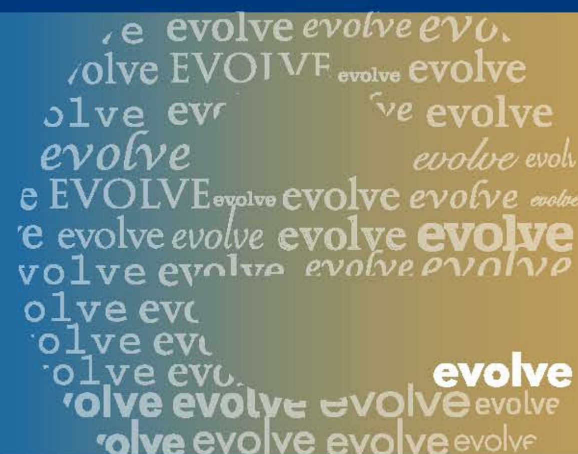
evolve

evaluating evidence. enhancing efficiencies.

RACP Congress, Adelaide

16 May, 2016

Australian & New Zealand Society of Palliative Medicine & Australasian Chapter of Palliative Medicine



Dr Doug Bridge
Emeritus Consultant, Royal Perth Hospital
Clinical Professor, UWA
President, AChPM

Palliative Medicine EVOLVE recommendations

1. Do not delay discussion of and referral to palliative care for a patient with serious illness just because they are pursuing disease-directed treatment

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Rationale for recommendation 1

The Royal Australasian College of Physicians

Early access to palliative care has been shown to reduce aggressive therapies at the end of life, prolong life in certain patient populations, and significantly reduce hospital costs.

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Palliative Medicine EVOLVE recommendations

2. Do not delay conversations around prognosis, wishes, values and end of life planning (including advance care planning) in patients with advanced disease

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Rationale for recommendation 2

The Royal Australasian College of Physicians

Evidence shows that advance care planning conversations improve patient and family satisfaction with care and concordance between patients’ and families’ wishes, reduce the likelihood of unnecessary hospital care and increase the likelihood of receiving hospice care.

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3. Do not use oxygen therapy to treat non-hypoxic dyspnoea in the absence of anxiety or routinely use oxygen therapy at the end of life

Rationale for recommendation 3

The Royal Australasian College of Physicians

Supplemental oxygen does not benefit patients who are breathless but not hypoxic. Supplemental flow of air is equally as effective as oxygen under these circumstances. The use of a fan for facial air streaming can also be effective.

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4. Do not use percutaneous feeding tubes in patients with advanced dementia; instead use oral assisted feeding

Rationale for recommendation 4

Strong evidence exists that artificial nutrition does not prolong life or improve quality of life in patients with advanced dementia

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Rationale for recommendation 4

Contrary to what many people think, **tube feeding** does not ensure the patient’s comfort or reduce suffering; it may cause fluid overload, diarrhoea, abdominal pain, local complications, less human interaction and may increase the risk of aspiration.

Assistance with **oral feeding** is an evidence-based approach to provide nutrition for patients with advanced dementia and feeding problems.

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Feeding is more than calories

The Royal Australasian College of Physicians

Palliative Medicine EVOLVE recommendations

5. To avoid adverse medication interactions in cases of polypharmacy, do not prescribe medication without conducting a drug regimen review

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Rationale for recommendation 5

Evidence shows that polypharmacy increases the risk of adverse drug reactions and hospital admissions.

Explore in more detail

4. **Do not use percutaneous feeding tubes in patients with advanced dementia; instead use oral assisted feeding**

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Evidence

Teno JM. Feeding tubes and the prevention or healing of pressure ulcers. Arch Intern Med 2012; 172(9): 697-701

Hanson LC. Oral feeding options for people with dementia: a systematic review. J Am Geriatr Soc 2011; 59(3): 463-72

Sampson EL. Enteral tube feeding for older people with advanced dementia. Cochrane Database Syst Rev 2009; 2:CD007209

Finucane TE. Tube feeding in patients with advanced dementia: A review of the evidence. JAMA 1999; 282(14): 1365-1370

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- What about patients who are not demented?
- What is the role of artificial nutrition and hydration at the end of life?
- Why do we eat and drink?

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The Royal Australasian College of Physicians

Back to basic physiology

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- Lessons from tree growth
- The physiology of fasting
- Hospice patients who fast to death
- A randomised trial of IV hydration
- The result of too much fluid
- Prolonging death

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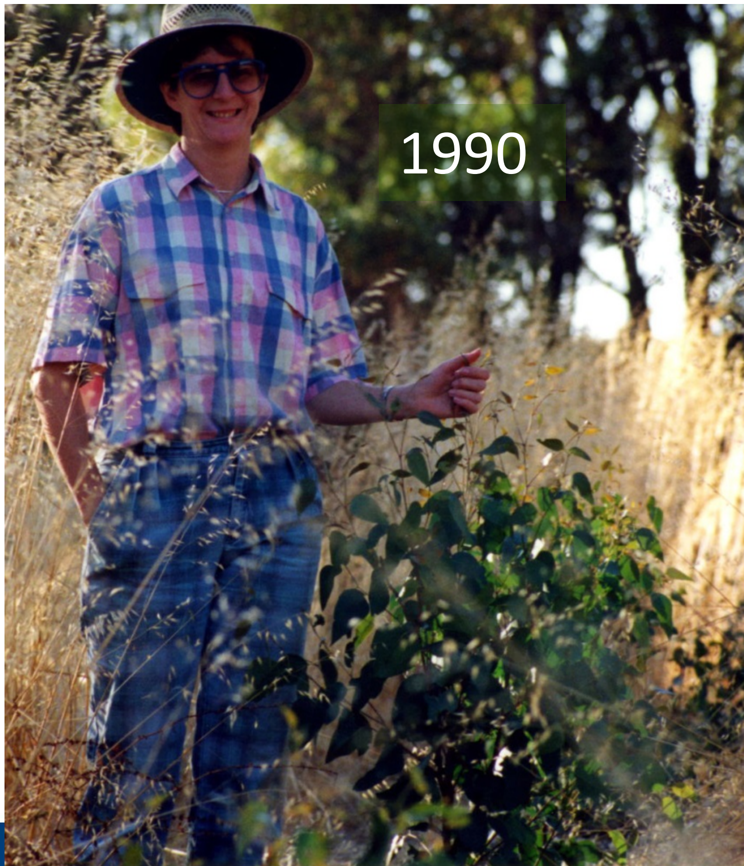
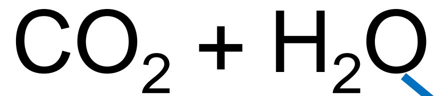
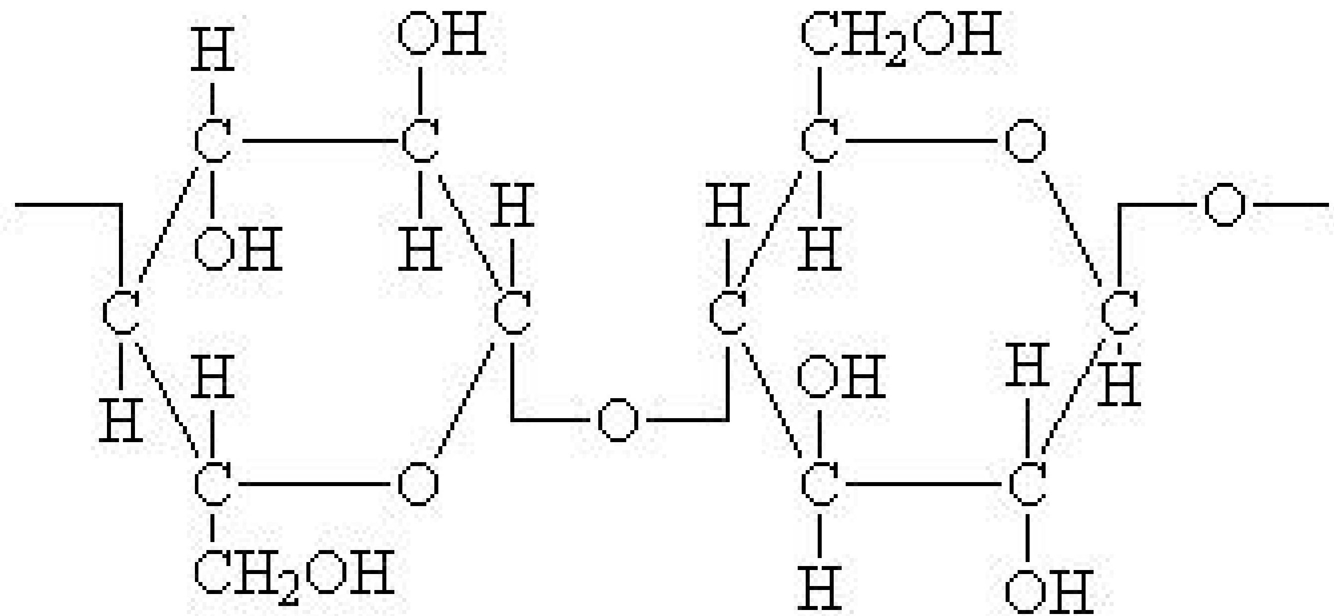
Tree growth 1990 to 2013
Now weighs 2 tonnes.
Where did the wood come from?



2013

Making wood from air and rain





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Composition of the body

A 70 kg person has how many kg fat?

Percentage water?

Where is the water?

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Composition of the body

10kg fat

30 L intra-cellular

15 L extra-cellular

12L interstitial

3L intravascular

70kg 60kg lean mass 45kg water

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3
12

15

15

Physiology of fasting (1)

Biochemical mechanisms

- Hepatic glycogen is depleted within 24 hours. Over the next few days fat catabolism produces both fatty acids and ketone bodies.
- In prolonged fasting (more than one week), the brain switches from glucose to ketones.
- Basal metabolic rate ↓ by 30%.

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Physiology of fasting (2)

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Q: How much do you pee?
A: 500-1000ml daily minimum.

Q: Why do you pee?
A: To excrete urea, to get rid of nitrogen

After five weeks of fasting, urea excretion falls to about 5% of normal, so obligatory water excretion falls to around 200 ml per day.

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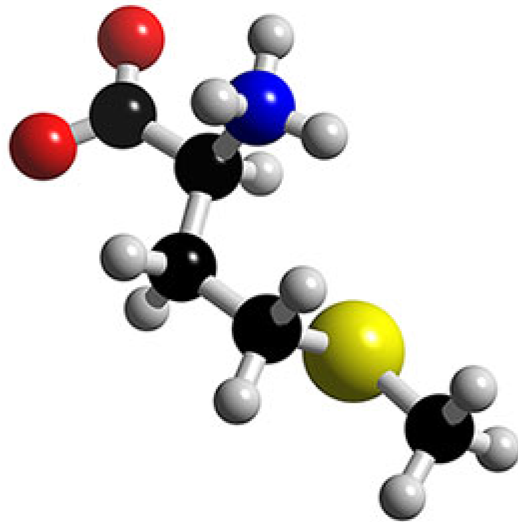
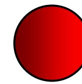
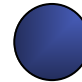
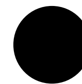
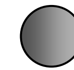
Methionine: an amino acid

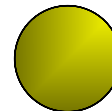


 Oxygen

 Nitrogen

 Carbon

 Hydrogen

 Sulphur

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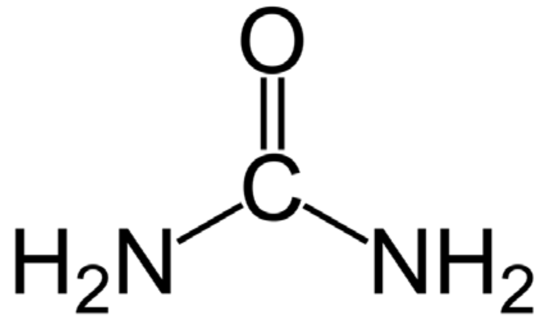
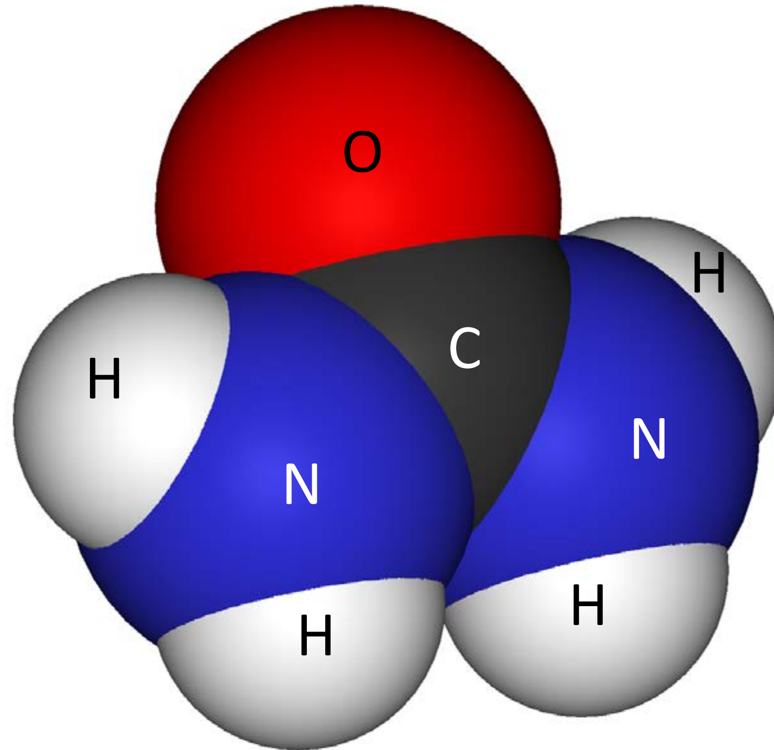
Urea: structure





47% nitrogen

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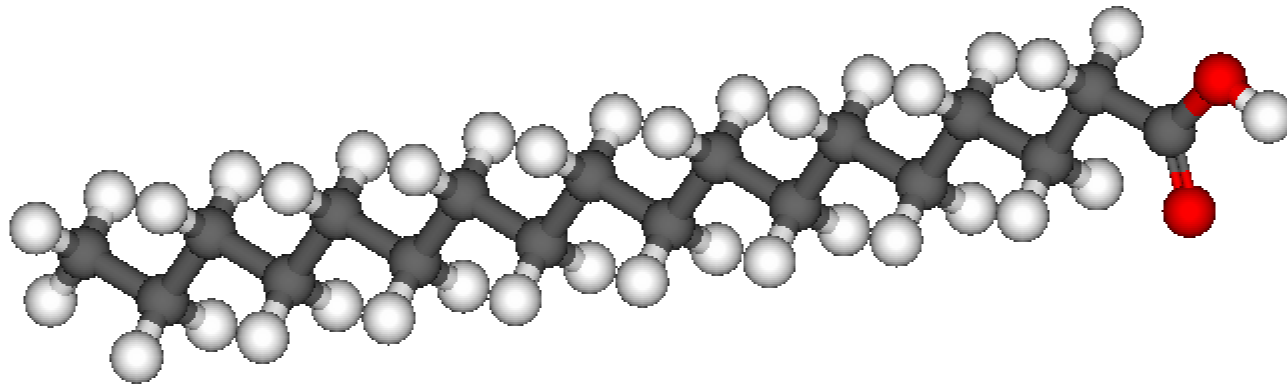
Catabolism of fat
Example: Octadecanoic acid (stearic acid)

18 carbon atoms
36 hydrogen atoms
2 oxygen atoms



No nitrogen!

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Stearic acid

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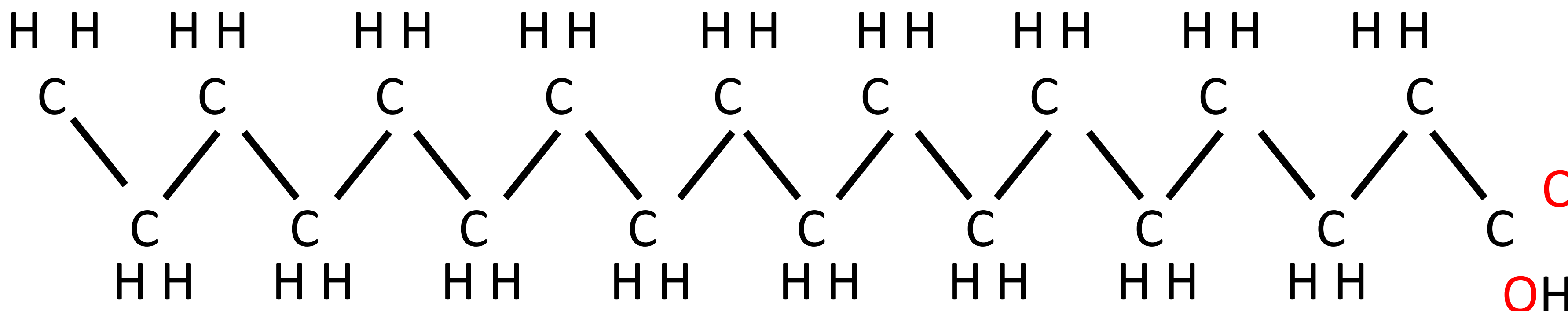

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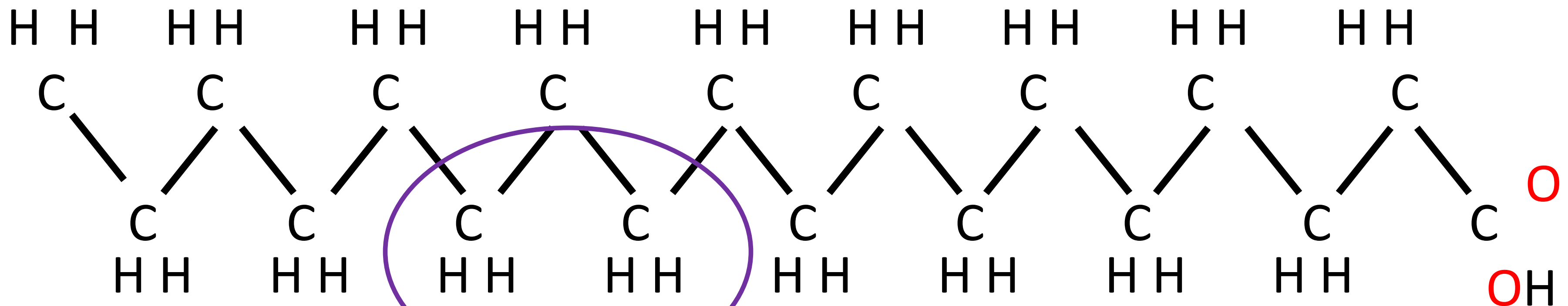
Stearic acid catabolism: just add oxygen



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Pierre Renoir
Blonde bather 1881

She is beautiful,
but is she healthy?

Pierre Renoir
Blonde bather 1881

Spot the difference

Renoir: 1891
baigneuse debout

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74kg -14kg ⟶ 60kg

+

15 litres of water of catabolism

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Suicide or fasting?

Which would give the more peaceful, less distressing death?

- Physician assisted suicide?
  (swallowing an overdose of sleeping pills)

  or

- Refusing to eat or drink?

Hospice Patients who refuse food and fluids to hasten death

Ganzini et al, New England Journal of Medicine 2003; 349: 359-365

- The State of Oregon in USA has legal physician assisted suicide
- Questionnaire sent to all hospice nurses in Oregon
- One-third of nurses had cared for a patient who had refused food and fluids to hasten death

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Hospice Patients who refuse food and fluids to hasten death

	Stopped food and fluids N=102	Physician- assisted suicide N=55	P value
Suffering	less		0.007
Pain	less		0.13
Peacefulness	more		0.14
Overall	better		0.95

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“Parenteral hydration in patients with advanced cancer: a multicentre, double-blind, placebo controlled randomized trial”

J Clin Oncol 2013
Dr Eduardo Bruera et al

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The patients: 102 hospice patients in Texas, with mild to moderate (but not severe) dehydration

Intervention: daily normal saline infused subcutaneously over 4 hours
1000ml (study arm), or
100ml (control arm)

Measurement instruments: baseline, day 4 and day 7
fatigue, drowsiness, hallucination, myoclonus

Results: Significant improvement seen in both arms
No significant difference between arms

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Bruera observes: "frequent visits and assessments by research nurses may result in significant improvement in the perception of overall benefit, to the extent that it may even overshadow the biomedical effect of hydration."

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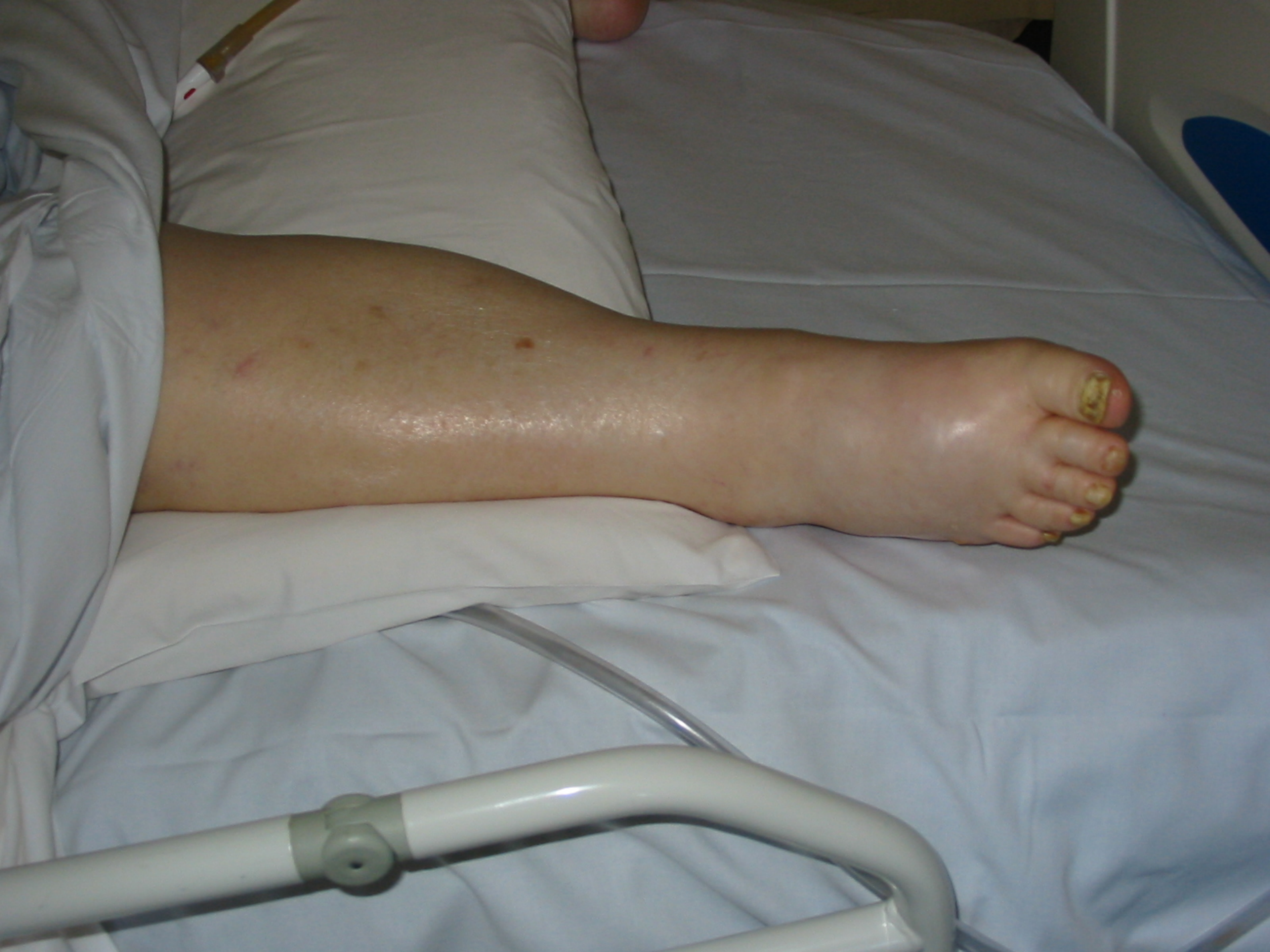
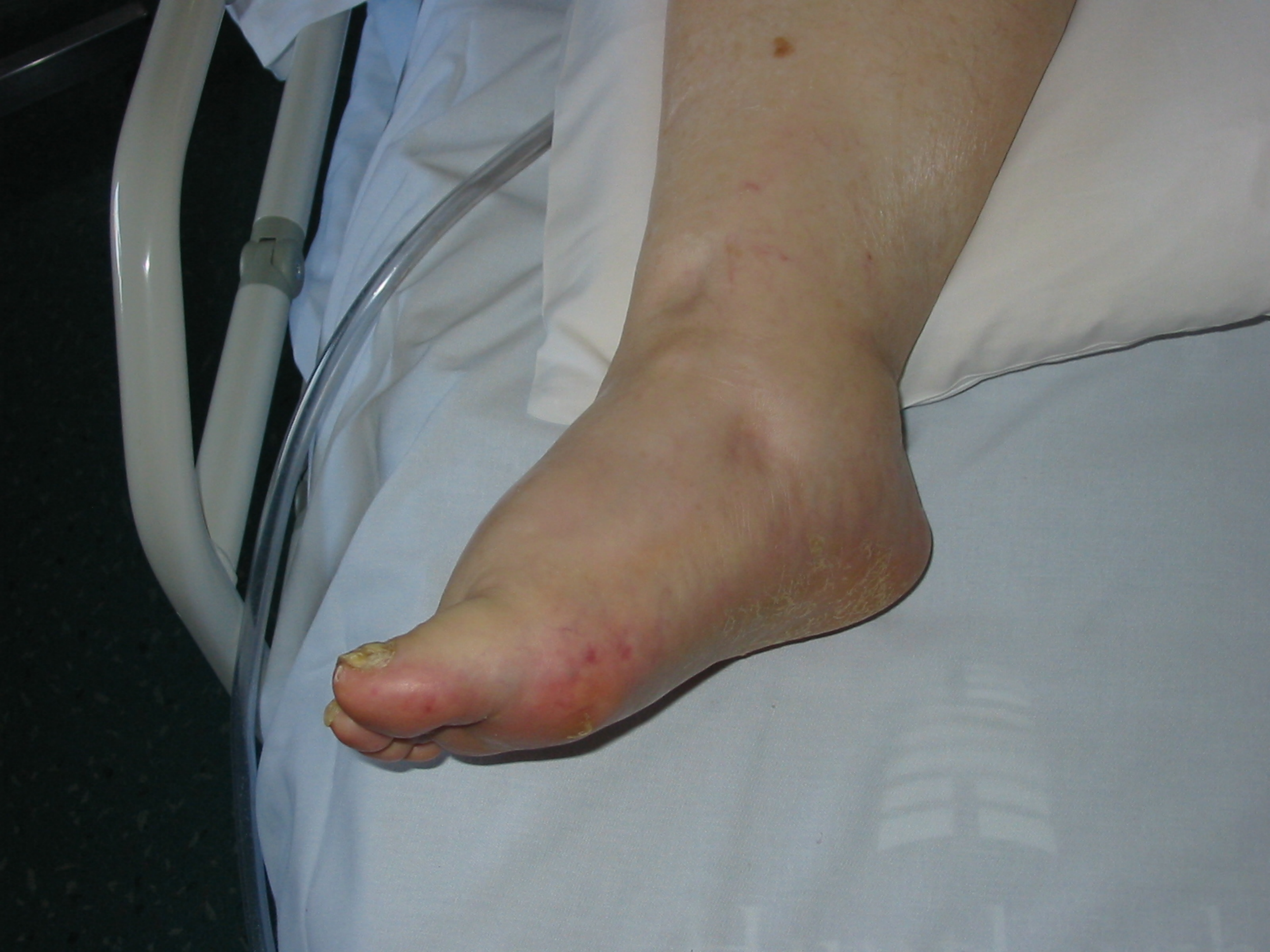
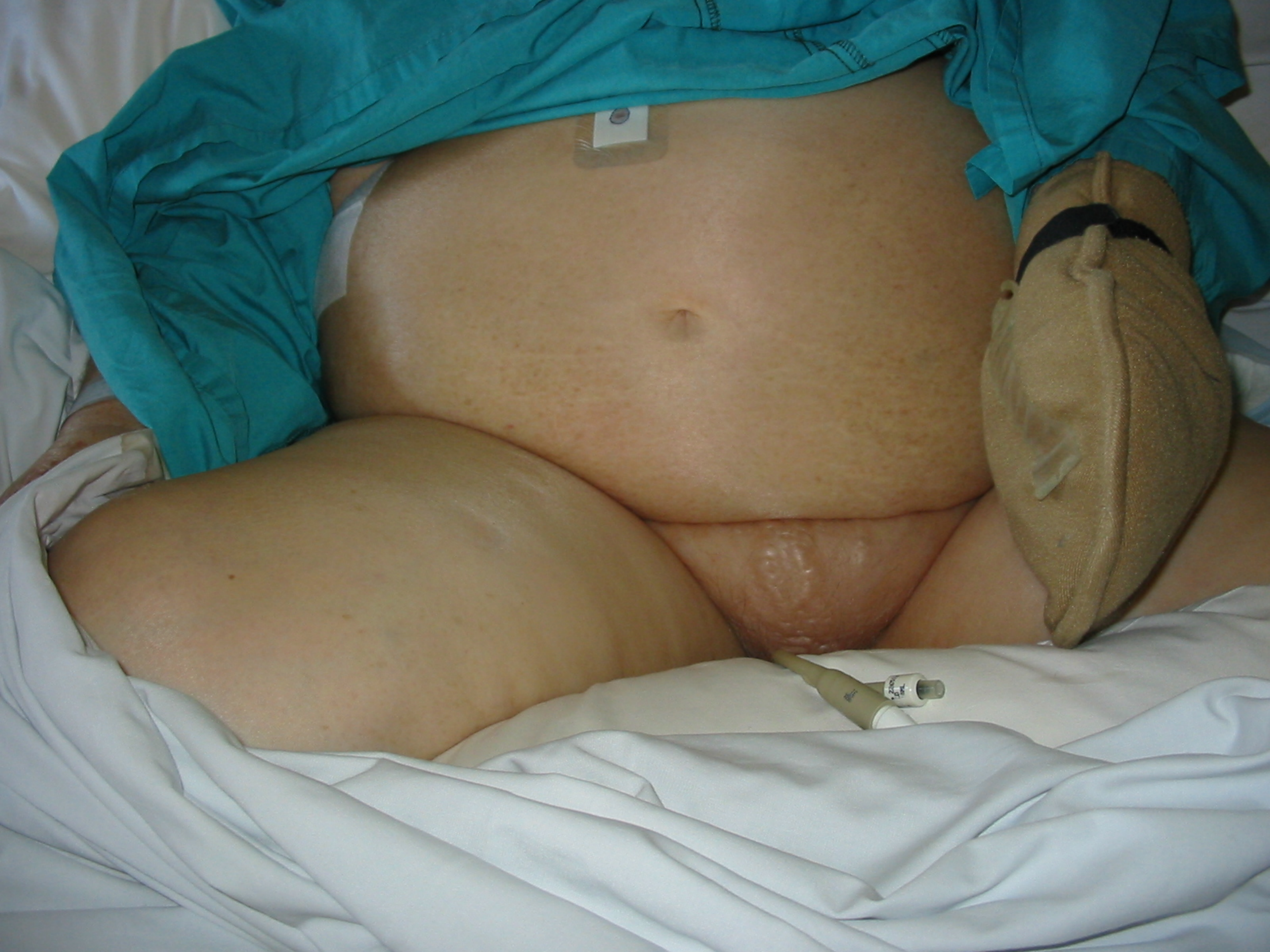
1000
900
800
700
600
500
400
300
200
100
tyco | Healthcare
KENDALL
KANGAROO
Gravity Feeding Set
NON-STERILE

Single Use
See Instructions
Avoid Freezing
And Excessive Heat







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Case History: Mrs B

Widow, 7 children

Demented, no speech for 10 years

In a coma for 2 years

Sustained by nasogastric feeding

Ventilated via endotracheal tube

Age: 107

護理指導單張
燕芬

Food is for pleasure, not postponing death

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Jacob Jordaens, 1665: the bean king