

PRECAUTIONS AND ACTIVITY RESTRICTIONS AFTER THA – A THING OF THE PAST?

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DISCLOSURES

- Smith and Nephew---Fellowship funding
- Stryker----Fellowship funding
- Omega ---Fellowship funding



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OBJECTIVES

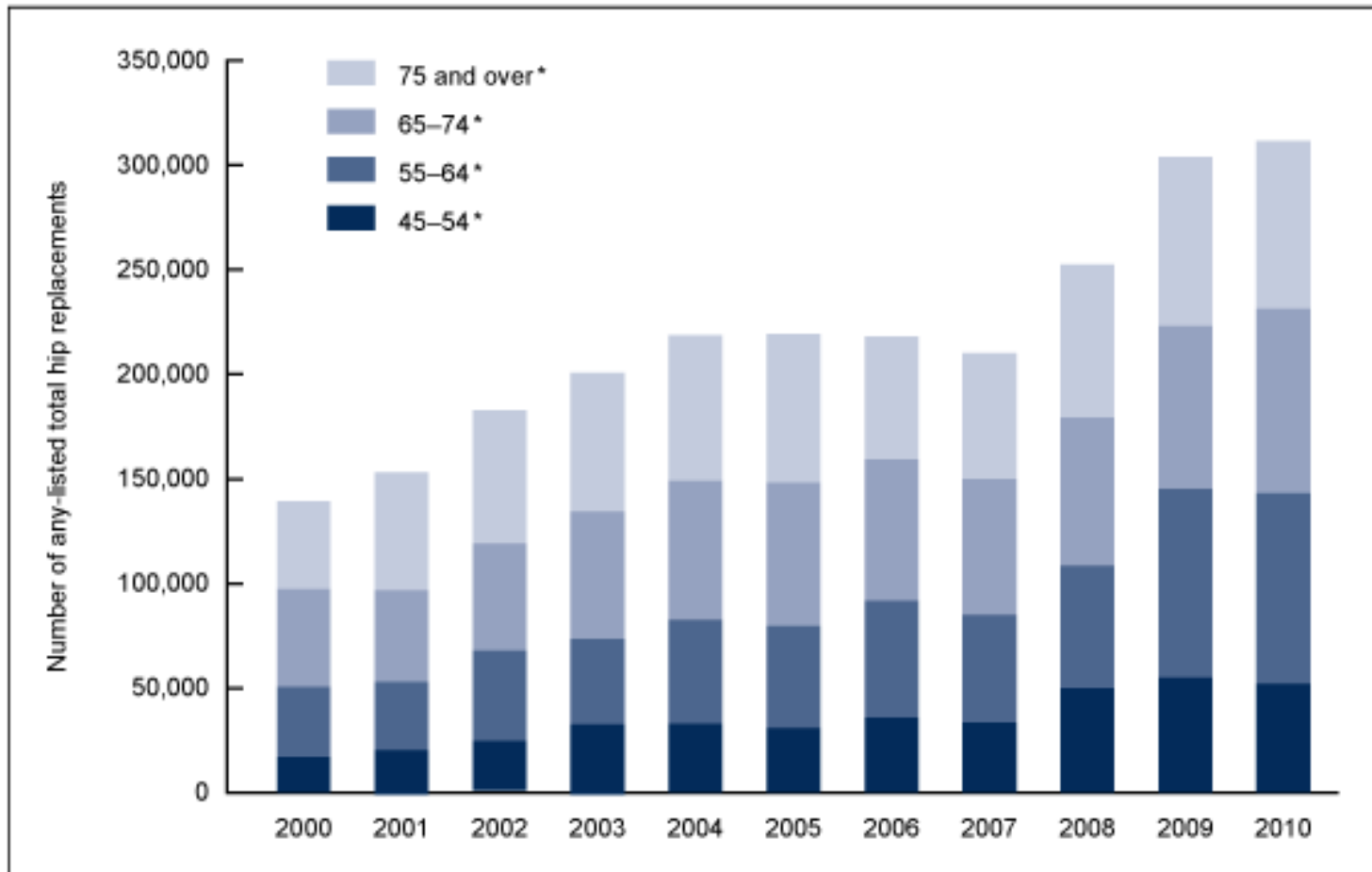
- Wight Bearing following Primary THA
- Hip Precautions following Primary THA
- Long term activities following Primary THA



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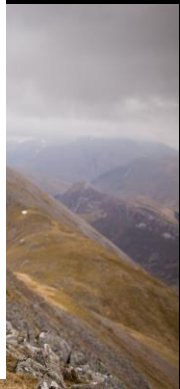
Figure 1. Number of total hip replacements among inpatients aged 45 and over, by age group and year: United States, 2000–2010



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W
Average
Incidence
increasing



WHAT IS NOT CHANGING?

- Increasing volume of elective THA and TKA

J Bone Joint Surg Am. 2018 Sep 5;100(17):1455-1460. doi: 10.2106/JBJS.17.01617.

Projected Volume of Primary Total Joint Arthroplasty in the U.S., 2014 to 2030.

Sloan M¹, Premkumar A², Sheth NP³.

- 71% growth in THA to 635K procedures in 2030



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HISTORICAL ACTIVITIES

Lifelong precautions

No High impact activities

Lifelong antibiotic prophylaxis

"If you do all of this your joint will last you 10 years or so"




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CURRENT THOUGHTS?


AAOS




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With normal use and activity, the material between the head and the socket of every hip replacement implant begins to wear. Excessive activity or being overweight may speed up this normal wear and cause the hip replacement to loosen and become painful. Therefore, most surgeons advise against high-impact activities such as running, jogging, jumping, or other high-impact sports.

Realistic activities following total hip replacement include unlimited walking, swimming, golf, driving, hiking, biking, dancing, and other low-impact sports.

With appropriate activity modification, hip replacements can last for many years.

AAHKS

Many surgeons suggest that you avoid any repetitive impact activities that can increase the wear on the implant such as long-distance running, basketball, or mogul skiing. Otherwise, limitations following hip replacement surgery are few; however, the better you treat your replacement the longer it will last.



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CURRENT 2023 PROTOCOLS

- Precautions
 - Approach based
 - Surgeon preference
 - Individualized to patient



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WEIGHT BEARING

- Weight Bearing
 - Should we limit for uncomplicated

> [Clin Orthop Relat Res](#). 1998 Apr;(349):156-62. doi: 10.1097/00003086-199804000-00019.

Immediate weightbearing after uncemented total hip arthroplasty

R R Rao ¹, P F Sharkey, W J Hozack, K Eng, R H Rothman

Affiliations + expand

PMID: 9584378 DOI: [10.1097/00003086-199804000-00019](#)

Full weight bearing after non cemented total hip replacement is compatible with satisfactory results

Y K Chan ¹, K Y Chiu, D K H Yip, T P Ng, W M Tang

Affiliations + expand

PMID: 12700932 PMCID: [PMC3460654](#) DOI: [10.1007/s00264-002-0419-4](#)

[Clinical Trial](#) > [Acta Orthop Scand](#). 2004 Feb;75(1):21-9.

doi: [10.1080/00016470410001708040](#).

No adverse effects of early weight bearing after uncemented total hip arthroplasty: a randomized study of 20 patients

Henrik Bodén ¹, Per Adolphson

Affiliations + expand

PMID: 15022801 DOI: [10.1080/00016470410001708040](#)

[Clinical Trial](#) > [Orthopedics](#). 2008 Mar;31(3):223. doi: 10.3928/01477447-20080301-40.

Immediate weight bearing after cementless total hip arthroplasty

Charles J Taunt Jr ¹, Henry Finn, Patricia Baumann

Affiliations + expand

ID: 19292251 DOI: [10.3928/01477447-20080301-40](#)



SAFE TO ALLOW WBAT

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HIP PRECAUTIONS

> [J Arthroplasty](#). 2018 Oct;33(10):3201-3205. doi: 10.1016/j.arth.2018.05.043. Epub 2018 Jun 6.

Variation in Use of Postoperative Precautions and Equipment Following Total Hip Arthroplasty: A Survey of the AAHKS and CAS Membership

Alberto V Carli¹, Stéphane Poitras², John C Clohisy³, Paul E Beaulé¹

- Survey of American AAHKS members and Canadian Arthroplasty Society members
- 44% universally prescribed precautions while 33% never prescribed precautions.
- Use of the posterolateral approach, surgeon experience, and larger head size use were significantly associated ($P < .01$) with precaution and equipment use.
- Direct anterior approach surgeons were significantly less likely to prescribe precautions ($P < .0001$) and significantly less likely to prescribe equipment ($P < .0001$).



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HIP PRECAUTIONS

- What does our literature suggest?
 - 237 patients consecutive cohort
 - Posterior approach
 - Education vs No Education
 - NO DIFFERENCES

> [Disabil Rehabil.](#) 2021 Oct;43(20):2882-2889. doi: 10.1080/09638288.2020.1721575.
Epub 2020 Feb 23.

Evaluation of hip precautions following total hip replacement: a before and after study

[Courtney J Lightfoot](#)¹, [Khosrow R Sehat](#)², [Carol Coole](#)¹, [Gary Drury](#)², [Joanne Ablewhite](#)¹,
[Avril E R Drummond](#)¹

Affiliations + expand

PMID: 32088992 DOI: [10.1080/09638288.2020.1721575](#)



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HIP PRECAUTIONS

Randomized Controlled Trial > J Arthroplasty. 2020 Jun;35(6S):S246-S251.

doi: 10.1016/j.arth.2020.02.019. Epub 2020 Feb 15.

Are Postoperative Hip Precautions Necessary After Primary Total Hip Arthroplasty Using a Posterior Approach? Preliminary Results of a Prospective Randomized Trial

Matthew W Tetreault ¹, Faisal Akram ², Jefferson Li ², Denis Nam ², Tad L Gerlinger ²,
Craig J Della Valle ², Brett R Levine ²

594 Hips from 2016-2019

Randomized to PHP versus unrestricted

Short term follow up average 15 weeks

5 dislocations (0.85%)

3 in restricted group

2 in non-restricted group

NO DIFFERENCE



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HIP PRECAUTIONS

- Meta Analysis
- 119 articles (RCT's, cohort studies)
- 1129 procedures (528 in restricted group 594 in non restricted group)
- 8 dislocations (1.5%) in restricted group
- 5 dislocations (1.0% in non restricted group)
- NO DIFFERENCES

[Review](#) > [Clin Rehabil.](#) 2016 Apr;30(4):329-39. doi: 10.1177/0269215515579421.

Epub 2015 Mar 31.

Do lifestyle restrictions and precautions prevent dislocation after total hip arthroplasty? A systematic review and meta-analysis of the literature

Walter van der Weegen ¹, Anke Kornuijt ², Dirk Das ³



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HIP PRECAUTIONS

Meta-Analysis > [Acta Orthop](#). 2023 Apr 5;94:141-151. doi: 10.2340/17453674.2023.11958.

Hip precautions after posterior-approach total hip arthroplasty among patients with primary hip osteoarthritis do not influence early recovery: a systematic review and meta-analysis of randomized and non-randomized studies with 8,835 patients

Christoffer B Korfitsen ¹, Lone R Mikkelsen ², Marie-Louise Mikkelsen ³, Jeanett F Rohde ⁴, Pætur M Holm ⁵, Simon Tarp ³, Holger-Henning F Carlsen ⁶, Kirsten Birkefoss ³, Thomas Jakobsen ⁷, Erik Poulsen ⁸, Jane S Leonhardt ⁹, Søren Overgaard ¹⁰, Inger Mechlenburg ¹¹

- 4 RCTs and 5 NRSs, including 8,835 participants, were included.
- 2016-2022
- Risk of dislocation in first 3 months
- NO DIFFERENCES



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HIP PRECAUTIONS

- 2005-2007 ---- 2764 hips
- The direct anterior or anterolateral approach was used in all patients.
- Femoral head size was 28, 32, or 36 mm.
- Patients were given no traditional functional restrictions postoperatively, such as use of elevated seats, abduction pillows, and restriction from driving.
- Four known dislocations occurred in the followed cohort of 2386 patients with 2612 hips (0.15%)

> [Clin Orthop Relat Res.](#) 2011 Feb;469(2):417-22. doi: 10.1007/s11999-010-1668-y.

Hip dislocation: are hip precautions necessary in anterior approaches?

Camilo Restrepo¹, S M Javad Mortazavi, Justin Brothers, Javad Parvizi, Richard H Rothman



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RETURN TO SPORTS

> [Arch Orthop Trauma Surg](#). 2021 Mar;141(3):497-507. doi: 10.1007/s00402-020-03691-1. Epub 2020 Dec 1.

Recommendations for return to sports after total hip arthroplasty are becoming less restrictive as implants improve

T Vu-Han ¹, S Hardt ², R Ascherl ³, C Gwinner ², C Perka ²

- Survey of German Arthroplasty Society
- >300 surgeons responded
- The majority of surgeons (81.9%) were in favor of RTS after THA.
- Risks associated with sports after THA were considered minimal (1%), with periprosthetic fractures ranking highest, followed by hip dislocation and polyethylene wear.
- We observed an increasingly liberal counseling of patients for high-impact sports.



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RETURN TO SPORTS

Table 2 Activity recommendations following total joint arthroplasty based on AAHKS, Hip Society, and Knee Society consensus statements

Low-impact sports: recommended	Intermediate-impact sports: recommended with experience	High-impact sports: generally not recommended*
Golf	Doubles tennis	Running/jogging
Swimming	Stair climber	Basketball
Walking	Hiking	Soccer
Treadmill	Downhill skiing	Baseball/softball
Stationary bicycle	Snowboarding	Racquetball/squash
Elliptical machine	Weightlifting	Martial arts
Cycling	Ice skating/roller blading	Volleyball
Rowing	Aerobics	American Football
Dancing	Horseback riding	Rugby
Pilates		Singles tennis
Stationary skiing		
Water aerobics		
Bowling		
Table tennis		



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RETURN TO SPORT/ WORK

- Systematic review of 52 studies
- Pooled return to work 70% (11%-100%)
 - Mean time was 11.2 weeks
 - Maximum was 90% at two years
 - Increasing age group and heavy manual labor being risks
- Pooled return to sport 85% (42%-100%)
 - Mean time was 16.1 weeks
 - 56% (20-80%) for high intensity
 - 97% (75-100%) for low intensity

Meta-Analysis > JBJS Rev. 2023 Aug 8;11(8). doi: 10.2106/JBJS.RVW.22.00249.

eCollection 2023 Aug 1.

Return to Sports and Return to Work After Total Hip Arthroplasty: A Systematic Review and Meta-analysis

Ignacio Pasqualini ¹, Ahmed K Emara ¹, Pedro J Rullan ¹, Xuankang Pan ², Hannah L Simmons ¹, Alison K Klika ¹, Trevor G Murray ¹, Nicolas S Piuze ¹



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MY PROTOCOL

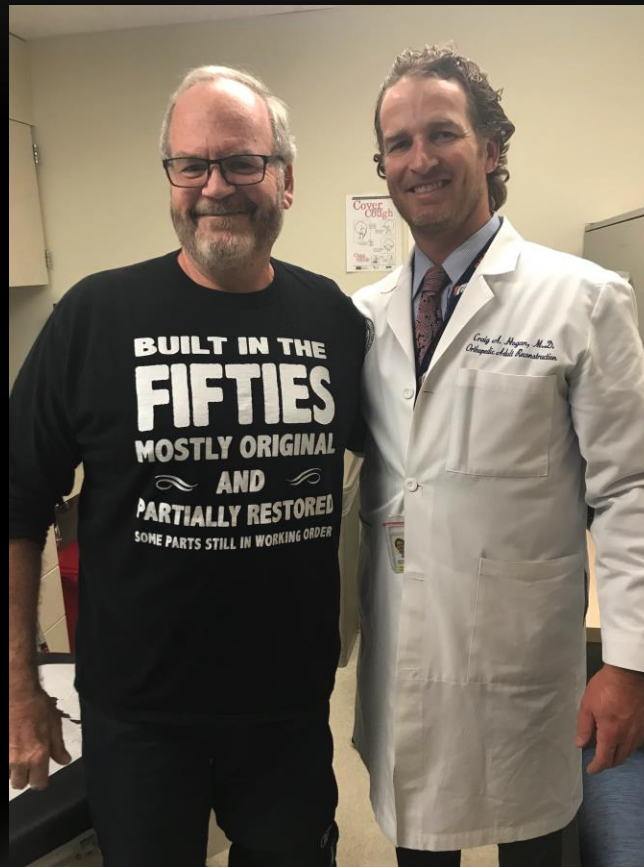
- Anterior Based surgeon
- WBAT (assistive devices as needed)
- No hip precautions
- Walking for first 4 weeks
- Then cycle, elliptical, etc...
- 6 weeks return to all activities (except high impact activities)
 - Discuss PT at this visit (20% feel like they need formal therapy)
- 12 weeks return to high impact activities



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THANK YOU



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