

# Clinical trials of atorvastatin high dose

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

## 1 acute myocardial infarction

Trial	Treatments	Patients	Trials design and methods
<b>atorvastatin high dose vs pravastatin</b>			
<a href="#">PROVE-IT , 2004</a> n=2099/2063 follow-up: 2 years	atorvastatin 80 mg daily versus Pravastatin 40 mg	acute myocardial infarction (with or without electrocardiographic evidence of ST-segment elevation) or highrisk unstable angina) in the preceding 10 days	Parallel groups double blind 8 countries

More details and results :

- cholesterol lowering intervention for acute myocardial infarction in all type of patients at <http://www.trialresultscenter.org/go-Q162>

## References

### PROVE-IT, 2004:

Cannon CP, Braunwald E, McCabe CH, Rader DJ, Rouleau JL, Belder R, Joyal SV, Hill KA, Pfeffer MA, Skene AM Intensive versus moderate lipid lowering with statins after acute coronary syndromes. N Engl J Med 2004;350:1495-504 [[15007110](#)]

Ray KK, Cannon CP, McCabe CH, Cairns R, Tonkin AM, Sacks FM, Jackson G, Braunwald E Early and late benefits of high-dose atorvastatin in patients with acute coronary syndromes: results from the PROVE IT-TIMI 22 trial. J Am Coll Cardiol 2005;46:1405-10 [[16226162](#)]

Rouleau J Improved outcome after acute coronary syndromes with an intensive versus standard lipid-lowering regimen: results from the Pravastatin or Atorvastatin Evaluation and Infection Therapy-Thrombolysis in Myocardial Infarction 22 (PROVE IT-TIMI 22) trial. Am J Med 2005;118 Suppl 12A:28-35 [[16356805](#)]

## 2 post myocardial infarction

Trial	Treatments	Patients	Trials design and methods
<b>atorvastatin high dose vs atorvastatin</b>			
<a href="#">TNT , 2005</a> [NCT00327691] n=4995/5006 follow-up: 4.9 years	80 mg of atorvastatin daily versus 10 mg of atorvastatin daily	Chronic coronary artery disease LDL cholesterol <3.4 mmol/L	Parallel groups double blind 14 countries

continued...

Trial	Treatments	Patients	Trials design and methods
<b>atorvastatin high dose vs lovastatin</b>			
Vascular basis , 2005 n=197/103 follow-up: 1 year	atorvastatin (80 mg) with or without vitamin C and E versus low dose lovastatin (5 mg)	Chronic coronary artery disease	Parallel groups double blind
<b>atorvastatin high dose vs pravastatin</b>			
REVERSAL , 2004 n=327/327 follow-up: 1.5 years	atorvastatin 80 mg daily versus Pravastatin(40 mg)	Chronic coronary artery disease	Parallel groups double blind
SAGE , 2007 n=446/445 follow-up: 1 years	atorvastatin 80 mg daily versus pravastatin(40 mg)	Chronic coronary artery disease	Parallel groups double blind
<b>atorvastatin high dose vs simvastatin</b>			
IDEAL , 2005 [NCT00159835] n=4439/4449 follow-up: 4.8 years	atorvastatin 80mg daily versus simvastatine 20mg/j	Men and women aged 80 years or younger with a history of a definite myocardial infarction and who qualified for statin therapy according to national guidelines	Parallel groups open Denmark, Finland, Iceland, Netherlands, Norway, Sweden

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More details and results :

- cholesterol lowering intervention for post myocardial infarction in all type of patients at <http://www.trialresultscenter.org/go-Q45>

## References

### TNT, 2005:

LaRosa JC, Grundy SM, Waters DD, Shear C, Barter P, Fruchart JC, Gotto AM, Greten H, Kastelein JJ, Shepherd J, Wenger NK Intensive lipid lowering with atorvastatin in patients with stable coronary disease. N Engl J Med 2005 Apr 7;352:1425-35 [15755765]

Wenger NK, Lewis SJ, Welty FK, Herrington DM, Bittner V Beneficial effects of aggressive low-density lipoprotein cholesterol lowering in women with stable coronary heart disease in the Treating to New Targets (TNT) study. Heart 2008;94:434-9 [18070940]

Johnson C, Waters DD, DeMicco DA, Breazna A, Bittner V, Greten H, Grundy SM, LaRosa JC Comparison of effectiveness of atorvastatin 10 mg versus 80 mg in reducing major cardiovascular events and repeat revascularization in patients with previous percutaneous coronary intervention (post hoc analysis of the Treating to New Targets [TNT] Study). Am J Cardiol 2008;102:1312-7 [18993147]

Waters DD, Guyton JR, Herrington DM, McGowan MP, Wenger NK, Shear C Treating to New Targets (TNT) Study: does lowering low-density lipoprotein cholesterol levels below currently recommended guidelines yield incremental clinical benefit? Am J Cardiol 2004;93:154-8 [14715339]

### Vascular basis, 2005:

Stone PH, Lloyd-Jones DM, Kinlay S, Frei B, Carlson W, Rubenstein J, Andrews TC, Johnstone M, Sopko G, Cole H, Orav J, Selwyn AP, Creager MA Effect of intensive lipid lowering, with or without antioxidant vitamins, compared with moderate lipid lowering on myocardial ischemia in patients with stable coronary artery disease: the Vascular Basis for the Treatment of Myocardial Ischemia Study. Circulation 2005;111:1747-55 [15809368]

### REVERSAL, 2004:

Nissen SE, Tuzcu EM, Schoenhagen P, Brown BG, Ganz P, Vogel RA, Crowe T, Howard G, Cooper CJ, Brodie B, Grines CL, DeMaria AN Effect of intensive compared with moderate lipid-lowering therapy on progression of coronary atherosclerosis: a randomized controlled trial. JAMA 2004;291:1071-80 [14996776]

### SAGE, 2007:

Deedwania P, Stone PH, Bairey Merz CN, Cosin-Aguilar J, Koylan N, Luo D, Ouyang P, Piotrowicz R, Schenck-Gustafsson K, Sellier P, Stein JH, Thompson PL, Tzivoni D Effects of intensive versus moderate lipid-lowering therapy on myocardial ischemia in older patients with coronary heart disease: results of the Study Assessing Goals in the Elderly (SAGE). Circulation 2007;115:700-7 [17283260]

### IDEAL, 2005:

Pedersen TR, Faergeman O, Kastelein JJ, Olsson AG, Tikkanen MJ, Holme I, Larsen ML, Bendiksen FS, Lindahl C, Szarek M, Tsai J High-dose atorvastatin vs usual-dose simvastatin for secondary prevention after myocardial infarction: the IDEAL study: a randomized controlled trial. JAMA 2005 Nov 16;294:2437-45 [16287954]

Pedersen TR, Cater NB, Faergeman O, Kastelein JJ, Olsson AG, Tikkanen MJ, Holme I, Larsen ML, Lindahl C, Szarek M Comparison of atorvastatin 80 mg/day versus simvastatin 20 to 40 mg/day on frequency of cardiovascular events late (five years) after acute myocardial infarction (from the Incremental Decrease in End Points through Aggressive Lipid Lowering [IDEAL] trial). Am J Cardiol 2010;106:354-9 [20643245] 10.1016/j.amjcard.2010.03.033

## 3 cardiovascular prevention

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Trial	Treatments	Patients	Trials design and methods
<b>atorvastatin high dose vs angioplasty</b>			
<b>AVERT , 1999</b> n=164/177 follow-up: 1.5 years	atorvastatin 80 mg/d versus recommended percutaneous revascularization procedure(angioplasty) followed by usual care, which could include lipid-lowering treatment	patients referred for percutaneous revascularization, with stable coronary artery disease, relatively normal left ventricular function, asymptomatic or mild-to-moderate angina, and a serum level of low-density lipoprotein (LDL) cholesterol of at least 115 mg per deciliter (3.0 mmol per liter)	Parallel groups open US, Europe
<b>atorvastatin high dose vs atorvastatin</b>			
<b>TNT (diabetic sub group) , 2006</b> n=748/753 follow-up: 4.9 y	atorvastatin 80 mg daily versus atorvastatin 10 mg daily	patients with stable coronary heart disease	double blind
<b>TNT , 2005</b> [NCT00327691] n=4995/5006 follow-up: 4.9 years	80 mg of atorvastatin daily versus 10 mg of atorvastatin daily	Chronic coronary artery disease LDL cholesterol <3.4 mmol/L	Parallel groups double blind 14 countries
<b>atorvastatin high dose vs lovastatin</b>			

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Trial	Treatments	Patients	Trials design and methods
Vascular basis , 2005 n=197/103 follow-up: 1 year	atorvastatin (80 mg) with or without vitamin C and E versus low dose lovastatin (5 mg)	Chronic coronary artery disease	Parallel groups double blind
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PROVE-IT , 2004 n=2099/2063 follow-up: 2 years	atorvastatin 80 mg daily versus Pravastatin 40 mg	acute myocardial infarction (with or without electrocardiographic evidence of ST-segment elevation) or highrisk unstable angina) in the preceding 10 days	Parallel groups double blind 8 countries
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More details and results :

- cholesterol lowering intervention for cardiovascular prevention in diabetic patients at <http://www.trialresultscenter.org/go-Q6>
- cholesterol lowering intervention for cardiovascular prevention in patients with prior MI or with CHD at <http://www.trialresultscenter.org/go-Q12>
- cholesterol lowering intervention for cardiovascular prevention in all chronical situations at <http://www.trialresultscenter.org/go-Q154>
- statins for cardiovascular prevention in secondary prevention at <http://www.trialresultscenter.org/go-Q689>

## References

### AVERT, 1999:

Pitt B, Waters D, Brown WV, van Boven AJ, Schwartz L, Title LM, Eisenberg D, Shurzinske L, McCormick LS, Aggressive lipid-lowering therapy compared with angioplasty in stable coronary artery disease. Atorvastatin versus Revascularization Treatment Investigators. N Engl J Med 1999; 341:70-6 [10395630]

### TNT (diabetic sub group), 2006:

Shepherd J, Barter P, Carmena R, Deedwania P, Fruchart JC, Haffner S, Hsia J, Breazna A, LaRosa J, Grundy S, Waters D Diabetes Care 2006;29:1220-6 [[16731999](#)]  
[10.2337/dc05-2465](#)

#### **TNT, 2005:**

LaRosa JC, Grundy SM, Waters DD, Shear C, Barter P, Fruchart JC, Gotto AM, Greten H, Kastelein JJ, Shepherd J, Wenger NK Intensive lipid lowering with atorvastatin in patients with stable coronary disease. N Engl J Med 2005 Apr 7;352:1425-35 [[15755765](#)]

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Ray KK, Cannon CP, McCabe CH, Cairns R, Tonkin AM, Sacks FM, Jackson G, Braunwald E Early and late benefits of high-dose atorvastatin in patients with acute coronary syndromes: results from the PROVE IT-TIMI 22 trial. J Am Coll Cardiol 2005;46:1405-10 [[16226162](#)]

Rouleau J Improved outcome after acute coronary syndromes with an intensive versus standard lipid-lowering regimen: results from the Pravastatin or Atorvastatin Evaluation and Infection Therapy-Thrombolysis in Myocardial Infarction 22 (PROVE IT-TIMI 22) trial. Am J Med 2005;118 Suppl 12A:28-35 [[16356805](#)]

#### **REVERSAL, 2004:**

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Pedersen TR, Cater NB, Faergeman O, Kastelein JJ, Olsson AG, Tikkanen MJ, Holme I, Larsen ML, Lindahl C, Szarek M Comparison of atorvastatin 80 mg/day versus simvastatin 20 to 40 mg/day on frequency of cardiovascular events late (five years) after acute myocardial infarction (from the Incremental Decrease in End Points through Aggressive Lipid Lowering [IDEAL] trial). Am J Cardiol 2010;106:354-9 [[20643245](#)] [10.1016/j.amjcard.2010.03.033](#)

## 4 diabetes type 2

Trial	Treatments	Patients	Trials design and methods
<b>atorvastatin high dose vs atorvastatin</b>			
TNT (diabetic sub group) , 2006 n=748/753 follow-up: 4.9 y	atorvastatin 80 mg daily versus atorvastatin 10 mg daily	patients with stable coronary heart disease	double blind

More details and results :

- cholesterol lowering intervention for diabetes type 2 in diabetic patients with or without hypercholesterolemia at <http://www.trialresultscenter.org/go-Q85>
- cholesterol lowering intervention for diabetes type 2 in secondary prevention at <http://www.trialresultscenter.org/go-Q721>

### References

#### TNT (diabetic sub group), 2006:

Shepherd J, Barter P, Carmena R, Deedwania P, Fruchart JC, Haffner S, Hsia J, Breazna A, LaRosa J, Grundy S, Waters D Diabetes Care 2006;29:1220-6 [16731999] 10.2337/dc05-2465

Entry terms: atorvastatin, Lipitor