



### Medicinal products in ATC group C07, Beta Blocking Agents

#### Reading instructions for the table below

Approved indication: The specified indication(s) of an active substance and pharmaceutical form, if stated, relate(s) to the medicinal product that has been licensed for the longest period of time.

Reimbursement status: The current reimbursement status of the medicinal product.

Treatment price per day: The listed prices per day are based on the medicinal products' reimbursement prices calculated in accordance with the Danish Medicines Agency's guidelines for evaluation and comparison of medicinal products in reassessments of reimbursement status dated 4 July 2006, cf. Appendix C3 and D.

Consumption: The number of persons in treatment is based on the Danish Medicines Agency's Register of Medicinal Product Statistics, cf. www.medstat.dk.

#### Single substance products for oral use

<b>C07AA03</b>	<b>Pindolol</b>
Pharmaceutical forms	Tablets
Traded names	Hexapindol, Pindolol "Merck NM", Visken
Approved indication	"Arterial hypertension. Angina pectoris. Supraventricular and ventricular tachyarrhythmias. Prophylaxis following acute myocardial infarction."
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	10-15 mg tablets: DKK 1.15- 1.88
Consumption	2,748 persons in treatment in 2006 2,383 persons in treatment in the first 10 months of 2007
Discussion	Pindolol has several indications within the cardiovascular area and is only used by a limited number of patients.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AA03

<b>C07AA05</b>	<b>Propranolol</b>
Pharmaceutical forms	Tablets, prolonged-release capsules
Traded names	Propal, Propal Retard, Propranolol "DAK", Propranolol "Merck NM"
Approved indication	Prolonged-release: "Arterial hypertension. Prevention of angina pectoris and migraine. Prophylaxis following acute myocardial infarction. Thyreotoxicosis. Familial and senile tremor. Prophylaxis against recurrent haemorrhage in portal hypertension and oesophageal varices." Tablets: Arterial hypertension. Supraventricular and ventricular tachyarrhythmias. Prevention of angina pectoris and migraine. Prophylaxis following acute myocardial infarction. Familial and senile tremor. Thyreotoxicosis.
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	80-320 mg tablets: DKK 0.52 – 1.52 80-320 mg prolonged-release capsules: DKK 2.41 – 6.88

Consumption	36,599 persons in treatment in 2006 33,413 persons in treatment in the first 10 months of 2007
Discussion	Propranolol has many indications. The prolonged-release form is considerably more expensive than the tablet form. A third of the consumption is in prolonged-release form which must be expected to improve compliance as it is only taken once a day. In the opinion of the Committee, the consumption is rational.
Assessment	All in all the Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AA05

<b>C07AA07</b>	<b>Sotalol</b>
Pharmaceutical forms	Tablets
Traded names	Sotalol "Actavis", Sotalol "Merck NM"
Approved indication	40 mg: "Prophylactically and for controlling the heart rate in atrial flutter and atrial fibrillation. Suppression of life-threatening ventricular tachycardia and prevention of inducible ventricular tachycardia." 80 mg and 160 mg: "Prophylactically and for controlling the heart rate in atrial flutter and atrial fibrillation. Suppression of life-threatening ventricular tachycardia and prevention of inducible ventricular tachycardia."
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	160 mg tablets: DKK 1.70
Consumption	7,403 persons in treatment in 2006 6,097 persons in treatment in the first 10 months of 2007
Discussion	Sotalol is only recommended for the treatment of arrhythmia and only in special cases. The substance is primarily used by specialists.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AA07

\* The figures also include patients treated with the medicinal product for injection.

<b>C07AB02</b>	<b>Metoprolol</b>
Pharmaceutical forms	Tablets, prolonged-release tablets
Traded names	Betaloc ZOK, Mepronet, Metocar, Metoprolol "1A Farma", Metoprolol "GEA", Metoprololsuccinat "1A Farma", Metoprololsuccinat "Hexal", Selenken, Selo-zok
Approved indication	Tablets: "Arterial hypertension. Angina pectoris. Supraventricular and ventricular tachyarrhythmias. Thyreotoxicosis. Prevention of migraine. Prophylaxis following acute myocardial infarction." Prolonged-release: "Arterial hypertension. Angina pectoris. Mild to severe symptomatic chronic heart insufficiency, as a supplement to other treatment of heart insufficiency. Supraventricular and ventricular tachyarrhythmias. Thyreotoxicosis. Prevention of migraine. Prophylaxis following acute myocardial infarction."
Dispensing terms	B
Reimbursement status	General reimbursement

Price per day	50-200 mg tablets: DKK 1.00- 2.12 50-200 mg prolonged-release tablets: DKK 1.54 – 3.41
Consumption	201,514 persons in treatment in 2006. 205,469 persons in treatment in the first 10 months of 2007
Discussion	Metoprolol is the most frequently used beta blocker and has more indications than the other beta blockers. The large consumption distributed on a little more than 200,000 patients is considered to be rational.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AB02

\* The figures also include patients treated with the medicinal product for injection.

<b>C07AB03</b>	<b>Atenolol</b>
Pharmaceutical forms	Tablets
Traded names	Atenet, Atenodan, Atenolol ”Copyfarm”, Atenolol ”Merck NM”, Atenolol ”Sandoz”, Atenor, Tenormin, Uniloc
Approved indication	“Arterial hypertension. Tachyarrhythmias. Acute myocardial infarction. Prevention of angina pectoris. Prophylaxis following acute myocardial infarction.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	50-100 mg tablets: DKK 0.23 – 0.58
Consumption	41,793 persons in treatment in 2006 38,297 persons in treatment in the first 10 months of 2007
Discussion	Atenolol is a frequently used beta blocker with several indications and applications. In the opinion of the Committee, the consumption is rational.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AB03

<b>C07AB04</b>	<b>Acebutolol</b>
Pharmaceutical forms	Tablets
Traded names	Diasectral
Approved indication	“Arterial hypertension. Supraventricular and ventricular tachyarrhythmias. Prevention of angina pectoris.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	200-400 mg tablets: DKK 3.18 – 6.04
Consumption	443 persons in treatment in 2006 406 persons in treatment in the first 10 months of 2007
Discussion	The treatment price per day is high relative to the other medicinal products in the group. The consumption is modest and decreasing. It is the opinion of the Committee that the medicinal product is used in those cases where the patient cannot be treated sufficiently with or cannot tolerate another cheaper equal treatment alternative, and that the consumption is rational.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AB04

<b>C07AB07</b>	<b>Bisoprolol</b>
Pharmaceutical forms	Tablets
Traded names	Bisocor, Bisoprolol "Alpharma", Bisoprolol "Sandoz", Bisoprolol "Stada", Cardicor, Emeconcor
Approved indication	"Arterial hypertension. Prevention of angina pectoris."
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	5-10 mg tablets: DKK 1.16 – 1.41
Consumption	20,261 persons in treatment in 2006 20,652 persons in treatment in the first 10 months of 2007
Discussion	Bisoprolol only has a limited number of indications, but is used by many patients. In the opinion of the Committee, the consumption is rational.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AB07

<b>C07AB12</b>	<b>Nebivolol</b>
Pharmaceutical forms	Tablets
Traded names	Hypoloc
Approved indication	"Hypertension: Treatment of essential hypertension. Chronic heart insufficiency: Treatment of stable mild or moderate chronic heart insufficiency as a supplement to standard treatment of older patients $\geq 70$ years."
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	5 mg tablets: DKK 4.68
Consumption	Nebivolol was marketed in May 2007. From May to October 2007, 43 persons have been treated.
Discussion	Nebivolol is the most recent beta blocker on the market. It is more expensive than most other beta blockers in the group, and is not recommended as first-line treatment by IRF. Its use is very limited.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AD12

<b>C07AG01</b>	<b>Labetalol</b>
Pharmaceutical forms	Tablets
Traded names	Trandate
Approved indication	"Arterial hypertension"
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	300 – 1,200 mg tablets: DKK 3.19 – 11.52
Consumption	2,251 persons in treatment in 2006. Hereof 74% women. Median age 42 years. 2,153 persons in treatment in the first 10 months of 2007
Discussion	As the only one in the group, labetalol is approved for use in pregnant women.

	The treatment price per day is at the high end of the group. It is the opinion of the Committee that the consumption figures reflect a rational consumption for pregnant women and persons who cannot be treated using other cheaper equal treatment alternatives.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AG01

\* The figures also include patients treated with the medicinal product for injection.

<b>C07AG02</b>	<b>Carvedilol</b>
Pharmaceutical forms	Tablets
Traded names	Carvedilol "Alternova", Carvedilol "Hexal", Carvedilol "KRKA", Carvedilol "Orionpharma", Carvedilol "PCD", Carvedilol "Sandoz", Carvedilol "Teva", Carvedilol "UNP", Carvedilol "ratiopharm", Dimitone
Approved indication	"Essential hypertension. Chronic, stable angina pectoris. Supplement treatment of moderate to severe stable heart insufficiency."
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	25 mg tablets: DKK 2.09
Consumption	23,331 persons in treatment in 2006 24,108 persons in treatment in the first 10 months of 2007
Discussion	insufficiency. The treatment price per day is, in relation to hypertension, at the high end of the group, but the consumption is, in the opinion of the Committee, appropriate.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07AG02

### Combinations for oral use

<b>C07BB02</b>	<b>Metoprolol + hydrochlorthiazide</b>
Pharmaceutical forms	Prolonged-release tablets
Traded names	Zok-Zid
Approved indication	"Arterial hypertension which cannot be treated sufficiently using monotherapy."
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	Prolonged-release tablets: 50 mg metoprolol + 12.5 mg hydrochlorthiazid: DKK 1.89 200 mg metoprolol + 50 mg hydrochlorthiazid: DKK 7.54
Consumption	2,768 persons in treatment in 2006 2,642 persons in treatment in the first 10 months of 2007
Discussion	The price is higher than for metoprolol depot tablets alone, but the Committee emphasises the need for combination products.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07BB02

<b>C07CB03</b>	<b>Atenolol + chlorotalidone</b>
Pharmaceutical forms	Tablets
Traded names	Tenidon, Tenidon Mite, Tenoretic
Approved indication	“Arterial hypertension which cannot be treated sufficiently using monotherapy.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	Tablets: 50 mg atenolol + 12,5 mg chlortalidon: DKK 1.26 100 mg atenolol + 25 mg chlortalidon: DKK 2.82
Consumption	4,278 persons in treatment in 2006 3,889 persons in treatment in the first 10 months of 2007
Discussion	The price is higher than for atenolol tablets alone which is the cheapest of all beta blockers, but the Committee emphasises the need for combination products.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07CB03

<b>C07FB02</b>	<b>Metoprolol + felodipine</b>
Pharmaceutical forms	Prolonged-release tablets
Traded names	Logimax
Approved indication	“Arterial hypertension which cannot be treated sufficiently using monotherapy.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	Prolonged-release tablets: 50 metoprolol + 5 mg felodipin: DKK 6.37 200 mg metoprolol + 20 mg felodipin: DKK 25.48
Consumption	1,252 persons in treatment in 2006 1,189 persons in treatment in the first 10 months of 2007
Discussion	The medicinal product is two to three times more expensive than the individual substances separately, but in its assessment the Committee emphasises an expected improvement of compliance and the need for combination products.
Assessment	The Committee assesses that there are <u>no</u> grounds to open a case to change the reimbursement status for oral medicinal products in ATC group C07FB02

### Parenteral medicinal products

<b>C07AA07</b>	<b>Sotalol</b>
Pharmaceutical forms	Injection
Traded names	Sotacor
Approved indication	Termination of acute and life-threatening arrhythmia, including life-threatening ventricular tachyarrhythmia, symptomatic non-sustained ventricular tachyarrhythmia.

	Testing of medicine effect during programmed electric stimulation in patients with inducible, ventricular and supraventricular tachyarrhythmia. Substitution for oral Sotacor in patients temporarily incapable of ingesting oral medicine.
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	160 mg: DKK 279.04
Consumption	-
Discussion	Sotalol injection fluid is used in hospitals only and should thus not be granted general reimbursement.
Assessment	The Committee assesses that <u>there are grounds</u> to open a case to change the reimbursement status for parenteral medicinal products in ATC group C07AA07 such that the medicinal products no longer be eligible for general reimbursement or general limited reimbursement.

<b>C07AB02</b>	<b>Metoprolol</b>
Pharmaceutical forms	Injection
Traded names	Seloken
Approved indication	“Supraventricular and ventricular tachyarrhythmias. Confirmed or suspected myocardial infarction.”
Dispensing terms	B
Reimbursement status	General reimbursement
Price per day	150 mg: DKK 783
Consumption	-
Discussion	Metoprolol injection fluid is used in hospitals only and should thus not be granted general reimbursement.
Assessment	The Committee assesses that <u>there are grounds</u> to open a case to change the reimbursement status for parenteral medicinal products in ATC group C07AB02 such that the medicinal products no longer be eligible for general reimbursement or general limited reimbursement.

<b>C07AG01</b>	<b>Labetalol</b>
Pharmaceutical forms	Injection
Traded names	Trandate
Approved indication	Hypertensive crisis. Adjuvant in general anaesthesia where controlled hypotension is desirable.
Dispensing terms	B
Reimbursement status	No general reimbursement
Price per day	600 mg: DKK 614
Consumption	-
Discussion	Labetalol injection fluid is used in hospitals only and should thus not be granted general reimbursement.
Assessment	The Committee assesses that <u>there are grounds</u> to open a case to change the reimbursement status for parenteral medicinal products in ATC group



	C07AG01 such that the medicinal products no longer be eligible for general reimbursement or general limited reimbursement.
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\*Calculated on the basis of the lowest of the actual prices.

**Price survey of C07 - Beta blocking agents**  
**Based on the indication hypertension**

**Appendix C3**  
**29 January 2008**

Average lowest unit price for 6 price periods (period start from 22 october to 31 december 2007)

1. ATC	2. Medicinal product	3. Reimbursement status/dispensing terms		4. DDD (mg)	5. Daily Dose (mg) <sup>1</sup>	6. Pharmaceutical form	7. Strength (mg)	8. Average lowest unit price (DKK)	9. Price per day (DKK)
<b>C07AA</b>	<b>Beta-blocking agents, plain, non-selective</b>								
C07AA03	Pindolol	•	B	15	10 - 15 <sup>3 5</sup>	Tablets	10 / 15	1.15 / 1.88	1.15 - 1.88
C07AA05	Propranolol	•	B	160	80 - 320 <sup>2 3 5</sup>	Tablets/film-coated t.	40 / 80	0.26 / 0.38	0.52 - 1.52
	Propranolol	•	B	160	80 - 320 <sup>3 5</sup>	Prol.-release tab.	80 / 160	2.41 / 3.44	2.41 - 6.88
C07AA07	Sotalol	•	B	160	160 <sup>2 4 7</sup>	Tablets	80	0.85	1.70
	Sotalol	-	B	160	160 <sup>2 4 7</sup>	Injection	10 mg/ml	17.44	279.04
<b>C07AB</b>	<b>Beta blocking agents, plain, selective</b>								
C07AB02	Metoprolol	•	B	150	50 - 200 <sup>3 5</sup>	Tablets	50 / 100	1.00 / 1.06	1.00 - 2.12
	Metoprolol	•	B	150	50 - 200 <sup>3 5</sup>	Prol.-release tab.	50 / 200	1.54 / 3.41	1.54 - 3.41
	Metoprolol	-	B	150	150 <sup>4</sup>	Injection	1 mg/ml	5.22	783.00
C07AB03	Atenolol	•	B	75	50 - 100 <sup>3 5</sup>	Tablets	50 / 100	0.23 / 0.58	0.23 - 0.58
C07AB04	Acebutolol	•	B	400	200 - 400 <sup>3 5</sup>	Tablets	200 / 400	3.18 / 6.04	3.18 - 6.04
C07AB07	Bisoprolol	•	B	10	5 - 10 <sup>3 5</sup>	Tablets	5 / 10	1.16 / 1.41	1.16 - 1.41
C07AB12	Nebivolol	•	B	5	5 <sup>4</sup>	Tablets	5	4.68	4.68
<b>C07AG</b>	<b>Alfa- og beta blocking agents</b>								
C07AG01	Labetalol	•	B	600	300 - 1200 <sup>3 6 12</sup>	Film-coated tab.	100 / 200	1.27 / 1.92	3.19 - 11.52
		-	B	600	600 <sup>4</sup>	Injection	5 mg/ml	5.12	614.40
C07AG02	Carvedilol	•	B	37.5	25 <sup>3 5</sup>	Tablets/film-coated t.	25	2.09	2.09
<b>C07BB</b>	<b>Beta blocking agents, selective, and thiazides</b>								
C07BB02	Metoprolol and thiazides <sup>9</sup>	•	B	-	50 - 200 <sup>3</sup>	Prol.-release tab.	100	3.77	1.89 - 7.54 <sup>8</sup>

1. ATC	2. Medicinal product	3. Reimbursement status/dispensing terms	4. DDD (mg)	5. Daily Dose (mg) <sup>1</sup>	6. Pharmaceutical form	7. Strength (mg)	8. Average lowest unit price (DKK)	9. Price per day (DKK)	
<b>C07CB</b>	<b>Beta blocking agents, selective, and other diuretics</b>								
C07CB03	Atenolol and other diuretics <sup>10</sup>	•	B	-	50 - 100 <sup>3</sup>	Film-coated tab.	50 / 100	1.26 / 2.82	1.26 - 2.82
<b>C07FB</b>	<b>Beta blocking agents, selective and other antihypertensives</b>								
C07FB02	Metoprolol and other antihypertensives <sup>11</sup>	•	B	-	50 - 200 <sup>3</sup>	Prol.-release tab.	50	6.37	6.37 - 25.48

**Notes and explanations:**

1	Can be given once a day unless otherwise noted
2	Divided into 2 daily doses
3	Recommended dose by the Institute for Rational Pharmacotherapy (IRF)
4	DDD (Defined Daily Dose) by the WHO
5	Recommended by the Institute for Rational Pharmacotherapy (IRF)
6	Recommended with certain limitations or in special cases by the Institute for Rational Pharmacotherapy
7	Not recommended by the Institute for Rational Pharmacotherapy
8	The medicinal product is not marketed in a strength equivalent to the daily dose
9	+ 12,5 mg hydrochlorothiazide
10	+ 12,5 mg chlorotalidone in the tablet containing 50 mg atenolol and 25 mg chlortalidone in the tablet containing 100 mg atenolol
11	+ 5 mg felodipine
12	Divided into 2-6 daily doses

**Symbols and abbreviations**

<b>Reimbursement status</b>	
-	Not eligible for general reimbursement
●	General reimbursement for prescription-only medicinal products
■	Limited general reimbursement for over-the-counter medicinal products.
⊗	Limited general reimbursement for prescription-only medicinal products

<b>Dispensing terms</b>	
A	Only to be dispensed once on the same prescription, unless dispensed in smaller doses at a time.
AP4	Subject to the provisions of section 4 of the Executive Order on prescriptions.
AP4BG	Only to be dispensed to hospitals. Subject to the provisions of section 4 of the Executive Order on prescriptions.
AP4NB	Only to be dispensed to hospitals or following prescription by specific medical specialists. Subject to the provisions of section 4 of the Executive Order on prescriptions.
B	Only to be dispensed once on the same prescription, unless stated otherwise.
BEGR	Only to be dispensed to hospitals. Same terms apply as for dispensing group A.
HA	Over-the-counter drugs. Pharmacy-restricted medicinal product.
HF	Over-the-counter drugs. Non-pharmacy-restricted human medicinal product.
HX	Over-the-counter drugs. Non-pharmacy-restricted human medicinal product. Maximum 1 package/customer/day.
NBS	Only to be dispensed to hospitals or following prescription by specific medical specialists. Same terms apply as for dispensing group A.