Definition

- noun (plural hernias or herniae /ˈhəːnɪə/)  
  late 14c., hirnia, from Latin hernia "a rupture," related to hira "intestine," from proto-indo-european *ghere- "gut, entrail". The re-Latinized spelling of the English word is from 17c
- A condition in which part of an organ is displaced and protrudes through the wall of the cavity containing it (often involving the intestine at a weak point in the abdominal wall): [with modifier]: 'umbilical hernia' [as modifier]: a 'hernia operation'
Now, underneath the scrotal covering many lesions are apt to occur, sometimes after the rupture of the coverings ... sometimes when they are uninjured ... there is a direct rupture of the covering which ought to separate the intestines from the parts below; then either omentum, or it may be intestine, rolls down by its own weight; this having found a way gradually from the groins into the parts below as well, there separates by its pressure the coverings which are fibrous and therefore give way. The Greeks call the condition enterocele and epiplocele, with us the ugly but usual name for it is hernia.

– De Medicina
‘Then you shall say concerning it “This is a swelling of the coverings of his abdomen, an illness which I will treat”. It is the heat of his bladder in front of his belly which creates it. Falling to the ground, it returns likewise. You should heat (“shemen”) it to imprison it in his belly. You treat it like the “sahemen” treatment’

– Papyrus Ebers
Types of inguinal hernia

- Indirect
- Direct
- Pantaloon (direct+indirect)
- Sliding
- Amyand (appendix)
- Richter (border of bowel)
- Littre (Meckels)
Indirect hernia

- All indirect
- Patent processus vaginalis
- Boys:girls 10:1
- Premature, 10%
- <3 months 10 % complications
  - obstruction
  - strangulation
  - loss of testis
Amyand hernia

VIII. Of an Inguinal Rupture, with a Pin in the Appendix Coeci, incrusted with Stone; and some Observations on Wounds in the Guts; by Claudius Amyand, Esq; Serjeant Surgeon to His Majesty, and F. R. S.

October 8, 1735. Hanvil Anderson, a Boy, 11 Years of Age, was admitted into St. George’s Hospital near Hyde-Park Corner, for the Cure of a Hernia Scrotalis, which he had had from his Infancy, and a Fistula between the Scrotum and Thigh
Richter hernia

• A strangulated hernia involving only part of the wall of the intestine
  – August Gottlieb Richter 1778
Littre hernia

- Alexis de Littré (1700)
- Meckel diverticulum
- Inguinal (50%), femoral, umbilical
Diagnosis

- Clinical
  - history
  - examination
    - swelling groin
    - scars
    - contralateral groin
    - reducible
    - testes
    - ascites
  - differential diagnosis
    - femoral hernia
    - lymph gland
    - aneurysm
    - saphena varix
    - soft-tissue tumour
    - ectopic testis
What if I cannot feel a lump?

- **Adult**
  - Sports hernia
    - Athletic pubalgia
    - Gilmors' groin
  - 'Lipoma' of the cord
    - Retroperitoneal fat
    - Cause of pain?
    - 20% during laparoscopic repair
    - 30% during open repair
    - Lipoma can mimic a hernia
    - Can be a cause of 'recurrence'

- **Child**
  - A history of a lump
    - Parents
    - Doctors?
  - Where?
  - How big?
  - How often?

- **Pitfalls**
  - Retractile testis
  - Inguinal lymphadenopathy
  - Hydrocele
How often do complications occur?

- Children
  - Incarceration
    - Infants 30 %
    - Older children 6-18 %
  - Gonadal infarction
    - 30 % <3 months
    - 10 % older children with incarceration
Do I have to operate?

**Indications**
- Age 18y or more
- Minimal symptoms
  - not limiting normal activities
  - not difficult to reduce
- ASA 3 or less

- 720 men randomized to watchful waiting or Lichtenstein repair
- Outcome: pain/physical score SF-36
- 2-year follow-up
- No difference between groups
- 23% cross-over watchful waiting to surgery
- Incarcerations: 1 patient in 2 years and a second after 4 years

Fitzgibbons et al. JAMA 2006, 295: 285
Watchful waiting

- Follow-up paper
  - Analysis at 2 years
  - Surgery associated with
    - Greater costs
    - Improved quality of life
- Conclusion
  - Watchful waiting an acceptable option for men with minimal or no hernia symptoms
  - When symptoms appear, early operation

- Predictors of cross-over
  - Pain with strenuous exercise
  - Chronic constipation
  - Prostatism
  - Married
  - Good health

Stroup et al JACS 2006, 203: 458
Can a truss help a hernia?

'Preop'
- Paucy of evidence
- Symptom relief, or uncomfortable
- British Hernia Society – should not be routinely used
  - [Who’s trusting in a truss? Hernia (2014) 18:147]

'Postop'
- Randomized Clinical Trial on the postoperative use of an abdominal binder after laparoscopic umbilical and epigastric hernia repair
- No effect on pain, activity, or quality of life
  - [Randomized Clinical Trial on the postoperative use of an abdominal binder after laparoscopic umbilical and epigastric hernia repair. Hernia (2015) 19:147]
Treatment

- Children
  - herniotomy

- Adults
  - individualise
Is laparoscopic repair better?

- **Adults**
  - Recurrence =
  - Pain less +
    - Nerve entrapment
  - Recovery faster +
  - Cosmetic +

- **Children**
  - Recurrence 3v1% -
  - Pain -
  - Recovery excellent with open -
  - Cosmetic excellent with open -
The review authors identified 41 eligible controlled trials in which a total of 7161 participants were randomized to laparoscopic or open surgery repair.

- The mean or median duration of follow up of patients ranged from 6 to 36 months.
- Return to usual activities was faster for laparoscopic repair, by about 7 days
- There was less persisting pain and numbness than with open surgery.
- However, operation times were some 15 minutes longer.

McCormack et al 2003
DOI: 10.1002/14651858.CD001785
Patient care

● Pre-operative
  – Caprini Score thromboembolic risk
  – Gupta perioperative cardiac risk
  – Estimate risk of postoperative respiratory failure

● Post-operative
  – Personal approach – Practice Nurse
  – Follow-up phone calls
  – Goal is for patients to feel 100% confident to be able to communicate readily with Hamill Surgery and feel "special"
Specialist Health Coaching

• Fionna Mills
  – General & Obstetric Nurse
  – Coronary Care & Progressive Care Nurse Specialist
  – Cardiac Rehabilitation Nurse Specialist
  – Established Mercy Cardiac Rehabilitation Program
  – Charge Nurse, Auckland Cardiac Rehabilitation Clinic, The University of Auckland
• Consultations
  – Fred Thomas Health, Takapuna
  – Kidzhealth, Newmarket
  – Auckland Surgical Centre, Remuera
• EDI drhamill