

# Clinical trials of lisinopril

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## 1 acute myocardial infarction

Trial	Treatments	Patients	Trials design and methods
<b>lisinopril vs placebo</b>			
<b>GISSI 3 , 1994</b> n=9435/9460 follow-up: 6 months	lisinopril (5 mg initial dose and then 10 mg daily) for 42 days versus open control	Acute MI <24h of MI	Factorial plan open Italy

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>

## References

### GISSI 3, 1994:

GISSI-3: effects of lisinopril and transdermal glyceryl trinitrate singly and together on 6-week mortality and ventricular function after acute myocardial infarction. Gruppo Italiano per lo Studio della Sopravvivenza nell'infarto Miocardico. Lancet 1994 May 7;343:1115-22 [[7910229](#)]

## 2 hypertension

Trial	Treatments	Patients	Trials design and methods
<b>lisinopril vs amlodipine</b>			
<b>ALLHAT (ACEI vs amlodipine) , 2002</b> n=9054/9048 follow-up: 4.9 y	Lisinopril 10 to 40 mg/d versus amlodipine 2.5 to 10 mg/d	participants aged 55 years or older with hypertension and at least 1 other CHD risk fact	Parallel groups Double blind US
<b>lisinopril vs chlorthalidone</b>			

continued...

Trial	Treatments	Patients	Trials design and methods
ALLHAT (lisi vs chlor, diabetic subgroup) , 2002 n=2431/4498 follow-up: 4.9 y	lisinopril 10 to 40 mg/d versus chlorthalidone 12.5 to 25 mg/d	diabetic (subgroup) participants aged 55 years or older with hypertension	Parallel groups double-blind
<b>lisinopril vs diuretics</b>			
ALLHAT (ACEI vs chlorthalidone) , 2002 n=9054/15255 follow-up: 49 y	lisinopril 10 to 40 mg/d versus chlorthalidone 12.5 to 25 mg/d	participants aged 55 years or older with hypertension and at least 1 other CHD risk factor	Parallel groups Double blind US

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>
- anti hypertensive agents for hypertension in patients with additional risk factor at <http://www.trialresultscenter.org/go-Q686>

## References

### ALLHAT (ACEI vs amlodipine), 2002:

Major outcomes in high-risk hypertensive patients randomized to angiotensin-converting enzyme inhibitor or calcium channel blocker vs diuretic: The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). JAMA 2002;288:2981-97 [12479763]

Norris K, Bourgoigne J, Gassman J, Hebert L, Middleton J, Phillips RA, Randall O, Rostand S, Sherer S, Toto RD, Wright JT Jr, Wang X, Greene T, Appel LJ, Lewis J Cardiovascular outcomes in the African American Study of Kidney Disease and Hypertension (AASK) Trial. Am J Kidney Dis 2006;48:739-51 [17059993] [10.1053/j.ajkd.2006.08.004](https://doi.org/10.1053/j.ajkd.2006.08.004)

### ALLHAT (lisi vs chlor, diabetic subgroup), 2002:

Major outcomes in high-risk hypertensive patients randomized to angiotensin-converting enzyme inhibitor or calcium channel blocker vs diuretic: The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). JAMA 2002;288:2981-97 [12479763]

Whelton PK, Barzilay J, Cushman WC, Davis BR, Iamathi E, Kostis JB, Leenen FH, Louis GT, Margolis KL, Mathis DE, Moloo J, Nwachuku C, Panebianco D, Parish DC, Pressel S, Simmons DL, Thadani U Clinical outcomes in antihypertensive treatment of type 2 diabetes, impaired fasting glucose concentration, and normoglycemia: Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). Arch Intern Med 2005;165:1401-9 [15983290] [10.1001/archinte.165.12.1401](https://doi.org/10.1001/archinte.165.12.1401)

### ALLHAT (ACEI vs chlorthalidone), 2002:

Major outcomes in high-risk hypertensive patients randomized to angiotensin-converting enzyme inhibitor or calcium channel blocker vs diuretic: The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). JAMA 2002;288:2981-97 [12479763]

## 3 heart failure

Trial	Treatments	Patients	Trials design and methods
<b>lisinopril vs control</b>			
Giles , 1990 n=130/63 follow-up:	-	-	
Rucinska-c (lisinopril) <i>unpublished</i> n=28/30 follow-up:	-	-	
Zwehl , 1990 n=183/92 follow-up:	-	-	
<b>lisinopril vs placebo</b>			
Gilbert , 1993 n=14/14 follow-up: 12 weeks	lisinopril versus placebo	subjects with heart failure	Cross over double blind
International Study Group (Lewis) , 1989 n=87/43 follow-up: 12 weeks	lisinopril titrated up to 10mg daily versus placebo	patients with congestive heart failure NYHA II-IV	Parallel groups double blind New Zealand
<b>lisinopril vs lisinopril</b>			
ATLAS , 1999 n=1596/1568 follow-up: 39 to 58 months	lisinopril low dose 2.5-5 mg daily versus lisinopril high dose 32.5-35 mg daily	patients with New York Heart Association class II to IV heart failure and an ejection fraction $\leq 30\%$	Parallel groups double blind 19 countries

More details and results :

- angiotensin-Converting Enzyme Inhibitors for heart failure in all type of heart failure at <http://www.trialresultscenter.org/go-Q43>

## References

### Giles, 1990:

Giles TD, for Lisinopril Chronic Heart Failure Group Lisinopril treatment of congestive heart failure-results of a placebo controlled trial. *Circulation*. 1990;82(suppl 4):III-323. Abstract

### Rucinska-c (lisinopril), 1000:

unpublished

### Zwehl, 1990:

Zwehl W, Rucinska E, for Lisinopril Chronic Heart Failure Investigators Long-term effects of lisinopril in patients with chronic heart failure: a multicenter, placebo-controlled trial In: Nicholls MG, ed. *A Focus on the Clinical Effects of a Long Acting ACE-Inhibitors/Heart Failure*. New York, NY: Raven Press; 1990:31-40

### Gilbert, 1993:

Gilbert EM, Sandoval A, Larrabee P, Renlund DG, O'Connell JB, Bristow MR Lisinopril lowers cardiac adrenergic drive and increases beta-receptor density in the failing human heart. *Circulation* 1993 Aug;88:472-80 [8393389]

### International Study Group (Lewis), 1989:

Lewis GR Comparison of lisinopril versus placebo for congestive heart failure. *Am J Cardiol* 1989 Feb 21;63:12D-16D [2537560]

Lewis GR Lisinopril versus placebo in older congestive heart failure patients. *Am J Med* 1988 Sep 23;85:48-54 [2844088]

Chalmers JP, West MJ, Cyran J, De La Torre D, Englert M, Kramar M, Lewis GR, Maranhao MF, Myburgh DP, Schuster P Placebo-controlled study of lisinopril in congestive heart failure: a multicentre study. *J Cardiovasc Pharmacol* 1987;9 Suppl 3:S89-97 [2442560]

### ATLAS, 1999:

Packer M, Poole-Wilson PA, Armstrong PW, Cleland JG, Horowitz JD, Massie BM, Rydn L, Thygesen K, Uretsky BF Comparative effects of low and high doses of the angiotensin-converting enzyme inhibitor, lisinopril, on morbidity and mortality in chronic heart failure. ATLAS Study Group. *Circulation* 1999 Dec 7;100:2312-8 [10587334]

## 4 atrial fibrillation

Trial	Treatments	Patients	Trials design and methods
<b>lisinopril vs placebo</b>			
Van den Burg , 1995 n=7/11 follow-up: 84 days	lisinopril versus placebo	atrial fibrillation, congestive heart failure	Parallel groups double blind
GISSI-3 (AF ancillary study) , 2003 n=8902/8846 follow-up: 0.5 y	lisinopril versus placebo	Postmyocardial infarction	

More details and results :

- prevention for atrial fibrillation in patient with history of atrial fibrillation at <http://www.trialresultscenter.org/go-Q328>
- prevention for atrial fibrillation in patients without history of AF (primary prevention) at <http://www.trialresultscenter.org/go-Q331>

## References

### Van den Burg, 1995:

Van Den Berg MP, Crijns HJ, Van Veldhuisen DJ, Griep N, De Kam PJ, Lie KI Effects of lisinopril in patients with heart failure and chronic atrial fibrillation. *J Card Fail* 1995;1:355-63 [12836710]

### GISSI-3 (AF ancillary study), 2003:

Pizzetti F, Turazza FM, Franzosi MG, Barlera S, Ledda A, Maggioni AP, Santoro L, Tognoni G Incidence and prognostic significance of atrial fibrillation in acute myocardial infarction: the GISSI-3 data. Heart 2001;86:527-32 [11602545]

## 5 diabetes type 2

Trial	Treatments	Patients	Trials design and methods
<b>lisinopril vs chlorthalidone</b>			
<b>ALLHAT (lisi vs chlor, diabetic subgroup) , 2002</b> n=2431/4498 follow-up: 4.9 y	lisinopril 10 to 40 mg/d versus chlorthalidone 12.5 to 25 mg/d	diabetic (subgroup) participants aged 55 years or older with hypertension	Parallel groups double-blind

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>

### References

#### ALLHAT (lisi vs chlor, diabetic subgroup), 2002:

Major outcomes in high-risk hypertensive patients randomized to angiotensin-converting enzyme inhibitor or calcium channel blocker vs diuretic: The Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). JAMA 2002;288:2981-97 [12479763]

Whelton PK, Barzilay J, Cushman WC, Davis BR, Iamathi E, Kostis JB, Leenen FH, Louis GT, Margolis KL, Mathis DE, Moloo J, Nwachuku C, Panebianco D, Parish DC, Pressel S, Simmons DL, Thadani U Clinical outcomes in antihypertensive treatment of type 2 diabetes, impaired fasting glucose concentration, and normoglycemia: Antihypertensive and Lipid-Lowering Treatment to Prevent Heart Attack Trial (ALLHAT). Arch Intern Med 2005;165:1401-9 [15983290] 10.1001/archinte.165.12.1401

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