

The Influence of Body Mass Index on Functional Outcomes Following Total Hip Replacement: A Ten-Year Follow Up

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Introduction

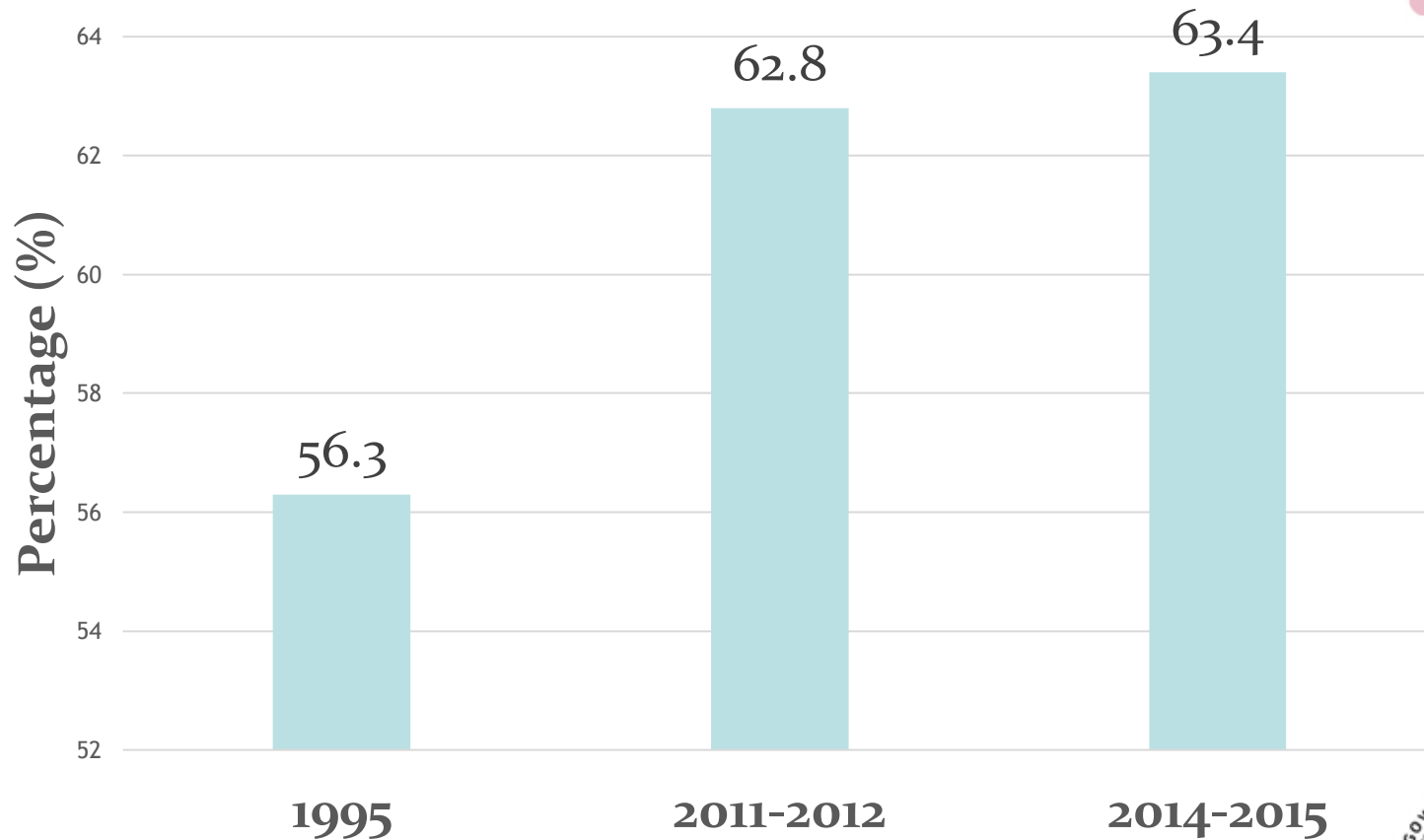


- Obesity is a major risk factor for number of chronic diseases
- It is associated with \uparrow rates of osteoarthritis and subsequent Total Hip Replacement (THR) surgery
- THR is a highly successful procedure known to significantly improve physical function and quality of life (QOL)
- RR of morbidly obese patients requiring THR is $\sim 8x$
- \uparrow numbers of joint replacement surgeries are being performed each year on obese patients at progressively younger ages

Introduction



Australians Aged Over 18 Overweight or Obese



Introduction



- Some surgeons may be reluctant to operate on obese patients
- The ‘weight’ of the evidence suggests that obese patients are linked with \uparrow post-operative complications however still able to achieve excellent short-term outcomes (Michalka et al 2012)
- Few studies exist with regards to long-term risks or function

Method



- A single centre prospective series
- Patients were assessed at pre-admission and 10 years
 - Functional capacity (PROMS and 6 MWT)
 - Radiological
 - Complications
- CT scan at 10 years
- Complications were graded 3-5 (Healy et al 2016)
- Developed a list of 19 validated and standardised THR complications

Sample

- 191 consecutive primary THR performed at Sir Charles Gairdner Hospital
- 2 surgeons
- All patients followed the same rehabilitation program
- 59% assessed at 10 years
 - 28% deceased
 - 13% lost to follow up



Demographics



Variable	Non-Obese (<30) N=112	Obese (>30) N= 79	p value
Gender (%male)	42%	46%	0.364
Age (years)	68.2 (12.7)	67.6% (10.2)	0.695
Aetiology (% Osteoarthritis)	91%	91%	0.367
Oxford Hip Score (0-48)	16.4 (7.3)	16.3 (7.4)	0.866
Pain (0-10)	7.2 (2.1)	7.4 (1.7)	0.458
Aids used (%)	53%	52%	0.512
Short Form 12 Physical Component	28.7 (6.9)	28.0 (5.8)	0.443
Short Form 12 Mental Component	45.8 (11.6)	44.3 (12.4)	0.392

Mean (Standard Deviation) unless stated otherwise

Results – 10 years



	Non-Obese N=65	Obese N=48	p value
Oxford Hip Score (0-48)	44 (6.6)	42.5 (7.8)	0.261
Pain Score (0-10)	0.9 (1.8)	1.1 (2.0)	0.514
6 Minute Walk Test (metres)	360 (110)	288 (111)	0.002
Aids used (%)	20%	37.5%	0.044
Satisfied (%)	100%	85%	0.051
Short Form 12 Physical Component	38.5 (12.1)	37 (11.8)	0.502
Short Form 12 Mental Component	52.9 (10.2)	52.6 (9.5)	0.879
Radiological Wear (%)	11%	8%	0.479

Mean (Standard Deviation) unless stated otherwise

Results

- Incidence of complications was similar in the obese v non-obese
- 18% (non-obese) v 22% (obese)



Discussion



10 years after THR, the obese group had an excellent response to surgery with respect to function.

- Similar satisfaction and pain levels (Busato et al 2008)
- Similar functional outcome measures (McCalden et al 2011, Andrew et al 2008)
- Lower walking distance in 6 minutes (Busato et al 2008)
- Higher rates of walking aid use (Singh et al 2010)
- No difference in complications or wear rates (Yeung et al 2011, Andrew et al 2008)

Conclusion

- This study supports the idea that patients should not be denied THR surgery on obesity alone as it results in
 - Significant long-term symptom resolution
 - Subjective functional improvement
 - High satisfaction levels



Conclusion

- Whilst our study was not strongly powered, our cohort did not show an increase in complication rate or radiological wear



“If more than 50% of the population is obese, then I’m not overweight, I’m average!”



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Questions?????

