditions such as Polycystic Ovary Syndrome (PCOS). This situation should be approached with respect and sensitivity and the principles of facial hair removal applied. Great sensitivity is also required when working with transgender patients who may seek support to manage hair growth. Adopting a non-judgemental approach and maintaining privacy and dignity is always an important aspect of all interactions with all patients.

Eye care

Eye care as an aspect of personal hygiene can also serve as an opportunity to assess the overall condition of the eye and the surrounding area. General eye care, eye cleansing and application of prescribed

treatment can prevent eye infections, support treatment of infections or conditions, and relieve symptoms of underlying conditions or eye trauma, and help prevent damage to the eye when the patient is unconscious and unable to blink (Dougherty and Lister, 2015).

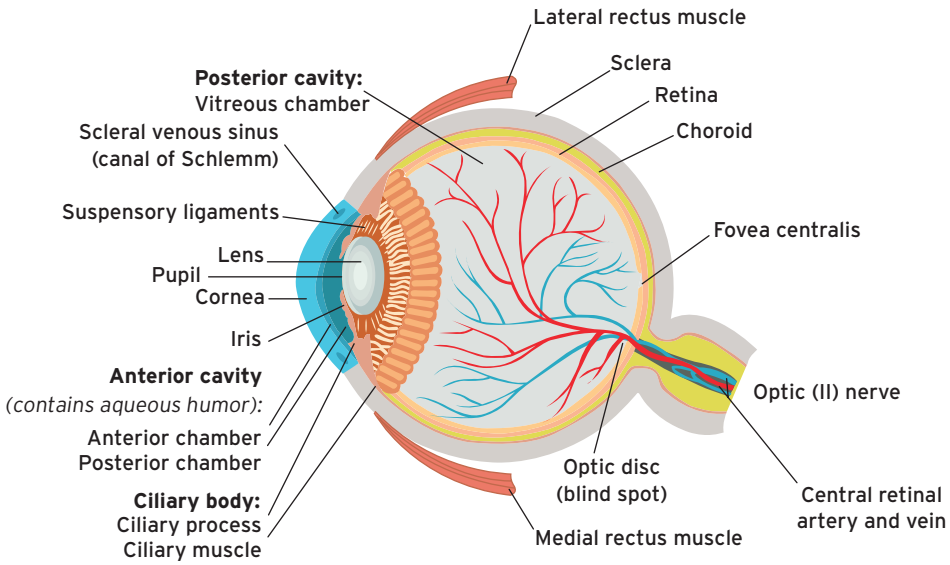


Figure 6.4 The eye

As with all aspects of personal care and hygiene, eye care should be underpinned by the concepts of good communication, patient dignity, infection control and prevention and patient advocacy and self-determination. Some patients who have underlying eye conditions including reduced vision and blindness may find it difficult to undertake their own eye care within a new environment, and as such you should help (Gwenhure and Shepperd, 2019). Eye infections can result in pain and discomfort and even long-term damage, and therefore care whilst cleansing the eye area should be applied. It may be not be possible for contact lens wearers to continue wearing contact lenses in hospital. This is because extra care is required to ensure contact lenses are taken out at night and that lens solution is available. If a patient is unwell, they may not be able to do this and therefore may need to wear glasses instead. Furthermore, sometimes patients are asked to remove contact lenses, for example when about to undergo surgery.

WATCH THE VIDEO

EYE CARE

Watch along as you read through this step by step procedure by scanning the QR code with your smartphone camera or via **https://study.sagepub.com/rowberry**.

EYE CARE: STEP BY STEP

- Gather all the necessary equipment prior to starting the process. This will avoid disruption of the process.
- Explain clearly what the procedure will involve and allow the patient to ask any questions they may have relating to the process.
- Gain informed consent from the patient prior to starting the procedure.
- Ensure the patient is in a comfortable position and uphold their privacy and dignity throughout.
- Wash your hands thoroughly and don appropriate PPE to reduce the risk of cross infection.
- On a clean tray or trolley, prepare all the equipment including sterile procedure pack, cleaning solution and lint free gauze swabs.
- Place a paper towel on the patient's chest and neck area.
- Ask the patient to keep their eyes closed whilst you clean the eyelids.
- Clean the eyelid from the inner aspect, near the lacrimal apparatus, towards the outer aspect. Use each swab only once prior to discarding.
- This should be repeated until such a point that all discharge has been removed.
- Ask the patient to open their eyes, and repeat the above process on the lower eyelid, again using swabs only once to avoid potential cross infection.
- Each eye should be regarded as a separate procedure and therefore two packs should be utilised.
- Infected eyes should be treated last to prevent the possibility of cross infection.
- Continue until all discharge has been removed.
- Ensure you do not touch the cornea with the gauze swab as this could be painful and could cause an abrasion.
- Dry the lids carefully, making sure the area is not left moist.
- Communicate with the patient throughout reducing anxiety and promoting dignity.
- On completion, discard all disposable equipment and PPE according to local policy.
- Ensure the patient is comfortable before documenting any findings.

Nail, hand, and foot care

Hands and feet are often overlooked as a fundamental aspect of personal hygiene and general care. However, for many reasons, including prevention and control of infection, they are central to maintaining personal hygiene.

NAIL, HAND, AND FOOT CARE: STEP BY STEP

- Familiarise yourself with local policy in respect of who can cut finger and toe nails. Some Health Boards/Trusts will not support the intervention being carried out by nurses, and as such alternative solutions must be found, including referrals to chiropodists or specifically trained staff. Remember, with the correct equipment, some patients can undertake their own nail care effectively.
- Encourage patients to wash their hands regularly, especially following use of the toilet and prior to mealtimes.
- If it is not possible for the patient to access a basin with water and soap, consider providing the patient with a wet/damp cloth and towel to wash their hands at the bedside.
- If they prefer, offer use of an alcohol-based hand gel, however, this should not be regarded as a substitute to handwashing with soap and water, but as a short-term alternative.
- Preventing infection underpins the nurse's role, and as such, maintaining good handwashing is important for the patient as well as staff.
- After the patient has washed their hands, they should be dried thoroughly, especially in between the digits/fingers. These areas if not thoroughly dried can remain moist and become a source of fungal infection. They should be offered the choice to apply hand cream. This will moisturise and help avoid dry and cracked skin. Ensure you have checked that the patient is not allergic to any ingredients and encourage them to use their own cream if they have access to it.
- Fingernails can harbour microorganisms and can be a source of infection. Patients should be encouraged to keep nails short, cut straight across to the level of the finger with nail clippers or scissors, and any rough or jagged areas filed smooth. Any residual dirt is best removed following immersion in a bowl of warm soapy water or during a bath or shower. Gently rub away any matter that the patient is unable to remove for themselves.
- Like the hands, the feet also require care of the skin and nails. When bathing or showering, do not overlook the feet. Care should be taken to wash and thoroughly dry the areas in between the toes, as like the hand digits, these areas if left moist can harbour fungal infections and become cracked and sore.
- Some patients will already be receiving treatment for various foot infections and conditions, and therefore it is vital that any treatment is accurately prescribed and administered appropriately.
- Toenails should be kept short, cut with clippers or scissors straight across. They should not be cut at the corners as this can lead to ingrowing toenails. There are some underlying conditions that will render this process difficult to manage including diabetes that can result in reduced sensation and circulation. Toenails can be tough and hard and some patients may also have underlying medical conditions that require specialist intervention from a foot care specialist such as a chiropodist.
- Conditions such as those that have an impact on peripheral sensation and circulation should be considered as part of an assessment to determine the most appropriate approach.

Hair care

For many patients, hair type and style are integral parts of individual identity and as such all effort should be made to approach hair care with respect towards individual practice and preference. Many patients will undertake the brushing or combing of their hair independently, provided they have brushes or combs to hand. However, for the dependent patient, assistance will be required, for example, to prevent their hair from knotting and becoming tangled. As with all aspects of care, you should approach this process with care and be careful not to apply too much pressure as this may be uncomfortable or painful for the patient. You also risk damaging the scalp if the skin condition is delicate and affected by any scalp conditions.

As with all interventions, prior to brushing or combing ensure you have gained consent and assess the general condition of the head and scalp, noting any abnormalities, lesions, trauma or cuts and bruises. Brushing and combing of the hair can result in general feelings of wellbeing and reflects the overall care and attention paid by the individual and/or staff to how the patient feels and appears.

In addition to brushing and combing, hair washing can have the same impact. Unwashed hair can feel dirty and as part of general personal hygiene the opportunity to wash hair as part of an independent bathing/showering should be made available. Hair washing can support a general feeling of wellbeing for patients. Washing hair stimulates the circulation of the scalp, whilst shampooing removes dirt, bacteria, microorganisms and oils. Aspects of hair care include daily brushing and combing, head bath to maintain cleanliness and treatment of hair including lice infestation.

Patients who are unable to leave the bed to wash their hair in a bathroom setting should nevertheless be helped to wash their hair. For the unconscious and conscious patient, there is equipment that can be utilised to facilitate hair washing whilst lying in bed. This equipment can range from an inflatable bowl to a rigid plastic tray (Lawton, 2019). In the absence of such equipment, a bowl can be utilised and placed beneath the patient's head. Do not attempt to move the patient or undertake hair washing until you have completed an assessment. This procedure may not be suitable for a patient who has a neck or spinal injury.

HAIR CARE: STEP BY STEP

- Gather all the required equipment including staff apron and gloves if deemed necessary, towels, waterproof sheeting, shampoo/conditioner, brush/comb, water tray or inflatable hair washing bowl and jug.
- Gain informed consent from the patient and ensure you communicate throughout the procedure, maintaining eye contact and providing reassurance, upholding patient dignity throughout.
- Remove the head of the bed and place towels or waterproof sheeting around the patient's neck and shoulder areas making sure the patient feels warm and comfortable.
- Place the tray or inflatable bowl under the patient's head.
- Apply water to the hair prior to applying shampoo. Ensure you have checked that the patient is not allergic to any contents and that it is suitable for their hair type. Ask the patient if they have their own and use it if that is what they prefer.
- After shampooing, rinse the hair thoroughly and dry with a towel making sure you dry the ears and folds in the neck.
- Some ward areas may have a hairdryer, if so, dry using the drier but be careful not to apply too much heat as to cause discomfort or pain.
- Change the bed linen and clothing as necessary.

- Discard all disposable equipment according to local policy and decontaminate any reusable equipment.
- Remove your apron and gloves if worn and wash your hands before recording the procedure appropriately.

ASSESSING, PREVENTING, AND MANAGING COMMON COMPROMISES TO SKIN INTEGRITY: DISCUSSION

Types of wounds

A wound can be defined as an injury to the skin and/or underlying tissues because of trauma, surgery, or underlying disease processes such as cancer. They can be categorised as acute, where healing occurs within an expected time frame, which is quantified differently within the literature, sometimes as four weeks, other times as six ; and as chronic. A chronic wound is a wound which does not heal within the above expected time frame, and delayed healing is often attributed to underlying conditions, pharmaceutical regimes, and infection. With the reasons for delayed healing varying between individuals, this highlights the importance of an individualised holistic assessment. Nurses tend to direct their focus towards the choice of dressing, but in fact the primary considerations should be of the underlying aetiology, that is what variables are causing this delay. The focus should be on solving the underlying problem.

Within this chapter, there is not scope to discuss the full principles of wound assessment, and further reading should be undertaken to complement the wound assessment looking at physiological factors such as disease and medications, psychological and social factors which may impact upon the wound. Locally, there should be a full assessment of the wound bed and quite often the TIME assessment is utilised as a framework for this.

Major categories of wounds, their underlying causes and generalised management plans are contained within the table below:

Table 6.1 Major categories of wounds, their underlying causes and generalised management plans

Wound type	Causes	Treatment
Pressure ulcers	Pressure, shear and friction. Risk elevated by underlying conditions, medications, continence status, nutritional status, age, mobility status.	Reduction of the pressure. Repositioning and offloading. Using specialist equipment, general wound management.
Moisture lesions	Urine and faeces, perspiration, exudate.	Full continence assessment, correct selection of continence products. Correct washing and drying of the skin using neutral pH cleansers. Use of barrier protection. Reducing the pressure.
Venous leg ulcers	Venous disease. Characterised by brown staining of the limbs, champagne bottle shape, swelling, varicose veins, eczema. Venous leg ulcers are shallow, tend to be limited to the gaiter area, irregular edged. However, there can be arterial disease occurring at the same time which may alter the appearance of the ulcers.	Gold standard treatment is graduated compression bandaging. Caution should be taken and full arterial assessment must be performed by a competent individual in order to commence therapy.

(Continued)

Table 6.1 (Continued)

Wound type	Causes	Treatment
Arterial leg ulcers	Peripheral arterial disease. Caused by narrowing or blockage of the arteries in the lower limb. Higher incidence in those who have diabetes, history of other arteriopathies such as coronary artery disease, CVA and smokers. Appearance of arterial ulcers tends to be more punched out, deeper, have necrosis.	Full arterial assessment is needed. Quite often requires surgical intervention – arterial bypass, grafts or angioplasty.
Diabetic foot ulceration	Ulceration on the foot. May be ischaemic, neuropathic or a combination of both. Healing is compromised because of a lack of blood supply and neuropathy. Very high risk of infection and osteomyelitis.	Debridement, infection prevention and management. Offloading of the pressure from the affected area using specialist foams or footwear. Revascularisation. Local wound care.
Malignant wounds and fungating tumours	Skin lesions because of primary or secondary tumours.	Some cancers can be surgically removed. For those that cannot, then treatment becomes palliative with management of exudate, pain, colonisation, and itching.
Burns	Wounds made by thermal, electrical, or electromagnetic energy.	Multifactorial approach from conservative management with cooling and dressings to surgical debridement with skin grafting.
Surgical wounds	Incisions made for the purpose of surgery.	Generally, heal by primary intention, with closure using sutures, clips or glue. Sometimes, wounds are left to heal by secondary or tertiary intention.

Negative pressure therapy

Vacuum assisted closure, sometimes referred to as negative pressure wound therapy, has revolutionised wound care over the last 15 years. It is a mode of therapy used to encourage wound healing. It is used both as a primary treatment of chronic and complex wounds and as an adjunct for temporary closure and wound bed preparation prior to surgical procedures such as flap surgery and skin grafts (Shintler, 2012).

KEY TERMS

Topical Negative Pressure (TNP) therapy: the application of local sub atmospheric pressure across the wound bed, which has a central role in the management of acute wounds.

Wounds suitable for treatment with topical negative pressure include:

- Acute trauma (upper/lower limb)
- Burns
- Chronic pressure sores
- Leg ulcers

- Diabetic ulcers
- Wound dehiscence
- Wound infection
- Necrotising fasciitis
- Postoperative sternal infections
- Skin grafts and flap surgery
- Wound bed preparation

NEGATIVE PRESSURE THERAPY: STEP BY STEP

- The equipment required consists of foam, an adhesive dressing, tubing, and the negative pressure vacuum assisted device/machine.
- The foam is cut to size, to fit the wound cavity exactly. Different colour foam pads are available; some are more pliable whereas others are less so and will require greater levels of pressure to achieve the required effect. The choice of foam is normally decided by the clinician.
- This is covered by a film dressing or silicone overlay to achieve a complete seal. The adhesive dressing also creates a closed environment for moist healing.
- A small incision is made in the film to insert a drainage tube, however when using gauze-based dressings, a fenestrated tube is used with no incision required.
- The tube is connected to the vacuum assisted closure device/machine. This enables excess fluid to be removed into a cannister. There can be some adhesion with the foams to the granulation tissue which can cause trauma on removal. It is worth placing a wound contact layer in between, such as a silicone-based dressing.
- The seal around the insertion point must be leak free to achieve the required suction.
- Once in position the dressing provides a stable environment over the wound surface. This also enables the wound to heal even in the mobile patient.
- Monitor for any shear stresses as this can affect the wound and in turn damage the fragile newly formed tissue.
- Pressures achieved are monitored by the machine. Negative pressure therapy is usually applied at a sub-atmospheric pressure of 125 mm Hg using PU (black) foam – that is, 125 mm Hg below atmospheric pressure to achieve the desired outcome, although evidence to support optimal pressures is limited (Jones et al., 2005). This decision however is normally made by the clinician.
- Pressure can be applied on a constant or intermittent basis, controlled by device functions on the device/machine. It is, however, often stated by patients that the intermittent mode is less tolerable due to the fluctuations in pressures applied, therefore caution is advised. Listen to the patient feedback and perspective in order to maximise positive patient experience and outcomes.
- Dressings should be changed every 48–56 hours except in exceptional circumstances (for example, over a skin graft).
- Dressings left for longer periods of time over the recommended 56 hours can lead to increased discomfort during dressing changes. This occurs as a result of granulating tissue adhering to the foam dressing.
- Wounds need to be regularly inspected to ensure the wound healing is achieved (Banwell and Musgrave, 2004).

GO FURTHER

For more information, read the following journal article on the vacuum assisted closure technique:

Yadav, S., Rawal, G. and Baxi, M. (2017) 'Vacuum assisted closure technique: A short review', *The Pan African Medical Journal*, 28: Article #246. doi.org/ 10.11604/pamj.2017.28.246.9606

Skin assessment: Pressure damage

The true incidence of pressure damage in the UK is unknown. Prevalence audits in England demonstrated an average of 9.04% of inpatients had a pressure ulcer (Gov.uk, 2022), with Wales' most recent national inpatient audit demonstrating a similar point prevalence of 8.9% (Clark et al., 2017). This has an estimated cost of £1.74 billion per year: the Department of Health and Social Care (2020) productivity calculator estimates the cost of a grade 4 pressure ulcer as £14,000. Besides the cost to the NHS, there is a significant cost to the person physically, psychologically, financially, occupationally, socially, and a significant impact on the quality of life. Figures vary, but several sources state that 50–95% of pressure ulcers are preventable, with simple interventions such as effective risk assessment, repositioning, adjunct equipment to reduce pressure and patient carer education. It is the responsibility of the entire healthcare team to prevent pressure ulcers; the remit normally falls on nursing staff and prevention is fundamental to effective and safe patient care.

A pressure ulcer is defined as 'localised injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure, or pressure in combination with shear. Several contributing or confounding factors are also associated with pressure ulcers; the significance of these factors is yet to be elucidated' (European Pressure Ulcer Advisory Panel, 2016). The sacrum is the most common area for development of pressure ulcers followed by the heels (Moore et al., 2019), however they can occur over any bony prominence, over the cartilage of the ears and nose and anywhere where a device has contact with the body.

WATCH THE VIDEO

SKIN ASSESSMENT

Watch along as you read through this step by step procedure by scanning the QR code with your smartphone camera or via **https://study.sagepub.com/rowberry**.

INITIAL SKIN ASSESSMENT: STEP BY STEP

As with all nursing interventions, it is essential that you gain informed consent from the patient prior to assessment. Privacy and dignity must be maintained throughout the procedure, and you must ensure that the patient is comfortable, i.e. their pain is managed, room temperature is adequate, and take into consideration the patient's current condition (breathing etc.).

- Ensure that communication is maintained with the patient, that dignity and respect are maintained, and the patient is comfortable.
- Only expose the parts of the body that are being checked at the time, keep all other parts covered. It is essential that all areas of the body are checked, with particular attention to bony prominences, ears and nose and areas in which there are devices. Check catheters, under anti-embolic stockings, under spectacles, oxygen delivery devices.
- Assess the bony prominences for any signs of erythema. If erythema is noted, apply pressure for a few seconds to assess whether it is blanching. Tissue that is blanching will return to its usual colour within 2 seconds. Blanching may not be visible in darkly pigmented skin, but colour of early pressure damage can be different to the surrounding skin therefore should be assessed for. Check for areas of skin loss and blistering. For patients with lighter skin tones, check for areas of dark discolouration or devitalised tissue, which is yellow, brown, or black in colour. For patients with darker skin tones, palpating areas over the bony prominences is recommended, any signs of the area being cooler or warmer to the touch or feeling softer or firmer than the surrounding tissue may be an indication of pressure damage. If these changes are noticed, then pressure should be offloaded from the area. Otherwise, unexplained pain over a bony prominence should also be taken note of and pressure offloaded with close observation. Suspected deep tissue injuries can also be difficult to detect on darker skin. It is extremely important that thorough assessment and management is undertaken in those with darkly pigmented skin as damage can quickly deteriorate into a deeper level ulcer without appropriate action.
- Ensure that the pressure is offloaded from any areas of concern immediately. This may be achieved by repositioning, or use of devices or pillows to offload pressure. There are silicone pads which can reduce the pressure in awkward areas.
- Consider the use of supplementary equipment to reduce the pressure, in line with local contracts. This may be static air filled devices or dynamic devices for the bed and chair.
- Patient and carer education is important, in encouraging movement, skin checks using a mirror if possible and reporting any areas of unusual pain.
- Document on a bedside communication chart, within the nursing notes and on a body map as per local protocol. Report any adverse incidents in line with local procedure.

Hygiene and skin integrity: Discussion

Pressure damage occurs because of sustained pressure, where the tissues are compressed between the surface and the bone. The pressure occludes the capillary bed and reduces the blood supply and oxygen supply to the tissues; thus, it begins to die. This can be alleviated by repositioning and offloading the pressure loads. The risk can be compounded by shearing forces, the act of the underlying structures

such as bone and more superficial tissues moving in opposite directions to each other; this again can cause ischaemia, a disruption in blood supply to the area. These forces can be reduced by correct moving and handling techniques and positioning the patient, so they are not likely to slip down in the bed or chair and be subject to shearing. Friction is also considered simultaneously with shear, damage can occur because of friction with the surface such as dragging across the bedsheets, friction against a chair, shoes, or medical devices.

There are many factors which increase the risk of pressure damage including but not limited to age, sex, underlying medical conditions, medication use, continence status, mobility status and nutritional status. Risk is elevated by a lack of mobility and lack of sensation. However, we should assume that pressure damage can happen to anyone. It is important not to be complacent, do not assume that just because someone is independently mobile or self-caring that they are risk free. They can still develop pressure ulcers; indeed, they may sometimes be more of a risk than those who are not, because staff can assume that they are not at risk. Pressure ulcers can develop in children and young people, labouring mothers and those who score as 'low risk' in assessment as a result of short-term illness, undergoing surgery or interventions which affect mobility and sensation such as temporary sedatives, nerve blocks and epidurals.

Pressure damage is categorised into six grades, numbered one to four and two additional categories of unstageable and suspected deep tissue injury, however not all pressure ulcers look like the photographs you may see and will vary in size, shape, and tissue types, and some find it easier to categorise the damage according to descriptors.

GO FURTHER

It is important to be mindful that pressure damage appears differently on different skin tones. To learn more read the following article:

Black, J. and Simende, A. (2020) 'Ten top tips: Assessing darkly pigmented skin', *Wounds International*, 11 (3). https://www.woundsme.com/uploads/resources/d34b6a6f02b2659b00636c49b453046c.pdf (accessed October 13, 2022)

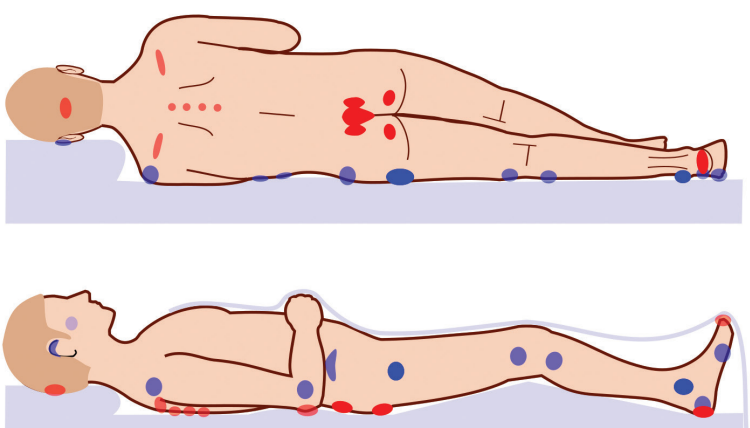


Figure 6.5 Body map with pressure points

Source: Wikimedia Commons/Jmarchn (CC BY-SA 3.0)

Table 6.2 Pressure ulcer grades and simple recognition

Grade of damage	Explanation
The red mark	This is not yet pressure damage, but an initial inflammatory response in an area which is highly susceptible to pressure damage. If there is an area of erythema over a bony prominence, ears or nose or underneath a device then firm pressure should be applied for a few seconds. When the pressure is released, check whether the area has blanched, that is turned white and then refilled. Even if the area is blanching, then the patient is still at high risk of pressure damage in this area and action must be taken to reposition off the area. Act on the red mark by offloading pressure.
Grade one	When pressure is applied to an area of erythema (redness), there is no blanching seen. That is, it does not turn white. This is grade one pressure damage. Skin tones vary in their response to this.
Grade two	Grade two pressure damage is superficial damage to the epidermis at the epidermal–dermal junction. This will appear as either a clear fluid filled blister or superficial skin loss in which the wound bed is pink.
Grade three	Grade three pressure damage is full thickness skin loss, that is loss of epidermis and dermis. There will be subcutaneous tissue visible as all of the skin layers are lost.
Grade four	Grade four pressure damage is down to the muscle, tendon, or bone. There may be some slough or necrosis, but the structures must be visible in order to classify it as grade four.
Suspected deep tissue injury	This will be either a blood-filled blister, or dark discolouration beneath intact skin. Sometimes, if the patient has had a fall, this can be confused with bruising. However, if the origin of the dark discolouration is uncertain, then treat it as if it were pressure related and remove the pressure.
Unstageable	An unstageable pressure ulcer is one in which the wound bed is obscured by slough or necrosis, where you are unable to visualise the wound bed. Until debridement of the devitalised tissue has been undertaken, you cannot see its true depth. Due to the level of tissue damage when slough or necrosis is present, it will always be a grade three or grade four post-debridement.

With darker skin tones, signs of erythema are not always as evident, therefore relying on this as an indicator of pressure damage is difficult. It may be useful to look for differences in skin tone, by comparing one affected limb to the other or areas surrounding. Some subtle signs include shiny skin as a result of swelling which pulls the skin tight. The area may be more painful for the patient, it may be firmer or softer, warmer or cooler compared to other skin areas. Identifying possible early pressure damage such as the red mark or grade one damage becomes more difficult.

At best, pressure damage causes pain and discomfort for the sufferer. In extreme circumstances, pressure damage can lead to sepsis, loss of limbs and even loss of life. It is the responsibility of all members of the healthcare team to prevent pressure ulcers. Up to 95% of pressure ulcers are avoidable, thus it is largely preventable harm.

Risk assessment

All patients should have a pressure ulcer risk assessment undertaken and the policy and guidelines for this will differ locally. It is essential that you familiarise yourself with the policies of the health board, trust or private provider that you are working with. There are a variety of different tools that may be used to assess risk of pressure damage, which will vary between healthcare providers, and you should use the standardised tool for the area in which you are working. Clinical judgement should also be exercised, as tools are just an aid to assessment and individualised planning is essential.

Each provider may have different frequencies at which to repeat risk assessments, with most often daily assessments undertaken or on each visit in community. It is essential that these risk assessments are repeated from scratch, as an assumed assessment copying the data from the previous assessment is as useful as no assessment at all. There will be various factors which increase the risk of pressure damage such as age, gender, underlying conditions, previous pressure damage, medications, and conditions which cause a lack of mobility or lack of sensation. Poorly managed continence and nutrition can also increase the risk of pressure damage, so it is vital that adjunct assessments of nutrition, mobility and continence are undertaken.

Documentation is extremely important in the prevention, assessment, and management of pressure ulcers. Risk assessment documentation allows for effective communication amongst the team and recognition of risk, effective care planning and safer care. There should also be sufficient documentation of skin assessment and repositioning of the patient. The age-old phrase 'if it wasn't documented, then it wasn't done', is applicable. Bedside records of care, most frequently the SKIN bundle (Gibbs et al., 2006) allows for documentation of skin assessment, repositioning, continence care and nutritional care. This documentation will be relied upon in investigations, which must be undertaken for all levels of pressure damage sustained. In addition to the SKIN bundle documentation at the bedside, there should be written entries documenting any changes within the nursing notes and documentation on a body map to accurately identify the position and nature of any wounds, as well as the date of discovery.

Local reporting systems should be used to report pressure ulcers and an investigation, root cause analysis and action plan should be undertaken to ensure learning from incidents and to improve practice. The serious incident reporting system in Wales and England mandates that all pressure ulcers of grade three, grade four and unstageable developed in NHS funded care must be reported to government and there must be a higher level of investigation. The presence of thorough documentation assists investigation. The documentation is essential to demonstrate that effective care was given and to demonstrate whether a pressure ulcer was avoidable or unavoidable. Care plans should always be put in place for patients who are at risk of pressure damage, which outline the frequency of repositioning and skin assessment, the equipment required to reduce the risk etc. It is imperative that care plans are formulated, individualised, and evaluated on a regular basis. A one-size-fits-all approach should not be taken in regard to repositioning; this should always be based on an individualised assessment. It is dependent on a variety of different factors, and clinical judgement should be considered, with thorough documentation of the rationale for decisions taken. Some patient's skin may tolerate not being repositioned for 6 hours, and issues such as waking them unnecessarily should be factored in. Other patients may be showing early signs of pressure damage in as little as an hour; these patients obviously require more frequent repositioning.

Adjunct equipment

Equipment can be used as an adjunct to, but never a replacement for, reducing pressure. Despite pressure-reducing equipment being used, the patient still needs to be repositioned to offload pressure regularly. Equipment is also prone to failure, so should be regularly checked to ensure that it is in good working order. For example, a deflated dynamic mattress is as useful as the patient just lying on the metal frame of the bed and can be more of a risk than using standard pressure reducing foam if left unchecked. However, dynamic mattresses are not suitable for use with patients suspected of having or with unstable spinal fractures as they can aggravate the injury. Patients with spinal fractures which have not yet been stabilised must be nursed in the supine position, thus offloading is far more difficult. The protection of the spine is more important at this stage, up until the fracture has been stabilised.

Instead, frequent log rolling and skin assessment are essential, as well as adjustment of skin loading using recognised techniques.

Most profiling beds in the inpatient setting will have a high specification foam mattress with castellations to reduce pressure. The same designs often come in cushions. These products are often marketed for patients who are at high risk of pressure damage, however this should not be relied upon solely and regular assessments should take place to ensure that the pressure reduction is sufficient.

The risk profile of the patient should be considered when deciding if higher specification equipment is required. There are non-powered static air-filled pressure redistributing mattress overlays, cushions, and heel offloading devices, which are made of thermoplastic polyurethane where movements redistribute pressure across the entire cell.

There are also mattresses on the market which are hybrid, that is, can be used as a standard foam castellated pressure reducing mattress or cushion. These products have alternating air cells which can be activated when a power box is attached. They have the benefit of being able to step up or step down the pressure relieving properties of the mattress without moving the patient. They can also be altered as condition dictates.

There is higher specification equipment in the form of entirely alternating dynamic pressure mattresses and cushions, which have cells which are filled with air in which alternating cells inflate and deflate to continually redistribute pressure. Again, it is key that the patient is still repositioned on this equipment as it reduces, but does not eliminate pressure ulcer risk.

Device related pressure damage

Any patient who must use a medical device for a period is potentially at risk of device-related pressure ulcers, thus it is important that thorough assessment of the skin underneath the device takes place. There should always be an assessment as to whether medical devices such as oxygen and catheters should be ongoing, not just for reasons of need, safety, and infection risks, but for their risk of pressure damage. This requires an individualised patient assessment to arrive at a solution for the individual patient; clinical judgement and the current evidence base should be consulted when arriving at a plan.

Oxygen delivery devices such as facemasks and nasal cannulas should be fitted to ensure correct positioning, but not overly tight to apply increased pressure to the tissues. Non-invasive ventilation devices which provide Continuous Positive Airways Pressure (CPAP) must have a tight seal over the nose and mouth to be effective; this can cause pressure damage particularly over the bridge of the nose. If pressure damage is occurring, alternatives such as a full-face CPAP facemask or nasal prongs can be considered. Alternative methods, such as utilising pressure reducing silicone strips across the bridge of the nose, can help to redistribute pressure without compromising the seal. These are not suitable for use on top of broken skin, but a primary wound contact layer could be tried beneath.

Anti-embolic stockings can cause pressure damage. Patients should be correctly measured following manufacturers guidelines. This should also be checked regularly as the size of the patient's legs can alter with oedema or reduction of oedema. The stockings should be removed at least once daily to monitor the skin condition beneath. A thorough holistic assessment should always be undertaken prior to both prescription and application of anti-embolic stockings; patients with compromised arterial status can be at high risk of tissue necrosis should they be applied. Patient education in relation to wearing these products must be given and follow manufacturer instructions.

Plaster casts are also a source of potential pressure damage. Application of casts should be undertaken by an appropriately trained professional and following correct techniques to minimise the risk of pressure damage. Due to the opacity of the casts, the patient should be questioned about any unusual pain beneath the cast, and this should be escalated for review. Patients should be advised or assisted to change position of the casted limb regularly, not to rest on the heel and to use a pillow under the cast.

Bedsheets can cause pressure damage if they are positioned too tightly, particularly on the toes. Top sheets should be left loose and not tucked under the mattress to reduce the risk. Too tight positioning of the bottom sheets on the bed can also cause a hammocking effect and reduce the pressure-reducing properties of the mattress. The layers between the patient and the mattress should also be minimised to sustain the pressure-reducing properties.

Caution should be taken with nasogastric tubes and endotracheal airways as they can cause pressure damage to both the skin and mucosa. These devices are often secured tightly to prevent movement, thus increasing the pressure on the tissues. Repositioning of these devices should occur regularly along with assessment of the tissues to ensure that there are no signs of damage.

Catheter tubing should be assessed for position when the patient is moved in bed or in the chair to ensure that it is not kinked nor underneath the patient. A catheter which is not properly positioned may not drain effectively, may cause a tugging effect and cause trauma to the urethra or neck of the bladder and can cause pressure damage to the skin or mucosa on which there is increased pressure. Spectacles can also be a source of pressure damage over the bridge of the nose and ear cartilage. Care should be taken to encourage or assist in repositioning spectacles and over the ear hearing aids regularly, as well as to ensure that the patient does not fall asleep wearing them.

Repositioning is the single most important concept in reducing pressure damage. We know that pressure ulcers are caused by pressure, so it makes sense that offloading this pressure lessens the chances of development. NICE recommend repositioning six-hourly for those at risk and four-hourly for those who are high risk. However, it is essential that reassessment of skin occurs, as there are some patients who could develop pressure damage in less than four hours. Some patients in conditions of high pressure and low sensation and movement can develop pressure damage in an hour or less. Imagine the patient collapsed unconscious on the floor; a hard surface coupled with the inability to sense the pain occurring in pressure damage and inability to move will mean that pressure damage will happen quickly. An individualised assessment should be undertaken to assess for the red mark; if a red mark is present after the scheduled time for turning, then it must be recognised that repositioning needs to happen more frequently.

When repositioning patients in the bed, ideally a new position should be chosen each time, however this will be dependent on their condition and tolerance. Repositioning does not always have to be assisted, and encouragement can be given to the patient to remind them to change their position. NICE guidelines do not mention a specific method of repositioning, and as always this will be patient dependent. Some patients cannot be positioned in a lateral position due to their condition. It is important to avoid positioning the patient on to an area of erythema. Appropriate manual handling aids should always be used, to avoid unnecessary shearing and friction.

There are times when helping the patient into a new position completely is not possible. For example, when a patient has respiratory disease or cardiac failure it becomes difficult to breathe when supine or lying on their side. It is common for these patients to want to be sat in an upright position for this reason, and some even sleep in the chair overnight. These are patients who are at higher risk of pressure damage anyway because of reduced oxygenation of the tissues and oedema. In this case, breathing would take priority. However, this does not mean that regular turns and assessment cannot occur, and the distribution of pressure will be ever so slightly different when returned to the position. These patients would require the higher specification equipment, consideration of the use of silicone redistributing devices over the bony prominences and education to keep moving as is practical.

When in the chair, people are more at risk of pressure damage. In bed, body weight is distributed over a larger surface area at the points that the body is in contact with the mattress. In the chair, 70% of the body weight is borne by the ischial tuberosities. So, a large amount of weight over a smaller surface area, which increases the pressure. It is for this reason that patients who have limited mobility and are largely sitting in a chair should be repositioned and have a skin assessment hourly.

Patients should be assisted to sit upright, on a chair which is neither too high nor too low. Chairs that are too high for the patient mean that they do not have a stable base and are at risk of slipping in the chair which increases the risk of falls and of shearing forces on the buttocks or sacrum. Being too low a chair will equal more weight being taken down through the ischial tuberosities. There should be consideration as to whether the patient requires a surface of higher-pressure reduction in the chair, that is a pressure-reducing cushion. Patients should not have hoist slings left underneath them when in the chair. It may be a task to fit the hoist sling in the seating position, but the seams of the sling can subject the person to unnecessary pressure, and it is also undignified.

Offloading of heel pressure is essential to minimise the risk of heel pressure ulcers developing. For example, those who have undergone surgery, patients who have experienced a stroke or those who have diabetic neuropathy. There are devices available specifically for offloading heel pressure, such as inflatable boots with cut outs in which the heel sits and inflatable wedges which allow heels to be suspended enough above the surface. These should not be draped with pillowcases or sheets as this defeats the purpose and creates again a hammocking effect. In the absence of specialist equipment, a pillow placed under the calf will suffice. Take care that the heel is not in contact with the pillow, as the pressure will remain; rather it should be suspended over the edge. The heels do not have to be elevated excessively, as this can cause discomfort for the patient. A general rule of thumb is that if you can slide a piece of paper between the heel and the surface, then the pressure is sufficiently offloaded. It is important to note that foam dressings designed for heels DO NOT reduce pressure in any way, so should not be used for this purpose.

Important consideration: we have discussed the fact that there is more pressure going down through the ischial tuberosities. Consider the patient who has difficulty maintaining balance while in the chair, possibly due to a stroke or muscle weaknesses. Those patients may tend to lean towards one side, thus putting even more weight and pressure through the one ischium. Coupled with a reduced sensation and ability to feel the pressure, this can be a great risk. It must never be assumed that if a patient is independently mobile and caring for their own needs, that they are not at risk.

When a pressure ulcer has already occurred

When a pressure ulcer has already occurred, then the aim becomes to heal the wound and prevent further damage. As pressure is the underlying cause of the wound, it stands to reason that further pressure will cause further deterioration or a delay in healing. The principles for avoidance of further damage remain the same as those for prevention. It is not possible to give an exact description of how to manage a pressure ulcer healing, because each pressure ulcer will have different characteristics (tissue types, inflammation, moisture, edges) and the individual patient factors which impact upon wound healing will be different. Each pressure ulcer needs a full holistic wound assessment and an appropriate management plan developed using the current evidence base and local wound care policy.

Assessment, prevention, and management of moisture lesions

Moisture lesions are damage to the skin caused by faeces, urine, perspiration or exudate. They can cause extreme pain and discomfort, and in some cases lead to the patient avoiding having an adequate fluid intake to avoid as frequent incontinence, which has its own consequences. As with pressure damage, many moisture lesions are preventable with effective care.

An adequate continence assessment should always be undertaken in line with local policy, and the correct continence aids chosen for the patient considering their own preferences. Devices such

as a sheath for males can completely avoid urine encountering the skin. If continence pads are used, then the correct absorbency should be chosen. Too low an absorbency, and more urine comes into contact with the skin. Too high an absorbency for the patient's needs can also be detrimental; pads are designed to absorb moisture. They can draw moisture from the skin and skin damage can ensue.

Catheterisation comes with its own risk of infection and should only be used as a last resort to manage incontinence and clinical judgement used. Sometimes, if there is extreme pain, infected moisture lesions or lack of healing, catheterisation could be considered as part of a balanced risk assessment.

Consideration should also be given to correct cleansing and drying of the skin. Soap based products can have a high pH and dry out the skin; it is best to use neutral cleansers to wash the skin after episodes of incontinence. Skin should be thoroughly dried after washing, paying special attention to skin folds.

Barrier creams and sprays can provide a layer of protection on the skin against damage from urine and faeces. It is important that manufacturer guidance is followed when applying barrier creams and sprays as many are not designed to be applied regularly, but rather every 24–72 hours. There is some evidence to suggest that emollients can both moisturise and protect the skin from damage from incontinence of urine and faeces. Be mindful that some barrier protection products can clog the pores of the continence aids and reduce the absorbency, if applied too generously. You should only use products to manage continence which are licenced for use for the purpose. Procedure pads (square sheets often marketed as bed protectors) should not be used for this purpose. They are not designed to absorb urine and will keep it against the skin. Additionally, they can cause pressure damage as they crease underneath the patient. They should just be used for the purpose of undertaking procedures (wound dressings, enemas, catheterisation etc.) and then removed immediately after use).

Moisture lesions are normally reportable as a clinical incident, as they are preventable harm. Ensure that you follow local policy in terms of reporting moisture lesions. It is important to differentiate between moisture damage and pressure damage for the purposes of care planning and treatment. Moisture damage can increase the risk of subsequently developing pressure damage.

Differentiating between moisture damage and pressure damage

1 Is the area of skin damage over a bony prominence?

Unless caused by a medical device, which usually has an obvious diagnosis, if the skin damage is not over a bony prominence, then it will not be pressure damage. Moisture damage can of course occur in the region of bony prominences, but damage which is over the fleshy part of the buttocks can generally rule out pressure.

2 What shape is the damage?

Linear areas of skin loss in the natal cleft will be due to moisture damage. Similarly, areas of linear skin loss in the groin, under the abdominal apron, under the breasts or axilla will not be pressure. A patient does not have to be incontinent for moisture damage to occur, it can occur as a result of perspiration, exudate or lymphorrhoea.

Pressure ulcers will generally be the shape of the bone and regularly shaped if the damage was caused when the patient was static. They generally tend to be rounded in shape over the ischium, trochanter, elbows, ankles and heels, the shape of the sacral bone in sacral pressure ulcers. However, they can be more irregularly shaped if shearing forces were involved. Moisture damage will most definitely be irregular in shape, sometimes creating a mirrored effect.

3 How many areas of skin loss are there?

Pressure damage is usually limited to one area. Multiple areas of skin loss over the buttocks is indicative of moisture damage.

4 What is the depth of the skin loss and what tissue types are present?

Pressure damage can be of any depth down to bone. There may be necrosis in pressure damage. Moisture damage will generally be superficial skin loss, unless infected. There will be no necrosis in a moisture lesion.

5 What are the edges like?

Pressure damage will generally have distinct edges. The edges are more diffuse in moisture damage.

It is important to note that although differentiation between the two types of skin damage is necessary, that there can be combination lesions in which there is moisture damage and pressure damage.

Treatment of wounds

Wounds come in varying presentations, and with many underlying aetiologies, thus it is important to undertake a full holistic assessment before proceeding to a dressing. As part of the holistic assessment, there should be consideration not just of the local characteristics of the wound such as tissue types, inflammation, exudate levels and surrounding skin but of the wider factors at play. There should be consideration of the underlying medical conditions that the patient experiences. Conditions such as cardiac failure, diabetes, arterial and venous disease, and chronic obstructive pulmonary disease can impact upon the rate of wound healing. Quite often, the underlying cause must be addressed in non-healing wounds, alongside local wound management. Medications that the patient takes can also have an impact upon wound healing. Corticosteroids, chemotherapeutics, anticoagulants, and non-steroidal anti-inflammatory drugs are known to impact wound healing.

After holistic assessment, an individualised care plan should be formulated, the TIME principle can again be useful in this. Consider if the wound requires cleansing. Preparation of the wound bed through debridement of devitalised tissue should be considered through sharp, mechanical, larval, or autolytic debridement methods. Consideration of the characteristics of the wound bed is important, including consideration of whether there is infection, in which case a topical antimicrobial is advised. The exudate levels of the wound should be considered. There is a requirement for a moist wound healing environment, however excess exudate can be detrimental and should be absorbed with an appropriate secondary dressing. There may be issues with further skin damage, malodour, pain and leakage if exudate is not properly managed, which can have an impact upon the person physically, psychologically and socially. Compression bandaging can help to reduce high levels of leakage in the limbs, with caution to suitability. Also, consideration of the underlying cause of exudate is important: infective causes, venous, lymphatic, or cardiac causes should be also treated. Surrounding skin should also be managed by cleansing and use of barrier protection or emollients.

Clean or sterile technique in wound care?

There is quite frequently debate within the literature as to whether wound dressing requires an aseptic technique or simply a clean technique. Chronic wounds tend to be routinely colonised with bacteria,

which quite often causes no harm until the critical colonisation stage. It is quite often advised to wash leg ulcers in a lined bucket in the patient's home, and for patients with burns to shower to clean the wounds. Quite often patients with leg ulcerations experience concurrent dermatological complaints such as varicose eczema, the dead skin can harbour bacteria and it is thought that washing the legs in this way reduces the risk of infection and does not increase it. Wounds in the perineal area are high risk and good attention to hygiene is required. This has benefits for the patient psychologically and socially.

There is no correlation between using tap water and rates of wound infection. In chronic wounds, the area can be washed with a suitable cleanser with a neutral pH, such as an emollient.

Does it need cleaning at all?

It should be assessed whether the wound requires cleaning at all. Irrigating with fluid, particularly room temperature saline, can reduce the temperature of the wound and in doing so delay healing. A moist, clean wound bed can be left without cleaning. There is a tendency for nurses to use gauze to rub the wound bed to ensure that it is clean, this can sometimes do more harm than good, disrupting new granulation tissue that is forming in the wound bed. Irrigation is preferable to cleaning using gauze swabs. Wound cleansing should be limited to those that have visible contamination (such as incontinence, road rash), infection or slough. There is rarely any requirement to use antiseptic solutions in wound care.

Sterile gloves debate

(See Chapter 11) Non-sterile clean gloves can be used for undertaking a wound dressing. When the procedure is being undertaken, the parts of the dressing which will contact the wound bed should not be touched by the clinician. Should the dressing need to be touched, for instance when packing a wound, then sterile gloves should be used in a hospital/care home environment. In the patient's own home, this is not considered necessary.

Despite the debates that have arisen above, there is still a requirement to maintain asepsis when undertaking a wound dressing so as not to increase the risk of transmission of pathogenic microorganisms from hands, equipment and from one body part to another. Therefore, the aseptic non-touch technique should be used. ANTT is discussed in more depth in Chapter 11. However, this becomes somewhat of an oxymoron when we are advising that legs be washed in a bucket in community, as it becomes impossible to avoid transfer of microorganisms, so this is where a clean technique would apply. There is still a requirement to have a dressing pack with a sterile field, aprons, gloves, and an aseptic approach to dressing application. In hospital settings, it is advised that strict aseptic non-touch technique is used for the procedure due to the higher risk of cross contamination.

In aseptic non-touch technique, we are used to hearing of key sites and key parts. Key sites are entry points for invasive devices or open wounds. In this case, the open wound. The key parts would be the wound dressing, forceps, scalpel etc. anything which comes into direct contact with the wound.

WATCH THE VIDEO

SIMPLE DRESSING AND SUTURE REMOVAL

Watch along as you read through this step by step procedure by scanning the QR code with your smartphone camera or via **https://study.sagepub.com/rowberry**.

DRESSING A WOUND: STEP BY STEP

- Introduce yourself to the patient and explain the procedure.
- Carefully read the wound management plan in place for the patient.
- Gather the equipment that is required for the procedure, e.g. dressing trolley, dressing pack, cleansing solution, gauze, primary and secondary dressings.
- Clean the dressing trolley according to local policy with recommended cleaning solution or wipes.
- Store your equipment on the bottom shelf of the trolley.
- Ensure thorough handwashing using soap and water.
- Open the dressing pack using a minimal touch technique to maintain the sterile field.
- Open packs and dispense the gloves, dressings and any other required key parts, ensuring that they are dropped into the sterile field, and you do not touch it.
- Clean hands using alcohol gel providing hands are not visibly soiled.
- Don apron and then gloves.
- Remove old dressing.
- Remove gloves and clean hands. Don a clean pair of gloves.
- Clean the wound if deemed necessary (consult guidance on whether it is necessary and the technique to be used). Keep a 'clean' hand which picks up items from the sterile field and 'dirty' hand for the wound care.
- Apply dressing using non-touch technique.

The practice of maintaining asepsis and using a non-touch technique applies to other aspects of wound care also, such as the management of wound drainage systems and removal of sutures and clips. It is important to minimise or eliminate the transmission of microorganisms wherever there is a breach in the skin.

CHAPTER SUMMARY

In summary, this chapter has highlighted some of the fundamentals of skin hygiene and integrity. Skin integrity and wound management is a wide field, and you are advised to read further on topics such as wound assessment and management. There are a diverse range of treatments and dressings which could not be covered within this chapter.

Personal hygiene and maintaining skin integrity are fundamentals in nursing and play an important part in patient safety and comfort. Some conditions are not preventable, but it is important that nurses focus on prevention, as it is far more favourable to cure. Breaches to the skin integrity and subsequent pain, infection, odour and discomfort can have a significant impact on a person's quality of life.

ACE YOUR ASSESSMENT

Q1 How many square meters does the skin cover (approx.)?

a 1.67 square meters
b 1.59 square meters
c 2.00 square meters

Q2 How many sweat glands does a square inch of skin contain (approx.)?

a 900
b 650
c 720

Q3 Identify the correct functions of the skin.

a Protection, keep warm, stop foreign bodies.
b Protective barrier, stop foreign bodies, regulates vitamin A.
c Protective barrier, thermoregulation, provides vitamin D.

Q4 Identify the correct causes of pressure damage.

a Shear/friction, medications, mobility.
b Medications, increased mobility, clothing.
c Mobility, medications, trauma.

Q5 What can cause device related pressure damage?

a Oxygen masks, slippers, wet clothes.
b Anti-embolism stockings, plaster casts, trauma.
c Oxygen masks, non-invasive equipment (CPAP), plaster casts.

Answers

1 A
2 B
3 C
4 A
5 C

GO FURTHER

National Pressure Injury Advisory Panel (NPIAP) guidelines: https://npiap.com/page/Guidelines (accessed October 13, 2022).

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