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DETSKY QUALITY SCALE FOR RANDOMIZED TRIALS			
Randomization			
Were the patients assigned randomly?	1 Yes	1 Partly	0 No
Randomization adequately described?	2 Yes		0 No
Was treatment group concealed to investigator?	1 Yes		0 No
Total/4			
Description of outcome measurement adequate?	1 Yes	1 Partly	0 No
Outcome measurements objective?	2 Yes		0 No
Were the assessors blind to treatment?	1 Yes		0 No
Total/4			
Were inclusion/exclusion criteria well defined?	2 Yes	1 Partly	0 No
Number of patients excluded and reason?	2 Yes	1 Partly	0 No
Total/4			
Was the therapy fully described for the treatment group?	2 Yes	1 Partly	0 No
Was the therapy fully described for the controls?	2 Yes	1 Partly	0 No
Total/4			
Statistics		1 Partly	
Was the test stated and was there a p value?	1 Yes		0 No
Was the statistical analysis appropriate?	2 Yes		0 No
If the trial was negative, were confidence intervals or post hoc power calculations performed?	1 Yes		0 No
Sample size calculation before the study?	1 Yes		0 No
Total/4 (if positive trial) Total/5 (if negative trial)			
Total Score 20 points (if positive trial) 21 points (if negative trial)			
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ELIGIBLE RANDOMIZED TRIALS

1. **Andersson C, Odensten M, Good L, Gillquist J.** Surgical or non-surgical treatment of acute rupture of the anterior cruciate ligament. A randomized study with long-term follow-up. *J Bone Joint Surg Am.* 1989;71:965-74.
2. **Ayers DC, Murray DG, Duerr DM.** Blood salvage after total hip arthroplasty. *J Bone Joint Surg Am.* 1995;77:1347-51.
3. **Badner NH, Bourne RB, Rorabeck CH, MacDonald SJ, Doyle JA.** Intrarticular injection of bupivacaine in knee-replacement operations. Results of use for analgesia and for preemptive blockade. *J Bone Joint Surg Am.* 1996;78:734-8.
4. **Barrack RJ, Wolfe MW, Waldman DA, Milicic M, Bertot AL, Myers L.** Resurfacing of the patella in total knee arthroplasty. A prospective, randomized, double-blind study. *J Bone Joint Surg Am.* 1997;79:1121-31.
5. **Beisaw NE, Comerota AJ, Groth HE, Merli GJ, Weitz HH, Zimmerman RC, Diserio FJ, Sasahara AA.** Dihydroergotamine/heparin in the prevention of deep-vein thrombosis after total hip replacement. A controlled, prospective, randomized multicenter trial. *J Bone Joint Surg Am.* 1988;70:2-10.
6. **Blachut PA, O'Brien PJ, Meek RN, Broekhuysen HM.** Interlocking intramedullary nailing with and without reaming for the treatment of closed fractures of the tibial shaft. A prospective, randomized study. *J Bone Joint Surg Am.* 1997;79:640-6.
7. **Blair B, Rokito AS, Cuomo F, Jarolem K, Zuckerman JD.** Efficacy of injections of corticosteroids for subacromial impingement syndrome. *J Bone Joint Surg Am.* 1996;78:1685-9.
8. **Bodoky A, Neff U, Heberer M, Harder F.** Antibiotic prophylaxis with two doses of cephalosporin in patients managed with internal fixation for a fracture of the hip. *J Bone Joint Surg Am.* 1993;75:61-5.
9. **Bone LB, Johnson KD, Weigelt J, Scheinberg R.** Early versus delayed stabilization of femoral fractures. A prospective randomized study. *J Bone Joint Surg Am.* 1989;71:336-40.
10. **Brown RA, Gelberman RH, Seiler JG 3rd, Abrahamsson SO, Weiland AJ, Urbaniak JR, Schoenfeld DA, Furcolo D.** Carpal tunnel release. A prospective, randomized assessment of open and endoscopic methods. *J Bone Joint Surg Am.* 1993;75:1265-75.
11. **Buchholz RW, Henry S, Henley MB.** Fixation of bioabsorbable screws for the treatment of fractures of the ankle. *J Bone Joint Surg Am.* 1994;76:319-24.
12. **Carragee EJ.** Single-level posterolateral arthrodesis, with or without posterior decompression, for the treatment of isthmic spondylolisthesis in adults. A prospective, randomized study. *J Bone Joint Surg Am.* 1997;79:1175-80.
13. **Chapman MW, Buchholz R, Cornell C.** Treatment of acute fractures with a collagen-calcium phosphate graft material. A randomized clinical trial. *J Bone Joint Surg Am.* 1997;79:495-502.
14. **Colwell CW Jr, Morris BA.** Patient-controlled analgesia compared with intramuscular injection of analgesics for the management of pain after an orthopaedic procedure. *J Bone Joint Surg Am.* 1995;77:726-33.
15. **Colwell CW Jr, Spiro TE, Trowbridge AA, Morris BA, Kwaan HC, Blaha JD, Comerota AJ, Skoutakis VA.** Use of enoxaparin, a low-molecular-weight heparin, and unfractionated heparin for the prevention of deep venous thrombosis after elective hip replacement. A clinical trial comparing efficacy and safety. Enoxaparin Clinical Trial Group. *J Bone Joint Surg Am.* 1994;76:3-14.
16. **Devane PA, Robinson EJ, Bourne RB, Rorabeck CH, Nayak NN, Horne JG.** Measurement of polyethylene wear in acetabular components inserted with and without cement. A randomized trial. *J Bone Joint Surg Am.* 1997;79:682-9.
17. **Drakeford MK, Pettine KA, Brookshire L, Ebert F.** Spinal narcotics for postoperative analgesia in total joint arthroplasty. A prospective study. *J Bone Joint Surg Am.* 1991;73:424-8.
18. **Eriksson BI, Ekman S, Lindbratt S, Baur M, Bach D, Torholm C, Kalebo P, Close P.** Prevention of thromboembolism with use of recombinant hirudin. Results of a double-blind, multicenter trial comparing the efficacy of desirudin (Revasc) with that of unfractionated heparin in patients having a total hip replacement. *J Bone Joint Surg Am.* 1997;79:326-33.
19. **Eriksson BI, Kalebo P, Anthymyr BA, Wadenvik H, Tengborn L, Risberg B.** Prevention of deep-vein thrombosis and pulmonary embolism after total hip replacement. Comparison of low-molecular-weight heparin and unfractionated heparin. *J Bone Joint Surg Am.* 1991;73:484-93.
20. **Faris PM, Ritter MA, Abels RI.** The effects of recombinant human erythropoietin on perioperative transfusion requirement in patients having a major orthopaedic operation. The American Erythropoietin Study Group. *J Bone Joint Surg Am.* 1996;78:62-72.
21. **Fauno P, Suomalainen O, Rehnberg V, Hansen TB, Kroner K, Soimakallio S, Nielsen E.** Prophylaxis for the prevention of venous thromboembolism after total knee arthroplasty. A comparison between unfractionated and low-molecular-weight heparin. *J Bone Joint Surg Am.* 1994;76:1814-18.
22. **Fragen RJ, Stulberg SD, Wixson R, Glisson S, Librojo E.** Effect of ketorolac tromethamine on bleeding and on requirements for analgesia after total knee arthroplasty. *J Bone Joint Surg Am.* 1995;77:998-1002.
23. **Francis CW, Pellegrini VD Jr, Marder VJ, Harris CM, Totterman S, Gabriel KR, Baughman DJ, Roemer S, Burke J, Goodman TL, et al.** Prevention of venous thrombosis after total hip arthroplasty. Antithrombin III and low-dose heparin compared with dextran 40. *J Bone Joint Surg Am.* 1989;71:327-35.
24. **Francis CW, Pellegrini VD Jr, Totterman S, Boyd AD Jr, Marder VJ, Liebert KM, Stulberg BN, Ayers DC, Rosenberg A, Kessler C, Johanson NA.** Prevention of deep-vein thrombosis after total hip arthroplasty. Comparison of warfarin and dalteparin. *J Bone Joint Surg Am.* 1997;79:1365-72.
25. **Garcia S, Lozano ML, Gatell JM, Soriano E, Ramon R, Sanmiguel JG.** Prophylaxis of deep-vein thrombosis after total hip arthroplasty compared with multiple-dose cefamandole. *J Bone Joint Surg Am.* 1991;73:1044-8.
26. **Gerhart TN, Yett HS, Robertson LK, Lee MA, Smith M, Salzman EW.** Low-molecular-weight heparinoid compared with warfarin for prophylaxis of deep-vein thrombosis in patients who are operated on for fracture of the hip. A prospective, randomized trial. *J Bone Joint Surg Am.* 1991;73:494-502.
27. **Grob D, Humke T, Dvorak J.** Degenerative lumbar spinal stenosis. Decompression with and without arthrodesis. *J Bone Joint Surg Am.* 1995;77:1036-41.
28. **Hardy DC, Decamps PY, Krallis P, Fabek L, Smets P, Bertens CL, Delince PE.** Use of an intramedullary hip-screw compared with a compression hip-screw with a plate for intertrochanteric femoral fractures. A prospective, randomized study of one hundred patients. *J Bone Joint Surg Am.* 1998;80:618-30.
29. **Heckman JD, Ryaby JP, McCabe J, Frey JJ, Kilcoyne RF.** Acceleration of tibial fracture-healing by non-invasive, low-intensity pulsed ultrasound. *J Bone Joint Surg Am.* 1994;76:26-34.
30. **Herkowitz HN, Kurz LT.** Degenerative lumbar spondylolisthesis with spinal stenosis. A prospective study comparing decompression with decompression and intertransverse process arthrodesis. *J Bone Joint Surg Am.* 1991;73:802-8.
31. **Holbrook JL, Swiontkowski MF, Sanders R.** Treatment of open fractures of the tibial shaft: Ender nailing versus external fixation. A randomized, prospective comparison. *J Bone Joint Surg Am.* 1989;71:1231-8.
32. **Johnson DP, Eastwood DM, Witherow PJ.** Symptomatic synovial plicae of the knee. *J Bone Joint Surg Am.* 1993;75:1485-96.
33. **Karnetis TA, Stulberg SD, Wixson RL, Reilly P.** The hemostatic effects of desmopressin on patients who had total joint arthroplasty. A double-blind randomized trial. *J Bone Joint Surg Am.* 1994;76:1545-50.
34. **Karrholm J, Malchau H, Snorrason F, Herberts P.** Micromotion of femoral stems in total hip arthroplasty. A randomized study of cemented, hydroxyapatite-coated and porous-coated stems with roentgen stereophotogrammetric analysis. *J Bone Joint Surg Am.* 1994;76:1692-705.
35. **Keating JF, O'Brien PJ, Blachut PA, Meek RN, Broekhuysen HM.** Locking intramedullary nailing with and without reaming for open fractures of the tibial shaft. A prospective, randomized study. *J Bone Joint Surg Am.* 1997;79:334-41.
36. **Knapp TP, Patzakis MJ, Lee J, Seipel PR, Abdollahi K, Reisch RB.** Comparison of intravenous and oral antibiotic therapy in the treatment of fractures caused by low-velocity gunshots. A prospective, randomized study of infection rates. *J Bone Joint Surg Am.* 1996;78:1167-71.
37. **Kristiansen TK, Ryaby JP, McCabe J, Frey JJ, Roe LR.** Accelerated healing of distal radius fractures with the use of specific, low-intensity ultrasound. A multicenter, prospective, randomized, double-blind, placebo-controlled study. *J Bone Joint Surg Am.* 1997;79:961-73.
38. **Toksvig-Larsen S, Ryd L, Lindstrand A.** Early inducible displacement of tibial components in total knee prostheses inserted with and without cement: a randomized study with roentgen stereophotogrammetric analysis. *J Bone Joint Surg Am.* 1998;80:83-9.
39. **Lastayo PC, Wright T, Jaffe R, Hartzel J.** Continuous passive motion after re-

- pair of the rotator cuff. A prospective outcome study. *J Bone Joint Surg Am.* 1998;80:1002-11.
40. **Leinberry CF, Hammond NL 3rd, Siegfried JW.** The role of epineurotomy in the operative treatment of carpal tunnel syndrome. *J Bone Joint Surg Am.* 1997;79:555-7.
41. **Lieberman JR, Huo MM, Hanway J, Salvati EA, Sculco TP, Sharrock NE.** The prevalence of deep venous thrombosis after total hip arthroplasty with hypotensive epidural anesthesia. *J Bone Joint Surg Am.* 1994;76:341-8.
42. **Maffulli N, Testa V, Capasso G.** Use of a tourniquet in the internal fixation of fractures of the distal part of the fibula. A prospective, randomized trial. *J Bone Joint Surg Am.* 1993;75:700-3.
43. **Mauerhan DR, Nelson CL, Smith DL, Fitzgerald RH Jr, Slama TG, Petty RW, Jones RE, Evans RP.** Prophylaxis against infection in total joint arthroplasty. One day of cefuroxime compared with three days of cefazolin. *J Bone Joint Surg Am.* 1994;76:39-45.
44. **McNally MA, Cooke EA, Mollan RA.** The effect of active movement of the foot on venous blood flow after total hip replacement. *J Bone Joint Surg Am.* 1997;79:1198-201.
45. **McNeill TW, Andersson GB, Schell B, Sinkora G, Nelson J, Lavender SA.** Epidural administration of methylprednisolone and morphine for pain after a spinal operation. A randomized, prospective, comparative study. *J Bone Joint Surg Am.* 1995;77:1814-8.
46. **Moyen BJ, Jenny JY, Mandrino AH, Lerat JL.** Comparison of reconstruction of the anterior cruciate ligament with and without a Kennedy ligament-augmentation device. A randomized, prospective study. *J Bone Joint Surg Am.* 1992;74:1313-9.
47. **Nelissen R, Valstar ER, Rozing PM.** The effect of hydroxyapatite on the micro-motion of total knee prostheses. A prospective, randomized, double-blind study. *J Bone Joint Surg Am.* 1998;80:1665-72.
48. **O'Neill DB.** Arthroscopically assisted reconstruction of the anterior cruciate ligament. A prospective randomized analysis of three techniques. *J Bone Joint Surg Am.* 1996;78:803-13.
49. **O'Neill DB.** Open lateral retinacular lengthening compared with arthroscopic release. A prospective, randomized outcome study. *J Bone Joint Surg Am.* 1997;79:1759-69.
50. **Onsten I, Carlsson AS, Ohlin A, Nilsson JA.** Migration of acetabular components, inserted with and without cement, in one-stage bilateral hip arthroplasty. A controlled, randomized study using roentgenstereophotogrammetric analysis. *J Bone Joint Surg Am.* 1994;76:185-94.
51. **Pellegrini VD Jr, Gregoritch SJ.** Preoperative irradiation for prevention of heterotopic ossification following total hip arthroplasty. *J Bone Joint Surg Am.* 1996;78:870-81.
52. **Pinzur MS, Garla PG, Pluth T, Vrbos L.** Continuous postoperative infusion of a regional anesthetic after an amputation of the lower extremity. A randomized clinical trial. *J Bone Joint Surg Am.* 1996;78:1501-5.
53. **Povacz P, Unger SF, Miller WK, Tockner R, Resch H.** A randomized, prospective study of operative and non-operative treatment of injuries of the fibular collateral ligaments of the ankle. *J Bone Joint Surg Am.* 1998;80:345-51.
54. **Ritter MA, Keating EM, Faris PM.** Closed wound drainage in total hip or total knee replacement. A prospective, randomized study. *J Bone Joint Surg Am.* 1994;76:35-8.
55. **Sasso RC, Williams JI, Dimasi N, Meyer PR Jr.** Postoperative drains at the donor sites of iliac-crest bone grafts. A prospective, randomized study of morbidity at the donor site in patients who had a traumatic injury of the spine. *J Bone Joint Surg Am.* 1998;80:631-5.
56. **Schmidt SA, Kjaersgaard-Andersen P, Pedersen NW, Kristensen SS, Pedersen P, Nielsen JB.** The use of indomethacin to prevent the formation of heterotopic bone after total hip replacement. A randomized, double-blind clinical trial. *J Bone Joint Surg Am.* 1988;70:834-8.
57. **Scott G, King JB.** A prospective, double-blind trial of electrical capacitive coupling in the treatment of non-union of long bones. *J Bone Joint Surg Am.* 1994;76:820-6.
58. **Sernbo I, Johnell O, Gentz CF, Nilsson JA.** Unstable intertrochanteric fractures of the hip. Treatment of Ender pins compared with a compression hip-screw. *J Bone Joint Surg Am.* 1988;70:1297-303.
59. **Snyder-Mackler L, Delitto A, Bailey SL, Stralka SW.** Strength of the quadriceps femoris muscle and functional recovery after reconstruction of the anterior cruciate ligament. A prospective, randomized clinical trial of electrical stimulation. *J Bone Joint Surg Am.* 1995;77:1166-73.
60. **Sommerkamp TG, Seeman M, Silliman J, Jones A, Patterson S, Walker J, Semmler M, Browne R, Ezaki M.** Dynamic external fixation of unstable fractures of the distal part of the radius. A prospective, randomized comparison with static external fixation. *J Bone Joint Surg Am.* 1994;76:1149-61.
61. **Stahl S, Ben-David B, Moscona RA.** The effect of local infiltration with morphine before carpal tunnel release. *J Bone Joint Surg Am.* 1997;79:551-4.
62. **Westrich GH, Sculco TP.** Prophylaxis against deep venous thrombosis after total knee arthroplasty. Pneumatic plantar compression and aspirin compared with aspirin alone. *J Bone Joint Surg Am.* 1996;78:826-34.
63. **Woolson ST, Watt JM.** Intermittent pneumatic compression to prevent proximal deep venous thrombosis during and after total hip replacement. A prospective, randomized study of compression alone, compression and aspirin, and compression and low-dose warfarin. *J Bone Joint Surg Am.* 1991;73:507-12.
64. **Wyrsch B, McFerran MA, McAndrew M, Limbird TJ, Harper MC, Johnson KD, Schwartz HS.** Operative treatment of fractures of the tibial plafond. A randomized, prospective study. *J Bone Joint Surg Am.* 1996;78:1646-57.
65. **Colwell CW Jr, Collis DK, Paulson R, McCutchen JW, Bigler GT, Lutz S, Hardwick ME.** Comparison of enoxaparin and warfarin for the prevention of venous thromboembolic disease after total hip arthroplasty. Evaluation during hospitalization and three months after discharge. *J Bone Joint Surg Am.* 1999;81:932-40.
66. **Gartsman GM, Roddey TS, Hammerman SM.** Shoulder arthroplasty with or without resurfacing of the glenoid in patients who have osteoarthritis. *J Bone Joint Surg Am.* 2000;82:26-34.
67. **Hermantini FU, Peters T, Quartararo L, Kambin P.** A prospective, randomized study comparing the results of open discectomy with those of video-assisted arthroscopic microdiscectomy. *J Bone Joint Surg Am.* 1999;81:958-65.
68. **Kirkley A, Webster-Bogaert S, Litchfield R, Amendola A, MacDonald S, McCalden R, Fowler P.** The effect of bracing on varus gonarthrosis. *J Bone Joint Surg Am.* 1999;81:539-48.
69. **Mortensen HM, Skov O, Jensen PE.** Early motion of the ankle after operative treatment of a rupture of the Achilles tendon. A prospective, randomized clinical and radiographic study. *J Bone Joint Surg Am.* 1999;81:983-90.
70. **Murkin JM, Haig GM, Beer KJ, Cicutti N, McCutchen J, Comunale ME, Hall R, Ruzicka BB.** Aprotinin decreases exposure to allogeneic blood during primary unilateral total hip replacement. *J Bone Joint Surg Am.* 2000;82:675-84.
71. **Pitto RP, Koessler M, Kuehle JW.** Comparison of fixation of the femoral component without cement and fixation with use of a bone-vacuum cementing technique for the prevention of fat embolism during total hip arthroplasty. A prospective, randomized clinical trial. *J Bone Joint Surg Am.* 1999;81:831-43.
72. **Riew KD, Yin U, Gilula L, Bridwell KH, Lenke LG, Lauryssen C, Goette K.** The effect of nerve-root injections on the need for operative treatment of lumbar radicular pain. A prospective, randomized, controlled, double-blind study. *J Bone Joint Surg Am.* 2000;82:1589-93.