

# Clinical trials of CAP

TrialResults-center [www.trialresultscenter.org](http://www.trialresultscenter.org)

## 1 acute myocardial infarction

Trial	Treatments	Patients	Trials design and methods
<b>captopril vs placebo</b>			
<b>Bussmann , 1992</b> n=22/24 follow-up: 48h	slow intravenous bolus injection of 2.5 or 5.0 mg captopril followed by a continuous infusion of 1.5-2.0 mg/h for a period of 48 hours versus placebo	patients with acute myocardial infarction	Parallel groups double blind
<b>SAVE , 1992</b> n=1115/1116 follow-up: 3.5y	Captopril 125 mg initial dose, up to 2550 mg three times daily versus placebo	patient within 316 days of a MI, LVEF <40%	Parallel groups double blind
<b>CATS , 1996</b> n=149/149 follow-up: 1 year	captopril 25 mg three times a day versus placebo	patients with a first anterior myocardial infarction treated with intravenous streptokinase within 6h of onset of symptoms	Parallel groups double blind The Netherlands
<b>CCS-1 , 1995</b> n=13634 follow-up: 1 month	captopril 6.25 mg initial dose, 12.5 mg 2 h later, and then 12.5 mg three times daily for 28 days versus placebo	Acute MI <36h of MI	Parallel groups double blind China
<b>Di Pasquale , 1997</b> n=31/30 follow-up: 12h	captopril first dose 2-4 h after starting thrombolysis (the dose was then increased up to 25 mg every 8 h) versus placebo	patients hospitalized for suspected anterior AMI within 4 h from the onset of symptoms suitable for thrombolysis	Parallel groups double blind italy
<b>Pfeffer , 1988</b> n=38 follow-up: 1 year	Captopril versus placebo	patient within 11-31 days after MI, LVEF ≤45% , not in overt congestive heart failure	Parallel groups double blind
<b>Di Pasquale , 1994</b> n=188/183 follow-up: 2h	captopril, 6.25 mg, orally 15 min before thrombolysis versus placebo before thrombolysis	patients with acute myocardial infarction , hospitalized within 4 h of the onset of symptoms	Parallel groups double blind Italy

continued...

<b>Trial</b>	<b>Treatments</b>	<b>Patients</b>	<b>Trials design and methods</b>
Sogaard , 1994 n=58 follow-up: 6 months	Captopril 50mg daily versus placebo	patients with left ventricular (LV) dysfunction on day 7 after MI	Parallel groups double blind
ECCE , 1997 n=104/104 follow-up: 1 month	captopril titrated dose in order to preserve their blood pressure versus placebo	patients with acute myocardial infarction	Parallel groups double blind
Sharpe , 1988 n=60 follow-up: 1 year	Captopril 25 mg thrice a day versus placebo	patients with symptomless left ventricular dysfunction (LVEF<45% ) 1 week after a myocardial infarction without clinical evidence of heart failure	Parallel groups double blind
Mortarino , 1990 n=10/11 follow-up: 2 months	Captopril 25 mg bid versus placebo	patient with mild congestive heart failure after recent MI	Parallel groups double blind
French , 1999 n=243/250 follow-up: 1 year	captopril 6.25 mg, increasing to 50 mg t.d.s. versus placebo	patients aged <or = 75 years with first infarctions, presenting within 4 h of symptom onset	Parallel groups double blind New Zealand
Galcera , 1993 n=21/22 follow-up: 14 days	captopril versus placebo	patients with a first acute myocardial infarction and a pulmonary capillary pressure equal or above 17 mmHg	Parallel groups double blind
Hargreaves , 1992 n=36/36 follow-up: 28 days	12.5 mg of captopril three times daily versus placebo	patients with acute myocardial infarction (systolic blood pressure >90 mm Hg) within 24 hours of the start of pain	Parallel groups double blind UK
ISIS-4 , 1995 n=29028/29022 follow-up: 1 month	captopril 6.25mg twice daily initially titrated up to 50 mg twice daily (for 1 month) versus placebo	Acute MI <24h of MI, no cardiogenic shock or persistent severe hypotension	Factorial plan double blind 31 countries
Nabel , 1991 n=20/18 follow-up: 3 months	intravenous followed by oral captopril versus placebo	patients with myocardial infarction	Parallel groups double blind
Ray , 1993 n=99 follow-up: 1 year	captopril 25 mg three times a day versus placebo	haemodynamically stable patients with acute myocardial infarction, selected on clinical grounds as being at risk of late ventricular dilatation	Parallel groups double blind Glasgow
Sharpe , 1991 n=100 follow-up: 3 months	captopril 50 mg twice daily versus placebo	patients with Q wave myocardial infarction, but without clinical heart failure 24-48h after onset of symptoms	Parallel groups double blind

continued...

Trial	Treatments	Patients	Trials design and methods
<b>captopril or enalapril vs placebo</b>			
<b>PRACTICAL (captopril) , 1994</b> n=150/75 follow-up: 1 year	captopril 25 mg three times daily or enalapril 5 mg three times daily versus placebo	patients with acute myocardial infarction within 24 hours of onset	Parallel groups double blind

More details and results :

- angiotensin-Converting Enzyme Inhibitors for acute myocardial infarction in systematic early treatment (with or without sign of HF) at <http://www.trialresultscenter.org/go-Q145>
- angiotensin-Converting Enzyme Inhibitors for acute myocardial infarction in patients with or without HF at <http://www.trialresultscenter.org/go-Q146>
- angiotensin-Converting Enzyme Inhibitors for acute myocardial infarction in patients with left ventricular dysfunction after MI at <http://www.trialresultscenter.org/go-Q147>

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Foy SG, Crozier IG, Turner JG, Richards AM, Frampton CM, Nicholls MG, Ikram H Comparison of enalapril versus captopril on left ventricular function and survival three months after acute myocardial infarction (the "PRACTICAL" study). Am J Cardiol 1994;73:1180-6 [8203335]

## 2 hypertension

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Trial	Treatments	Patients	Trials design and methods
<b>captopril or atenolol vs control</b>			
UKPDS 38 , 1998 n=758/390 follow-up: 8.4y (median)	tight control of blood pressure aiming at a BP <150/85 (with the use of captopril or atenolol as main treatment, other treatment were added if the control criteria were not met) versus less tight control aiming at a blood pressure of <180/105 (avoiding treatment with ACE inhibitors or beta-blockers)	hypertensive patients with type 2 diabetes	Parallel groups open UK
<b>captopril vs atenolol</b>			
UKPDS 39 , 1998 n=400/358 follow-up: ND	captopril 25 mg/d aiming at a BP <150/85 versus atenolol 50mg/d aiming at a BP <150/85	hypertensive patients with type 2 diabetes	Parallel groups open UK
<b>Valsartan + captopril vs Captopril</b>			
VALIANT/Val+Cap , 2003 n=4885/4909 follow-up: 2.1 y	Valsartan + captopril versus Captopril	patients with myocardial infarction complicated by left ventricular systolic dysfunction, heart failure, or both	Parallel groups double-blind

continued...

Trial	Treatments	Patients	Trials design and methods
<b>captopril vs diuretic and/or beta-blockers</b>			
<b>CAPP (diabetic subgroup) , 1999</b> n=309/263 follow-up: 6.1 year	Captopril initial dose of 50 mg daily given in one or two doses versus thiazide diuretic or beta-blocker	Patients aged 25-66 years with a measured diastolic blood pressure of 100 mm Hg or more on two occasions; subgroup of diabetic patients	Parallel groups open with blinded assessment Sweden, Finland
<b>captopril vs diuretic or beta-blocker</b>			
<b>CAPPP , 1999</b> n=5492/5493 follow-up: 6.1 y	captopril 50mg/d versus beta-blocker (not specified) or diuretic (not specified)	Patients aged 25-66 years with a measured diastolic bloodpressure of 100 mm Hg or more on two occasions	Parallel groups Open Sweden and Finland
<b>UKPDS-HDS , 1998</b> n=400/358 follow-up: 84 y	captopril started at 25mg twice daily up to 50 mg twice daily (target blood pressure of <150/<85 mmHG) versus atenolol started at 50mg daily up to 100mg if required(target blood pressure of <150/<85 mmHG)	HBP+DM	Parallel groups Open England, Scotland, and Northern Ireland

More details and results :

- anti hypertensive agents for hypertension in diabetic patients at <http://www.trialresultscenter.org/go-Q10>
- anti hypertensive agents for hypertension in all type of patient at <http://www.trialresultscenter.org/go-Q13>
- angiotensin-receptor blockers for hypertension in all diseases requiring ACEi (HF, CHD, HT,...) at <http://www.trialresultscenter.org/go-Q125>

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## 3 heart failure

Trial	Treatments	Patients	Trials design and methods
<b>SAVE , 1992</b> n=1115/1116 follow-up: 3.5y	Captopril 125 mg initial dose, up to 2550 mg three times daily versus placebo	patient within 316 days of a MI, LVEF <40%	Parallel groups double blind

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<b>Trial</b>	<b>Treatments</b>	<b>Patients</b>	<b>Trials design and methods</b>
Barabino , 1991 n=52/49 follow-up: 6 months	captopril (37.5-75 mg/day) versus placebo	old patients (>75y) under treatment with digitalis and/or diuretics	double blind
Pfeffer , 1988 n=38 follow-up: 1 year	Captopril versus placebo	patient within 11-31 days after MI, LVEF<=45% , not in overt congestive heart failure	Parallel groups double blind
Bussmann , 1987 n=12/11 follow-up: 6 months	captopril versus placebo	patients with severe heart failure (NYHA classes III and IV) on treatment with digitalis and diuretics	Parallel groups double blind
Sogaard , 1994 n=58 follow-up: 6 months	Captopril 50mg daily versus placebo	patients with left ventricular (LV) dysfunction on day 7 after MI	Parallel groups double blind
Captopril Digoxin Multicenter Research Group , 1988 n=104/100 follow-up:	captopril versus placebo	patients with mild to moderate heart failure	double blind
Sharpe , 1988 n=60 follow-up: 1 year	Captopril 25 mg thrice a day versus placebo	patients with symptomless left ventricular dysfunction (LVEF<45% ) 1 week after a myocardial infarction without clinical evidence of heart failure	Parallel groups double blind
Mortarino , 1990 n=10/11 follow-up: 2 months	Captopril 25 mg bid versus placebo	patient with mild congestive heart failure after recent MI	Parallel groups double blind
Cilazapril-Captopril Multi-centre Group (capt vs pbo) , 1995 n=108/114 follow-up: 12 weeks	cilazapril 1-2.5 mg once daily versus placebo	patients with chronic heart failure (New York Heart Association classes II-IV)	Parallel groups double blind
CMRG , 1983 n=50/42 follow-up: 12 weeks	captopril versus placebo	patients with heart failure refractory to digitalis and diuretic therapy	double blind
Magnani , 1986 n=48/46 follow-up: 1 year	captopril 25 mg t.i.d. versus placebo	patients on digitalis treatment for chronic congestive heart failure (NYHA class II-III)	double blind
Magnani , 1990 n=16/16 follow-up:	captopril versus placebo	patients with congestive heart failure	Cross over double blind

continued...

Trial	Treatments	Patients	Trials design and methods
Munich MHFT (Kleber) , 1992 n=83/87 follow-up: 2.7y (median)	captopril 25 mg twice a day versus placebo	patients with congestive heart failure New York Heart Association (NYHA) functional class I-III on standard treatment	Parallel groups Double blind Germany
<b>spironolactone+captopril vs captopril</b>			
Han , 1994 n=19/16 follow-up: 4 weeks	captopril plus spironolactone versus captopril alone	patients with refractory CHF and New York Heart Association functional class IV without renal dysfunction, hypotension and hyperkalemia	open China
<b>captopril vs enalapril</b>			
packer , 1986 n=21/21 follow-up: 1-3 months	captopril 150 mg/d versus enalapril 40mg/d	patient with severe chronic heart failure	Parallel groups open

More details and results :

- angiotensin-Converting Enzyme Inhibitors for heart failure in all type of heart failure at <http://www.trialresultscenter.org/go-Q43>
- angiotensin-Converting Enzyme Inhibitors for heart failure in elderly at <http://www.trialresultscenter.org/go-Q71>
- diuretics for heart failure in all type of patients at <http://www.trialresultscenter.org/go-Q75>
- angiotensin-Converting Enzyme Inhibitors for heart failure in MI patients with LV dysfunction without clinical evidence of HF at <http://www.trialresultscenter.org/go-Q238>
- aldosterone blockade for heart failure in all type of patients at <http://www.trialresultscenter.org/go-Q488>

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## 4 diabetes type 2

Trial	Treatments	Patients	Trials design and methods
<b>captopril or atenolol vs control</b>			
UKPDS 38 , 1998 n=758/390 follow-up: 8.4y (median)	tight control of blood pressure aiming at a BP <150/85 (with the use of captopril or atenolol as main treatment, other treatment were added if the control criteria were not met) versus less tight control aiming at a blood pressure of <180/105 (avoiding treatment with ACE inhibitors or beta-blockers)	hypertensive patients with type 2 diabetes	Parallel groups open UK
<b>captopril vs atenolol</b>			
UKPDS 39 , 1998 n=400/358 follow-up: ND	captopril 25 mg/d aiming at a BP <150/85 versus atenolol 50mg/d aiming at a BP <150/85	hypertensive patients with type 2 diabetes	Parallel groups open UK
<b>captopril vs diuretic and/or beta-blockers</b>			
CAPP (diabetic subgroup) , 1999 n=309/263 follow-up: 6.1 year	Captopril initial dose of 50 mg daily given in one or two doses versus thiazide diuretic or beta-blocker	Patients aged 25-66 years with a measured diastolic blood pressure of 100 mm Hg or more on two occasions; subgroup of diabetic patients	Parallel groups open with blinded assessment Sweden, Finland

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More details and results :

- anti hypertensive agents for diabetes type 2 in patients with hypertension at <http://www.trialresultscenter.org/go-Q83>
- anti hypertensive agents for diabetes type 2 in patients with or without hypertension at <http://www.trialresultscenter.org/go-Q414>
- angiotensin renin system blockade for diabetes type 2 in all type of patients at <http://www.trialresultscenter.org/go-Q438>

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Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 38. UK Prospective Diabetes Study Group. BMJ 1998;317:703-13 [[9732337](#)]

### UKPDS 39, 1998:

Tight blood pressure control and risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 38. UK Prospective Diabetes Study Group. *BMJ* 1998;317:703-13 [[9732337](#)]

Efficacy of atenolol and captopril in reducing risk of macrovascular and microvascular complications in type 2 diabetes: UKPDS 39. UK Prospective Diabetes Study Group. *BMJ* 1998;317:713-20 [[9732338](#)]

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