

Clinical trials of UFH

TrialResults-center www.trialresultscenter.org

1 acute myocardial infarction

Trial	Treatments	Patients	Trials design and methods
UFH vs no heparin			
ISIS-2 Pilot , 1987 n=106/103 follow-up: 65279;In-hospital, 1 y (deat	UFH nNo bolus, 1000 IU/h for 48 h versus 65279;No heparin	patients with s65279;uspected MI <=24 h	Parallel groups open
DUCCS , 1994 n=128/122 follow-up: 14 d	UFH no bolus, 15 IU/kg per h for 4 d; target aPTT 5090 s versus No heparin	patients with acute myocardial infarction four hours after APSAC administration, age <=85 y STEMI <=12 h	Parallel groups open
UFH vs placebo			
ECSG , 1992 n=324/320 follow-up: In-hospital	UFH 5000 IU bolus, UFH 1000 IU/h for 48120 h versus Placebo	patients treated with alteplase thrombolysis for acute myocardial infarction, Age 2170 y STEMI <=6h	Parallel groups Double-blind
OSIRIS , 1992 n=64/64 follow-up: In-hospital	UFH 10 000 IU bolus, 1000 IU/h for 24 h versus Placebo	STEMI w=6 h	Parallel groups Double-blind

More details and results :

- antithrombotics for acute myocardial infarction in all type of patients at <http://www.trialresultscenter.org/go-Q36>
- heparin (UFH or LMWH) for acute myocardial infarction in patients eligible to receive fibrinolytic therapy at <http://www.trialresultscenter.org/go-Q308>

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ISIS-2 Pilot, 1987:

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Col J, Decoster O, Hanique G, Delligne B, Boland J, Pirenne B, Cheron Infusion of heparin conjunct to streptokinase accelerates reperfusion of acute myocardial infarction: results of a double blind randomized study (OSIRIS).6891 Circulation. 1992;86(suppl 1):259a.

2 acute coronary syndrome

2

Trial	Treatments	Patients	Trials design and methods
UFH vs control (on top of aspirin)			
Holdright , 1994 n=154/131 follow-up: hospital stay	intravenous heparin plus oral aspirin (150 mg once daily) versus aspirin alone 150 mg/d	unstable angina	Parallel groups single blind
RISC (heparin+aspirin vs ASP) , 1990 n=210/189 follow-up: 90 days	5 days of intermittent intravenous heparin + oral aspirin 75 mg/day versus oral aspirin 75 mg/day	unstable angina or non-Q-wave myocardial infarction	Parallel groups open
Theroux (heparin+ASP vs ASP) , 1988 n=122/121 follow-up: 3-9 days	aspirin 325 mg/d + heparin 1000 UI/hr IV versus aspirin 325 mg/d		double blind
UFH, warfarin vs control (on top of aspirin)			
ATACS (Cohen) , 1994 n=105/109 follow-up: 12 weeks	aspirin 162.5 mg daily plus heparin (activated partial thromboplastin time, two times control) followed by aspirin 162.5 mg daily plus warfarin (international normalized ratio, 2 to 3) for 12 weeks. versus aspirin alone (162.5 mg daily) for 12 weeks.	patients with unstable rest angina or non-Q-wave myocardial infarction with last episode of pain within 48 hours of randomization and who were nonprior aspirin users	Parallel groups single blind

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Trial	Treatments	Patients	Trials design and methods
Cohen (ATACS pilot) (heparin+aspirin vs asp) , 1990 n=37/32 follow-up: 12 weeks	aspirin (80 mg/day) plus heparin and then warfarin versus aspirin (325 mg/day)	Patients between 21 and 75 years with unstable angina or non-Q-wave MI with last episode of pain within 48 hours of screening.	Parallel groups open
UFH vs placebo			
RISC (heparin vs PBO) , 1990 n=198/199 follow-up: 1y (5,30 and 90 days)	5 days of intermittent intravenous heparin versus placebo	men with unstable coronary artery disease (unstable angina or non-Q-wave myocardial infarction)	Factorial plan Sweden
Theroux (heparin vs PBO) , 1988 n=118/118 follow-up: 3-9 days	heparin (1000 units per hour by intravenous infusion) versus placebo	patients with acute unstable angina pectoris	double blind
UFH + aspirin vs placebo			
RISC (ASP+ heparin vs PBO) , 1990 n=210/199 follow-up: 1y (5,30 and 90 days)	oral aspirin 75mg/d + intermittent IV heparin 10000UI/d followed by 7500 UI 6-hourly for 4 days versus placebo	men with unstable coronary artery disease (unstable angina or non-Q-wave myocardial infarction)	Sweden
Theroux (heparin+aspirin vs PBO) , 1988 n=122/118 follow-up: 3-9 days	heparin (1000 units per hour by intravenous infusion)+ aspirin (325 mg twice daily) versus aspirin (325 mg twice daily)	-	double blind
UFH vs placebo (on top of aspirin)			
Gurfinkel (UFH+aspirin vs aspirin) , 1995 n=70/73 follow-up: 5-7 days	aspirin plus UFH 5000 IU iv then 400 IU/kg body weight per day intravenously and titered by activated partial thromboplastin time versus aspirin 200 mg/day	patients greater than 21 years with unstable angina within 24 hours of randomization	Parallel groups double blind
UFH, warfarin vs aspirin			
Cohen (ATACS pilot) (heparin vs asp) , 1990 n=24/32 follow-up: 12 weeks	heparin followed by warfarin (without aspirin) versus aspirin 325 mg/day	Patients between 21 and 75 years with unstable angina or non-Q-wave MI with last episode of pain within 48 hours of screening	Parallel groups open

More details and results :

- antithrombotics for acute coronary syndrome in all type of patients at <http://www.trialresultscenter.org/go-Q24>
- heparin (UFH or LMWH) for acute coronary syndrome in all type of patients at <http://www.trialresultscenter.org/go-Q171>

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RISC (heparin+aspirin vs ASP), 1990:

Risk of myocardial infarction and death during treatment with low dose aspirin and intravenous heparin in men with unstable coronary artery disease. The RISC Group. Lancet 1990;336:827-30 [1976875]

Theroux (heparin+ASP vs ASP), 1988:

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3 DVT prophylaxis

Trial	Treatments	Patients	Trials design and methods
IPC + UFH vs control			
Killewich , 1997 n=NA follow-up:	low-dose heparin sodium therapy (5000 U every 12 hours) and calf-length intermittent mechanical compression devices versus no prophylaxis	patients undergoing aortic reconstruction for aneurysmal or occlusive disease	open
UFH vs control			
Handley , 1972 n=30/30 follow-up: 14 d	Heparin 5000 U IV (loading dose) followed by 20 000 U IV twice daily versus no heparin	Myocardial infarction	Parallel groups
Handley (low dose) , 1972 n=26/24 follow-up: 7 d	Heparin 5000 U IV and 7500 U SC as soon as possible, then 7500 U SC twice daily versus no heparin	Myocardial infarction	Parallel groups
Blech , 1981 n=50/50 follow-up: <=14 days	Unfractionated heparin, 5000 U trice daily, until mobilized versus control	Heart failure, chest infection	Parallel groups open
Gallus , 1973 n=38/40 follow-up: until mobile	heparin 5000 U SC 3 times daily versus no heparin	Myocardial infarction	Parallel groups
Cade n=NA follow-up: <=10 days	-	Age >40, complete bed rest, cardiac failure, obesity, previous VTE, cancer or recent surgery	Parallel groups
Warlow , 1973 n=73/73 follow-up: 10 d	Heparin sodium 5000 U SC twice dailyly versus no heparin	Myocardial infarction	Parallel groups double blind

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Trial	Treatments	Patients	Trials design and methods
Gardlund , 1996 n=5776/5917 follow-up: <=60 days	Unfractionated heparin, 5000 U twice daily, until hospital discharge, <=21 days versus control	Age >55, infectious disease Immobilization	Parallel groups open
Emerson , 1973 n=37/41 follow-up: NA	Heparin Low dose SCium9 versus no heparin	Myocardial infarction	Parallel groups
Zawilska , 1989 n=50/53 follow-up: 14-21 d	Heparin sodium 5000 IU SC twice daily for 14 to 21 days versus no heparin	patients with acute myocardial infarction, disqualified for thrombolytic treatment	Parallel groups
UFH vs no treatment			
Abernethy , 1974 n=63/62	UFH twice daily for 7 days versus no treatment	all other general surgery	
Abraham-Inpijn , 1979 n=20/20	UFH twice daily for 7 days versus no treatment	all other general surgery	
Allen , 1978 n=30/30	UFH twice daily for D versus no treatment	urologic surgery	
Bergqvist , 1979 n=84/77	UFH twice daily for 5 days versus no treatment	elective orthopedic surgery	
Bergqvist , 1979 n=32/23	UFH twice daily for 5 days versus no treatment	traumatic orthopedic surgery	
Bergqvist , 1980 n=53/58	UFH twice daily for 5 days versus no treatment	all other general surgery	
Caloghera , 1984 n=40/40	UFH 3 times daily for 7 days versus no treatment	all other general surgery	
Clarke-Pearson , 1983 n=95/105	UFH twice daily for 7 days versus no treatment	all other general surgery	
Coe , 1978 n=28/24	UFH twice daily for D versus no treatment	urologic surgery	

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Trial	Treatments	Patients	Trials design and methods
Dechavanne , 1974 n=29/29	UFH 3 times daily for 10 days versus no treatment	elective orthopedic surgery	
Dechavanne , 1975 n=20/21	UFH 3 times daily for 10 days versus no treatment	elective orthopedic surgery	
Galasko , 1976 n=50/50	UFH twice daily (duration unknown) versus no treatment	traumatic orthopedic surgery	
Gallus , 1973 n=23/23	UFH 3 times daily for A versus no treatment	traumatic orthopedic surgery	
Gallus , 1973 n=8/9	UFH twice daily for A days versus no treatment	elective orthopedic surgery	
Gallus , 1973 n=100/109	UFH 3 times daily for A versus no treatment	all other general surgery	
Gallus , 1976 n=408/412	UFH 3 times daily for 7 days versus no treatment	all other general surgery	
Gordon-Smith , 1972 n=NA	UFH twice daily for 5 days versus no treatment	all other general surgery	
Groote Schuur , 1979 n=323/323	UFH 3 times daily for 6 days versus no treatment	all other general surgery	
Gruber n=119/113	UFH 3 times daily for 7 days versus no treatment	All other general surgery	
Kakkar (IMT) n=2111/2137	UFH 3 times daily for 7 days versus no treatment	All other general surgery	
Kettunen , 1974 n=83/117	UFH 3 times daily for 7 days versus no treatment	all other general surgery	
Kopenhagen , 1982 n=162/50	UFH twice daily versus no treatment	all other general surgery	

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Trial	Treatments	Patients	Trials design and methods
Kraytman , 1976 n=21/28	UFH 3 times daily for 6 days versus no treatment	all other general surgery	
Kraytman , 1977 n=23/27	UFH 3 times daily for 6 days versus no treatment	all other general surgery	
Mannucci , 1976 n=23/24	UFH 3 times daily for 7 days versus no treatment	elective orthopedic surgery	
Marchelli , 1983 n=30/30	UFH 3 times daily for ? versus no treatment	all other general surgery	
Morris , 1974 n=36/36	UFH twice daily for 10 days versus no treatment	elective orthopedic surgery	
Morris , 1977 n=24/24	UFH 3 times daily for 10 days versus no treatment	traumatic orthopedic surgery	
Multiunit , 1974 n=128/128	UFH twice daily for 7 days versus no treatment	all other general surgery	
Nicolaides , 1972 n=128/122	UFH twice daily for 7 days versus no treatment	all other general surgery	
Plante , 1979 n=42/66	UFH twice daily for 8 days versus no treatment	all other general surgery	
Sagar , 1974 n=264/236	UFH twice daily for 5 days versus no treatment	all other general surgery	
Sebeseri , 1975 n=34/31	UFH twice daily for D versus no treatment	urologic surgery	
Spebar , 1981 n=24/19	UFH twice daily for 5-7 days versus no treatment	all other general surgery	
VTCSG , 1975 n=34/30	UFH twice daily for 10 days versus no treatment	elective orthopedic surgery	

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Trial	Treatments	Patients	Trials design and methods
Welin-Berger , 1982 n=20/20	UFH twice daily for 7 days versus no treatment	elective orthopedic surgery	
Ziemski , 1979 n=30/20	UFH 3 times daily for 2 days versus no treatment	all other general surgery	
Cerrato , 1978 n=50/50 follow-up: NA	Unfractionated heparin, 5000 IU subcutaneously 3 times a day, starting 2 hours preoperatively for +7 days versus no treatment	Elective neurosurgery for tumors, 40 years or older	
UFH vs placebo			
Abraham-Inpijn , 1975 n=12/13	UFH twice daily for 8 days versus placebo	elective orthopedic surgery	
Bejjani , 1983 n=17/17	UFH twice daily for 2 days versus placebo	urologic surgery	
Belch , 1980 n=24/25	UFH twice daily for 7 days versus placebo	all other general surgery	
Pitt , 1980 n=36/37 follow-up: 2-3 d	Heparin 500 U IV twice daily versus placebo	patients with acute myocardial infarction of less than 48 hours duration	Parallel groups open
Covey , 1975 n=53/52	UFH twice daily for 8 days versus placebo	all other general surgery	
Hampson , 1974 n=48/52	UFH 3 times daily for 7- 10 days versus placebo	elective orthopedic surgery	
Hedlund , 1979 n=30/29	UFH 3 times daily for 5 days versus placebo	urologic surgery	
Jourdan , 1984 n=21/21	UFH twice daily for 5 days versus placebo	all other general surgery	
Kakkar , 1972 n=39/39	UFH twice daily for 7 days versus placebo	All other general surgery	

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Trial	Treatments	Patients	Trials design and methods
Kiil , 1978 n=650/663	UFH twice daily for 7 days versus placebo	All other general surgery	
Kraytman , 1977 n=25/22	UFH 3 times daily for 6 days versus placebo	all other general surgery	
Kruse-Blinkenberg , 1980 n=29/33	UFH 3 times daily for 8 days versus placebo	all other general surgery	
Kutnowski , 1977 n=6/13	UFH 3 times daily for 6 days versus placebo	urologic surgery	
Lahnborg , 1975 n=58/54	UFH twice daily for 5 days versus placebo	all other general surgery	
Lahnborg , 1976 n=24/24	UFH twice daily for 5 days versus placebo	all other general surgery	
Lahnborg , 1980 n=70/69	UFH twice daily for 10 days versus placebo	traumatic orthopedic surgery	
Lawrence , 1977 n=133/129	UFH twice daily for 5 days versus placebo	all other general surgery	
Lowe , 1981 n=51/49	UFH twice daily for 16 days versus placebo	elective orthopedic surgery	
Marchetti , 1982 n=16/13	UFH 3 times daily versus placebo	all other general surgery	
Moskovitz , 1978 n=29/23	UFH 3 times daily for 7 days versus placebo	traumatic orthopedic surgery	
Moskovitz , 1978 n=35/32	UFH 3 times daily for 7 days versus placebo	elective orthopedic surgery	
Muiticentre , 1984 n=222/108	UFH twice daily for 5-7 days versus placebo	all other general surgery	

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Trial	Treatments	Patients	Trials design and methods
Ribaudo , 1975 n=75/75	UFH twice daily for A days versus placebo	all other general surgery	
Roberts , 1975 n=39/45	UFH twice daily for 7 days versus placebo	all other general surgery	
Strand , 1975 n=55/55	UFH twice daily for 7 days versus placebo	all other general surgery	
Svend-Hansen , 1981 n=65/65	UFH 3 times daily for 14 days versus placebo	traumatic orthopedic surgery	
Taberner , 1978 n=50/50	UFH twice daily for 7 days versus placebo	all other general surgery	
Torngren n=47/62	UFH twice daily for 6-8 days versus placebo	all other general surgery	
Torngren , 1978 n=10/10	UFH 3 times daily for 6-8 days versus placebo	all other general surgery	
Torngren , 1978 n=66/62	UFH twice daily for 6-8 days versus placebo	all other general surgery	
Vandendris , 1980 n=32/33	UFH 3 times daily for 6 days versus placebo	urologic surgery	
Williams , 1978 n=106/106	UFH twice daily for 14 days versus placebo	elective orthopedic surgery	
Wu , 1977 n=44/44	UFH twice daily for 7 days versus placebo	all other general surgery	
Xabregas , 1977 n=27/26	UFH twice daily for 14 days versus placebo	traumatic orthopedic surgery	
IPC + UFH vs UFH			

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Trial	Treatments	Patients	Trials design and methods
Ramos , 1996 n=1355/1196 follow-up:	prophylactic regimen of Pneumatic compression stocking and subcutaneous heparin versus with 5,000 U of subcutaneous heparin every 12 h	cardiac surgery	Parallel groups open
Siragusa (H) , 1994 n=35/35 follow-up:	-	-	Parallel groups open
UFH vs aspirin			
Loew , 1977 n=60/67	UFH twice daily for 7 days versus aspirin	all other general surgery	
Vinazzer , 1980 n=402/404	UFH twice daily for A days versus aspirin	all other general surgery	
UFH vs DHE			
Muiticentre , 1984 n=226/110	UFH twice daily for 5-7 days versus DHE	all other general surgery	
Muiticentre 53,S4 , 1984 n=214/110	UFH twice daily for 5-7 days versus DHE	all other general surgery	
UFH vs oral anticoagulant			
van Geloven , 1977 n=74/80	UFH twice daily for 4 days versus Oral anticoagulant	all other general surgery	
out of hospital UFH vs standard prophylaxis			
Manganelli , 1998 n=79/80	65279;in hospital thromboprophylaxis followed by out of hospital UFH 5000 IU three times a day for a total duration of 30 days versus UFH 5000 IU three times a day for 15 days	THR	
GCS + UFH vs UFH			

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Trial	Treatments	Patients	Trials design and methods
*Rasmussen (adj) , 1988 n=NA follow-up:	subcutaneous heparin and graduated compression stockings to the knee (TED stockings), versus subcutaneous heparin	patients (age more than 40 yrs) admitted for major abdominal surgery	Parallel groups open
Torngren , 1980 n=NA	-	-	
Wille-Jorgensen , 1985 n=86/90 follow-up:	low-dose heparin treatment with graded compression stockings versus low-dose heparin treatment (5000 units twice daily subcutaneously)	patients undergoing Abdominal surgery	parallel groups
Wille-Jorgensen , 1991 n=83/83 follow-up:	low dose heparin and graded compression stockings versus low dose heparin	patients undergoing Abdominal surgery	parallel groups

More details and results :

- antithrombotics for DVT prophylaxis in orthopedic surgery at <http://www.trialresultscenter.org/go-Q37>
- antithrombotics for DVT prophylaxis in medical patients at <http://www.trialresultscenter.org/go-Q87>
- antithrombotics for DVT prophylaxis in general surgery at <http://www.trialresultscenter.org/go-Q92>
- antithrombotics for DVT prophylaxis in urologic surgery at <http://www.trialresultscenter.org/go-Q93>
- antithrombotics for DVT prophylaxis in neurosurgery at <http://www.trialresultscenter.org/go-Q99>
- graduated compression stockings for DVT prophylaxis in all type of patients at <http://www.trialresultscenter.org/go-Q158>
- antiplatelets drug for DVT prophylaxis in orthopedic surgery at <http://www.trialresultscenter.org/go-Q186>
- UFH for DVT prophylaxis in general surgery at <http://www.trialresultscenter.org/go-Q191>
- UFH for DVT prophylaxis in all type of surgery at <http://www.trialresultscenter.org/go-Q192>
- UFH for DVT prophylaxis in urologic surgery at <http://www.trialresultscenter.org/go-Q194>
- heparin (UFH or LMWH) for DVT prophylaxis in neurosurgery at <http://www.trialresultscenter.org/go-Q197>
- LMWH for DVT prophylaxis in neurosurgery at <http://www.trialresultscenter.org/go-Q198>

- mechanical devices for thromboprophylaxis for DVT prophylaxis in all type of patients at <http://www.trialresultscenter.org/go-Q402>
- antithrombotics for DVT prophylaxis in patients with myocardial infarction at <http://www.trialresultscenter.org/go-Q406>
- mechanical devices for thromboprophylaxis for DVT prophylaxis in general non orthopaedic surgery at <http://www.trialresultscenter.org/go-Q466>

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4 superficial thrombophlebitis

Trial	Treatments	Patients	Trials design and methods
Prophylactic UFH vs no treatment			
Belcaro (prophylactic UFH vs no) , 1999 n=NA	-	-	

More details and results :

- antithrombotics for superficial thrombophlebitis in superficial thrombophlebitis of the leg at <http://www.trialresultscenter.org/go-Q218>

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