

## Wound management

by Marie McCullagh & Ros Wright

### A Pre-reading

Think of

- three common causes of wounds
- three factors that can affect wound healing

### B Word building

1. Match the words to the definitions (1-10).

ulcers  
friction

venous  
collagen

chronic  
capillaries

arterial  
acute

scabs  
shear

- \_\_\_\_\_ are very thin tubes that carry blood around the body.
- \_\_\_\_\_ is a protein found especially in the joints of humans and animals.
- \_\_\_\_\_ refers to something which comes on quickly and can be severe.
- Scissor blades \_\_\_\_\_ when cutting.
- Breaks in the skin or on the surface of an organ inside the body, which do not heal naturally are called \_\_\_\_\_.
- \_\_\_\_\_ refers to a disease that has continued for a long time and is difficult to cure.
- \_\_\_\_\_ refers to the veins.
- \_\_\_\_\_ occurs when one object rubs against another.
- \_\_\_\_\_ are rough surfaces made of dried blood which form over a cut or broken skin while it is healing.
- \_\_\_\_\_ refers to the arteries.

2. Prefixes and suffixes: Match the following prefixes and suffixes to their meaning.

e.g. *mal = bad, badly*

mal	bad, badly
angio	bad, with difficulty
dys	blood
gen	blood vessel
haemo / hemo	born in, from
ology	disease
path	stop, stand
peri	study of
statis	'surrounding' or 'around' another

### C Comprehension check

Which of these statements do you think are true? Write T (true) or F (false) next to each of the statements.

- Acute wounds are related to an underlying pathology.
- Inflammation is a normal part of the healing process.
- Smoking affects wound healing.
- New skin begins to form immediately as part of the healing process.
- Good nutrition can help reduce the rate of infection in wounds.

Now read the text on the next page and check your answers.

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### 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, and the stage of healing.

#### 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 and arterial ulcers by peripheral vascular disease. Pressure ulcers can be caused by pressure, friction or shearing.



#### 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*, the elements required for new skin growth, such as capillaries and collagen, emerge. In the final phase, *maturation*, new skin begins to thicken.

#### 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 key 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.

#### 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.

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Age

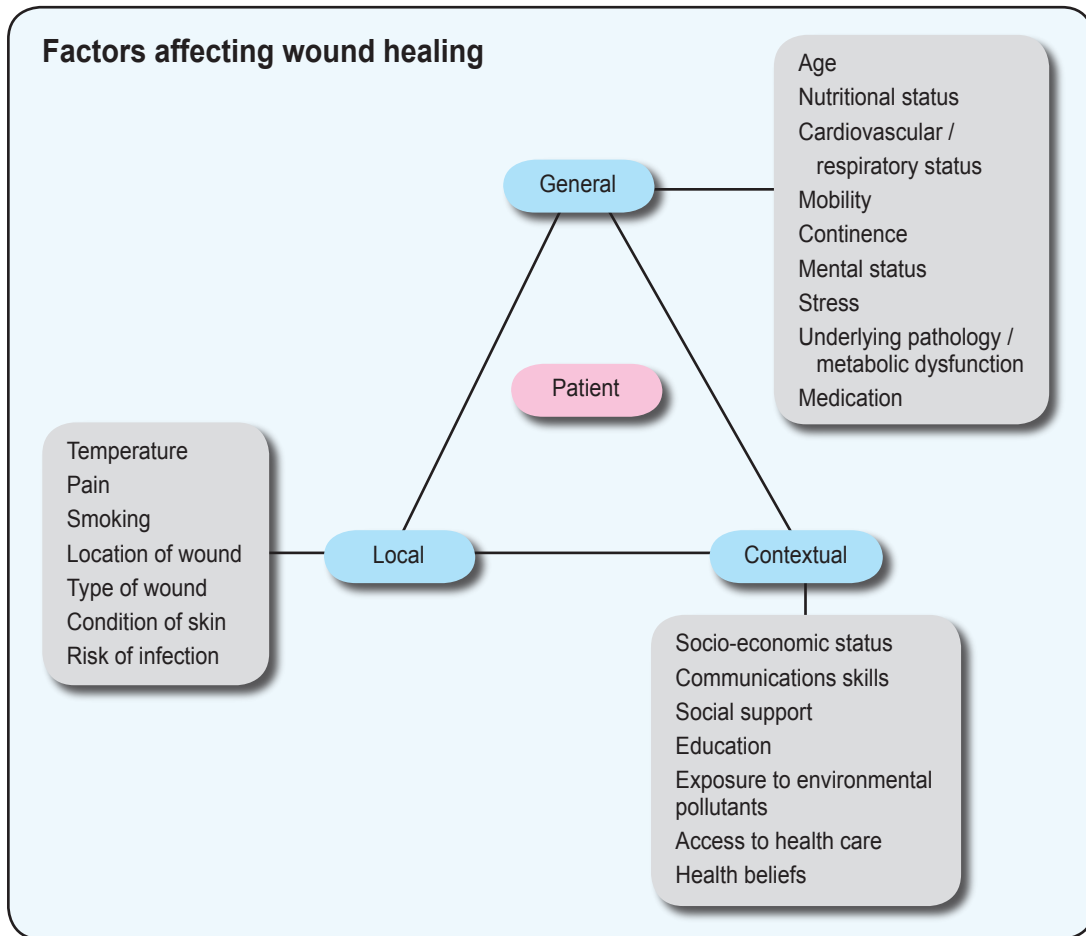
Wound healing complications are more common in the elderly, due to the body's reduced capacity to repair and slower cellular activity.

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.



Adapted from *Foundations of Nursing Practice* (3rd Edition), edited by Richard Hogston and Barbara A.

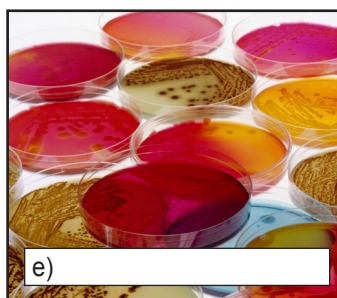
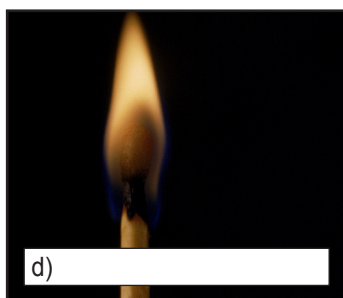
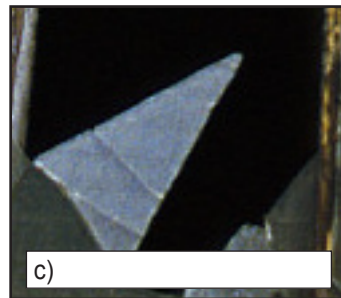
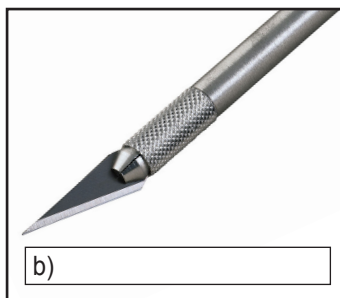
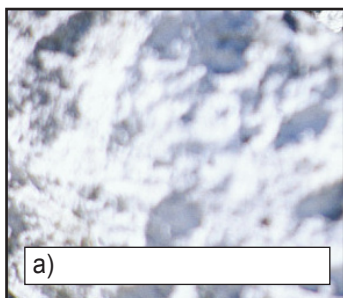
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### D Vocabulary development

1. Match the types of wound to the pictures.

- surgical incision
- burn
- abrasion
- laceration
- infected wound



2. Write A (acute) or C (chronic) next to each of the wound types. (Some may be both.)

### E Discussion

What natural substances do you know of that can help in the wound healing process? Discuss with a partner, outlining any experience you have had with the substance.

### F Follow-up

Use a textbook or the Internet to do some research on the substances you have discussed. Can you find any research to suggest that they are effective? If not, think about why this might be. Present your findings to the class.

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### ANSWER KEY

#### A Pre-reading

- Burn, cut, operation, accident/fall, an attack/assault
- Age, nutrition, pain, stress, poorly controlled diabetes mellitus

#### B Word-building

1.

- capillaries
- collagen
- acute
- shear
- ulcers
- chronic
- venous
- friction
- scabs
- arterial

2.

*angio* → *blood vessel*

*dys* → *bad, with difficulty*

*gen* → *born in, from*

*haemo / hemo* → *blood*

*ology* → *study of*

*path* → *disease*

*peri* → *'surrounding' or 'around' another*

*statis* → *stop, stand*

#### C Comprehension check

- F
- T
- T
- F
- T

#### D Vocabulary development

- Abrasion → A
- Surgical incision → A
- Laceration → A
- Burn → A
- Infected wound → A/C

#### E Discussion

Two well known substances which have been used in wound healing are honey and aloe vera. However there may be many more which have not been well researched. One reason for the lack of research into natural substances is the difficulty of ensuring that they have the same active ingredients. Also, the substances may be particular to a locality and may not be well known outside of that.