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## Efficacy of THA/TKA in Canton Zurich (SIRIS registry) – Are the improvement rates in „daily routine“ better than studies?

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## Background: Treatment effect

Measures the % reduction of symptoms/impairments for each treated patient

$$TE = \frac{(\text{baseline score} - \text{result score})}{\text{baseline score}}$$

Example: baseline score 8, result score 1,  $TE = (8-1)/8 = 0.875$

Best TE = 1 complete amelioration

TE = 0 no amelioration

TE neg = worsening

[Z Orthop Unfall. 2013 Jun;151\(3\):239-42. doi: 10.1055/s-0032-1328531. Epub 2013 May 21.](#)

**[Relative effect per patient (REPP)--outcome groups  
for total hip replacement and total knee  
replacement]**

[Article in German]  
J Huber<sup>1</sup>, E Dabis, M D Zumstein, J Hüsler

Affiliations + expand  
PMID: 23696160 DOI: 10.1055/s-0032-1328531

## Efficacy = Improvement rate

- Improvement = Patient with TE >20%=symptom reduction >20%

[Multicenter Study](#) > [Osteoarthritis Cartilage](#). 2016 Mar;24(3):480-3.

doi: 10.1016/j.joca.2015.10.012. Epub 2015 Oct 27.

### **A new responder criterion (relative effect per patient (REPP) > 0.2) externally validated in a large total hip replacement multicenter cohort (EUROHIP)**

J Huber <sup>1</sup>, J Hüsler <sup>2</sup>, P Dieppe <sup>3</sup>, K P Günther <sup>4</sup>, K Dreinhöfer <sup>5</sup>, A Judge <sup>6</sup>

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PMID: 26518993 DOI: 10.1016/j.joca.2015.10.012

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## Introduction/Aims

- How are the improvement rates for THA/TKA in a registry (in daily routine)?
- How are the improvement rates of a registry compared to studies?



## Patients and Methods

- Inclusion criteria: Patients Kt Zurich  
With hip/knee OA, treated with  
THA/TKA
- Data in SIRIS (Swiss Implant Registry)
- EQ-5D score preop and 1 year postop  
(mandatory in Kt. ZH)
- Improvement criterion TE > 0.2

Canton Zurich, Switzerland  
Population 1.5 Mio., 1729 km<sup>2</sup>



## Results July 2019 to December 2023

- THA: 5121 patients  
mean age 68.8 years  
complete follow-up
- TKA: 4375 patients  
mean age 70.0 years,  
complete follow-up



## Improvement rate for THA SIRIS Canton Zurich

Category	N	% rates
improved	4793	93.6 (Improvement rate)
unchanged	236	4.6
worse	92	1.8

## Improvement rates of THA studies vs. registry

	KS Aarau (2009)	EUROHIP (2008)	SIRIS ZH (ab 2019)
Improvement rate	91	85.4	93.6
N (THA)	170	845	5121



## Improvement rate for TKA Canton Zurich

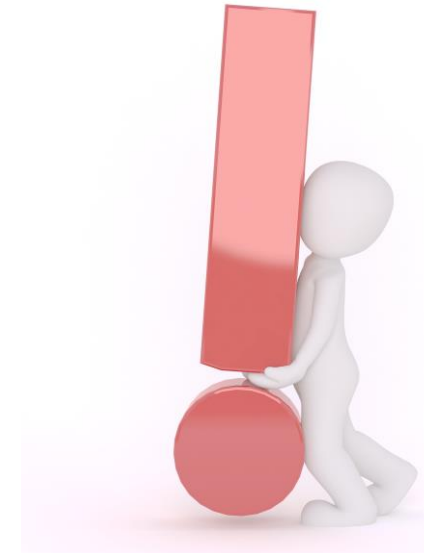
Kategorie	N	% Anteil
Improved	3684	84.2 (Improvement rate)
Unchanged	503	11.5
Worse	188	4.3

## Improvement rates of TKA studies vs. registry

	KS Aarau (2009)	DRESDEN (registry)	SIRIS ZH (since 2019)
Improvement rate	81	85.8	84.2
N (TKA)	71	582	4375

## Discussion

- Improvement rates are a simple dimension to measure efficacy of treatments (simple to calculate and understand)
- Results vary; THA better than TKA
- Results in Kt Zurich can be compared to studies



## Conclusions

- THA is a «winning operation»  
(>90% improvement rate)
- TKA has good results  
(>80% improvement rate)
- Improvement rates measure the  
whole treatment process  
(indication, surgery, rehab)

