Preoperative strength training for patients awaiting total knee arthroplasty.

No registrations found.

Ethical review	Positive opinion
Status	Pending
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON27568

Source
NTR

Brief title
PITSTOP

Health condition

Total knee arthroplasty
Osteoarthritis
Rehabilitation
Totale knievervanging
Artrose
Revalidatie

Sponsors and support

Primary sponsor: VU university, Faculty of human movement sciences
Source(s) of monetary or material Support: -

Intervention

Outcome measures

Primary outcome

1. Isometric knee extension force;

2. Voluntary activation of the quadriceps.

Secondary outcome

1. Cross sectional area of the quadriceps;

2. Flexor strength;

3. Range of motion of the knee;

4. Time for the “five times sit to stand test”;

5. Distance walked during the “six minute walk test”;

6. Time for the stair climb test;

7. Time for the balance test;

8. Scores at the WOMAC questionnaire and VAS pain scale will be used for assessment of quality of life.

Study description

Background summary

95% of the patients undergoing total knee arthroplasty are diagnosed with osteoarthritis. Osteoarthritis is a joint disease which is characterized by pain, loss of force and problems during activities of daily life. This can result in reduced social participation and quality of life. Current advice on preoperative training is very diverse. Some hospitals advise patient to consult a physiotherapy pre surgery, while others do not. Between physiotherapists there are huge differences in treatment. While some only train walking with aids, others perform intensive strength training. Because there is evidence that intensive strength training is beneficial post surgery, our hypothesis is that preoperative training also leads to increases in muscle strength, voluntary activation, and physical functioning. Further we expect to find indications that positive training status is related to postoperative recovery.

Study objective

95% of the patients undergoing total knee arthroplasty are diagnosed with osteoarthritis. Osteoarthritis is a joint disease which is characterized by pain, loss of force and problems during activities of daily life. This can result in reduced social participation and quality of life. Current advice on preoperative training is very diverse. Some hospitals advise patient to consult a physiotherapist before surgery, while others do not. Between physiotherapists there are large differences in treatment. While some only train walking with aids, others perform intensive strength training. Because there is evidence that intensive strength training is beneficial post surgery, our hypothesis is that preoperative training also leads to increases in muscle strength, voluntary activation, and physical functioning. Further we expect to find indications that positive preoperative effects promote postoperative recovery. This study can help to shorten recovery and increase the quality of life for patients undergoing total knee arthroplasty.

Study design

All variables will be measured at:

1. 6 weeks before surgery;

2. 0 weeks before surgery;

3. 5 weeks after surgery;

4. 12 weeks after surgery.

Intervention

1. Control group: Usual care according to guidelines for training subjects with osteoarthritis;

2. Intervention group: Usual care plus additional intensive strength training (6 weeks 2 days a week). The strength training consist of 4 legexercises. The number of repeats decreases from 15 to 8, but weight increases.

After surgery, both groups will receive the same exercise program.

Contacts

Public
Van der Boechorststraat 9
D.M. Leeuwen, van
Amsterdam 1081 BT
The Netherlands

+31 (0)20 5988500
Scientific
Van der Boechorststraat 9
D.M. Leeuwen, van
Amsterdam 1081 BT
The Netherlands
+31 (0)20 5988500

Eligibility criteria

Inclusion criteria

1. Minimum age of 55 yrs;

2. On the waiting list for unilateral TKA.

Exclusion criteria

1. Contraindications for training the lower limbs;

2. ASA>2 (American Society of Anesthesiologists);

3. Severe cognitive and/or communicative problems, preventing ability to follow verbal instructions;

4. Other problems that would limit the ability to perform the requested tasks;

5. Contra-indications for electrical stimulation (unstable epilepsy, cancer, skin abnormalities, pacemaker).

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Single blinded (masking used)

Control:	Active

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-07-2010
Enrollment:	80
Type:	Anticipated

Ethics review

Positive opinion

Date:	01-04-2010
Application type:	First submission

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL2154
NTR-old	NTR2278
Other	CWO MOVE / ABR Nummer : 10.01 / 30715 ;
ISRCTN	ISRCTN wordt niet meer aangevraagd.

Study results

Summary results
N/A