

# Clinical trials of mechanical devices for thromboprophylaxis for DVT prophylaxis in orthopaedic surgery

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## 1 GCS (adjunctive therapy)

Trial	Treatments	Patients	Trials design and methods
<b>GCS + dextran vs dextran</b>			
<b>Fredin , 1989</b> n=44/46 follow-up:	graded compression stockings + dextran versus dextran alone	patients undergoing THR surgery	parallel groups
<b>GCS + LMWH vs LMWH</b>			
<b>Kalodiki (GCS+LMWH vs LMWH) , 1996</b> n=NA follow-up:	enoxaparin (40 mg once daily) plus graduated elastic compression (TEDR stockings) for 8-12 days versus low molecular weight heparin: (enoxaparin 40 mg once daily)	patients having elective total hip replacement	Parallel groups

## References

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### Kalodiki (GCS+LMWH vs LMWH), 1996:

Kalodiki EP, Hoppensteadt DA, Nicolaides AN, Fareed J, Gill K, Regan F, al-Kutoubi A, Cunningham DA, Birch R, Harris N, Hunt D, Johnson J, Marx C Deep venous thrombosis prophylaxis with low molecular weight heparin and elastic compression in patients having total hip replacement. A randomised controlled trial. Int Angiol 1996;15:162-8 [[8803642](#)]

## 2 Graduated compression stockings

Trial	Treatments	Patients	Trials design and methods
<b>GCS vs no prophylaxis</b>			
<b>Barnes , 1978</b> n=10/8 follow-up:	graded-compression stockings versus nostockings	patients undergoing total hip replacement	parallel groups
<b>*Inada , 1983</b> n=NA follow-up:	graduated compression stocking on one leg versus no GCS on the other leg serving as a control.	patients undergoing major surgery	

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Trial	Treatments	Patients	Trials design and methods
*Ohlund , 1983 n=NA follow-up:	-	elective total hip arthroplasty	
*Wille-Jorgensen , 1989 n=NA follow-up:	regional anesthesia and graded compression stockings versus general anesthesia	elective hip arthroplasty	
Holford , 1976 n=48/47 follow-up:	Graded compression versus control	patients undergoing major operations	parallel groups
<b>GCS vs LMWH</b>			
Camporese , 2008 n=660/667 follow-up:	full-length graduated compression stocking for 7 days versus once-daily subcutaneous injection of LMWH (nadroparin, 3800 anti-Xa IU) for 7 days or 14 days	patients undergoing knee arthroscopy	Parallel groups open Italy
<b>Knee length GCS vs Thigh length GCS</b>			
Hui THR , 1996 n=18/22 follow-up:	Knee length GCS versus Thigh length GCS	Orthopaedic patients THR	parallel groups
Hui TKR , 1996 n=22/32 follow-up:	Knee length GCS versus Thigh length GCS	Orthopaedic patients TKR	parallel groups
William , 1996 n=NA follow-up:	Knee-length graduated compression stockings versus thigh-length graduated compression stoc	orthopaedic surgery	
<b>GCS vs UFH</b>			
Fasting , 1985 n=NA follow-up:	graded compression stockings (TED stockings, Kendall Co.) versus low-dose heparin (Heparin Leo 5 000 I.U. subcutaneously twice daily)	elective major surgery	Parallel groups

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Barnes RW, Brand RA, Clarke W, Hartley N, Hoak JC Efficacy of graded-compression antiembolism stockings in patients undergoing total hip arthroplasty. Clin Orthop Relat Res 1978;:61-7 [679555]

### \*Inada, 1983:

Inada K, Shirai N, Hayashi M, Matsumoto K, Hirose M Postoperative deep venous thrombosis in Japan. Incidence and prophylaxis. Am J Surg 1983;145:775-9 [6859416]

### \*Ohlund, 1983:

Ohlund C, Fransson SG, Starck SA Calf compression for prevention of thromboembolism following hip surgery. Acta Orthop Scand 1983;54:896-9 [6367345]

### \*Wille-Jorgensen, 1989:

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**Holford, 1976:**

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**Camporese, 2008:**

Camporese G, Bernardi E, Prandoni P, Noventa F, Verlato F, Simioni P, Ntita K, Salmistraro G, Frangos C, Rossi F, Cordova R, Franz F, Zucchetta P, Kontothanassis D, Andreozzi GM Low-molecular-weight heparin versus compression stockings for thromboprophylaxis after knee arthroscopy: a randomized trial. *Ann Intern Med* 2008;149:73-82 [[18626046](#)]

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**Hui TKR, 1996:**

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**William, 1996:**

Williams AM, Davies PR, Sweetnam DI, Harper G, Pusey R, Lightowler CD Knee-length versus thigh-length graduated compression stockings in the prevention of deep vein thrombosis. *Br J Surg* 1996;83:1553 [[9014671](#)]

**Fasting, 1985:**

Fasting H, Andersen K, Kraemmer Nielsen H, Husted SE, Koopmann HD, Simonsen O, Husegaard HC, Vestergaard Madsen J, Pedersen TK Prevention of postoperative deep venous thrombosis. Low-dose heparin versus graded pressure stockings. *Acta Chir Scand* 1985;151:245-8 [[3892994](#)]

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