

## Wound management

by Marie McCullagh & Ros Wright

### A Pre-reading

Discuss your experience or theoretical knowledge with a partner.

1. What is *your* experience of wound management to date?
2. To what extent do you believe wounds should be managed from a 'holistic' perspective?

### B Word building

Complete the definitions using the correct word. (You may need to change the form of the word.)

ulcer	venous	chronic	arterial	scab
friction	collagen	capillaries	acute	shear

1. \_\_\_\_\_ are very thin tubes that carry blood around the body.
2. \_\_\_\_\_ is a protein found especially in the joints of humans and animals.
3. \_\_\_\_\_ refers to an illness or pain which quickly becomes severe or dangerous.
4. Scissor blades \_\_\_\_\_ when cutting.
5. A break in the skin or on the surface of an organ inside the body, which does not heal naturally, is called an \_\_\_\_\_.
6. \_\_\_\_\_ refers to a disease that continues over a long period and is difficult to get rid of.
7. \_\_\_\_\_ refers to the veins.
8. \_\_\_\_\_ occurs when one object rubs against another.
9. A \_\_\_\_\_ is a rough surface made of dried blood which forms over a cut or broken skin while it is healing.
10. \_\_\_\_\_ refers to the arteries.

### C Scanning

1. As you read the article, try to find the part of the text that answers these questions as quickly as possible.
  - a) What occurs at the *proliferative phase* of the healing process?
  - b) How would you define the three sets of factors affecting the healing process?
  - c) How might the fact that a patient smokes affect the healing of their wound?
2. Now summarize the information you need in order to answer these questions in a single sentence.
  - a) \_\_\_\_\_
  - b) \_\_\_\_\_
  - c) \_\_\_\_\_
3. With a partner, discuss how the patient's level of communication skills might be detrimental to the healing of their wound.

## Wound management

### What is a wound?

A wound is a cut or hole in the skin or flesh. Wounds can be classified according to how they are caused, whether they are acute or chronic, how deep they are, the stage of healing, or the method by which they are expected to heal.

### Assessing the risk

A number of wounds, particularly chronic wounds, are associated with underlying pathology: for example, venous ulcers are often caused by chronic venous insufficiency, arterial ulcers by peripheral vascular disease, fungating wounds by carcinoma and pressure ulcers either by pressure, shearing or friction. The likelihood of certain wounds developing as a result of an underlying pathology can be assessed and there are a number of risk assessment tools available to assist nurses and other health professionals in their clinical judgement.

### The healing process

Four main phases can be identified in the healing process:

- 1 Haemostasis
- 2 The inflammatory phase
- 3 The proliferative phase
- 4 The maturation phase

*Haemostasis* is where the wound begins to close and a scab forms. The *inflammatory phase* usually occurs over three to seven days where the wound appears inflamed; protein, nutrients and growth factors leak out of the capillaries and bathe the injured area. This phase is a normal response to injury and is not to be confused with infection. In the *proliferative phase*, capillaries, collagen and fibroblasts, the elements required for new skin growth, begin to emerge. In the final phase, *maturation*, the new skin emerges and thickens.

### Factors affecting wound healing

Wounds do not heal in isolation and it is important to consider the whole person by completing a holistic assessment, which should aim to identify any existing or potential problems that will adversely affect wound healing. The numerous factors to be considered during assessment are illustrated below and include local, systemic and contextual factors. By reviewing each factor, the nurse will be able to develop an effective wound management strategy. Some of the factors are identified below.

### Nutrition

Good nutrition is essential for wound healing. There is a relationship between protein-energy malnutrition and delayed healing, reduced tensile strength (resistance to tearing), infection and the development of pressure ulcers. Proteins are essential for collagen synthesis, angiogenesis and cell reconstruction.



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### Cardiovascular and respiratory status

Anything that interferes in any way with oxygen delivery will tend to increase susceptibility to infection and delay healing, for example, smoking, where carbon monoxide reduces the available oxygen.

### Age

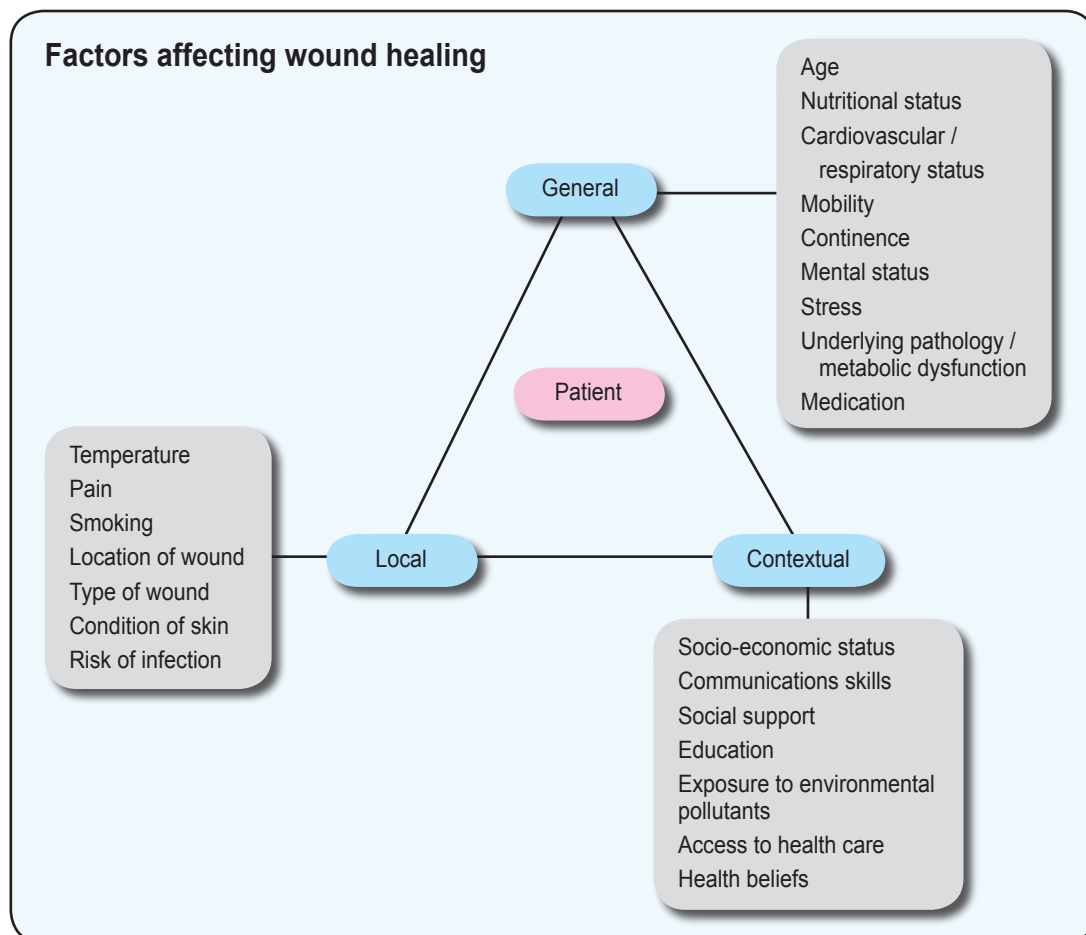
Wound healing complications are more common in the elderly, due to the body's reduced capacity to repair and slower cellular activity.

### Pain

Pain can have a detrimental effect on recovery and healing. Pain needs to be assessed in terms of intensity, duration and frequency and the effect it is having on the patient's mental state.

### Stress

Stress is a factor in poor healing due to reduced efficiency of the immune response.



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### D Vocabulary development

1. Look at the prefixes and suffixes from the text. With a partner, write a definition for each. You may wish to refer to a good English medical dictionary.

Prefix / Suffix	Meaning	Examples from text	Your example(s)
<i>angio-</i>		<b>angio</b> genesis	
<i>dys-</i>		<b>dys</b> function	
<i>-gen</i>		collage <b>n</b>	
<i>haemo- / hemo-</i>		<b>haemo</b> stasis	
<i>mal-</i>		<b>mal</b> nutrition	
<i>-ology</i>		path <b>ology</b>	
<i>path-</i>		<b>path</b> ology	
<i>peri-</i>		<b>peri</b> pheral	

2. Now add one or two more examples from the medical context.

### E Discussion

- Write notes on the following: *Wounds do not heal in isolation and it is important to consider the whole person by completing a holistic assessment.*
- Now present your ideas to the rest of the group.

### F Follow-up

Research the different dressing types that are available for the following types of wounds.

burn / diabetic ulcer / puncture / surgical incision

Find out why each of them is particularly beneficial for the wound. Include so-called 'natural' treatments (maggots, leeches), which are coming back into practice.

Keep a record of where you found the information.

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### ANSWER KEY

#### A Pre-reading

These questions are simply meant to lead into the subject – there are no specific responses.

**NB:** You may need to explain the term 'holistic' to your learners depending on their language background.

*treat from a holistic perspective* = treat the patient as a whole (physical, psychological and psychosocial) as opposed to the wound (in this case) in isolation. The other factors may well have a bearing.

#### B Word-building

1. capillaries
2. collagen
3. acute
4. shear
5. ulcer
6. chronic
7. venous
8. friction
9. scab
10. arterial

#### C Scanning

1. a) paragraph 3  
b) table  
c) paragraph 4
2. *Suggested answers:*
  - a) The new skin begins to form.
  - b) 'General' are those factors related to the general mental and physical state of the patient. 'Contextual' are related to the way in which the patient lives and his/her environment. 'Local' factors are directly related to the wound itself and the skin around it.
  - c) Carbon monoxide reduces the availability of oxygen necessary to help the wound to heal.

**NB:** Your learners may come up with alternatives. Q.2 – Three separate sentences would be more appropriate in this case.
3. If the patient is unable to communicate the level of their pain to their nurse or GP, the healing process may take longer than is necessary.

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### ANSWER KEY

#### D Vocabulary development

1. Possible answers:

Prefix / Suffix	Meaning	Examples from text	Your example(s)
<i>angio-</i>	blood vessel	<b>angiogenesis</b>	angioplasty
<i>dys</i>	bad, difficult	<b>dysfunction</b>	dysphasia, dysentery
<i>-gen</i>	born in, from	<b>collagen</b>	carcinogen, allergen
<i>haemo- / hemo-</i>	blood	<b>haemostasis</b>	haemoglobin, haemorrhage
<i>mal-</i>	bad	<b>malnutrition</b>	malaise, malignant
<i>-ology</i>	study of	<b>pathology</b>	toxicology, gynaecology
<i>path-</i>	disease	<b>pathology</b>	pathogen, pathologist
<i>peri-</i>	'surrounding' or 'around' another	<b>peripheral</b>	peritonitis, perinatal

#### E Discussion

1. Encourage your learners to express and compare their own views on factors affecting wound healing. Their specific medical culture might be such that they are unused to a holistic approach to wound management.