

Title

The Changes in Home versus Clinic Blood Pressure with Antihypertensive Treatments: a Meta-analysis

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Short title: Meta-analysis of home blood pressure reduction

Number of words in abstract: 242

Number of words in text: 3960

Number of Tables (3) and Figures (5)

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Characteristics and home blood pressure measurement methods of 30 collected papers

First author	Age years	Backgrounds			Subj.	N. Sub.	Clinic BP		HBP measurements		
		Male %	BMI kg/m ²	Previous HT Tx.			Clinic BP devices	Home BP devices	N. HBP	Time	Dur.
Mengden T	53	63.2	NA	Placebo	HT	19	Sphg.	Visomat OZ1	?	ME	2 w
Chatellier G	57	55	26	Washout	HT	816	Sphyg.	UA751, A&D	3	ME	4 d
Vaur L	56	62.5	NA	Washout	HT	24	Mercury sphyg.	A&D UA751	3	ME	7 d
Bailey B	56	45	29	T, NonT	HT	31	Sphyg.	Omron HEM 706	?	ME	?
Fernandez-G	59.3	42.9	28	Washout	HT	1395	Omron HEM-705CP	Omron HEM-705CP	2	ME,	?
Leeman MJ	55	50	27.3	Washout	HT	760	Mercury or Aneroid	Omron HEM-705CP	2	ME	8 D
Ragot S	55.6	56	NA	Placebo	HT	199	Mercury sphyg.	UA751, A&D	3	ME	7 d
Broege PA	73	68	25.8	T, NonT	HT	20	Sphyg.	Omron HEM-702	3	ME	?
Mancia G	55.4	67	NA	Placebo	HT	215	Sphyg,	Pressolink-T	3	ME	7 d
	55.1	62	NA			211					
Ragot S	55.1	57	NA	Placebo	HT	217	Omron HEM-705CP	Omron HEM-705CP	3	ME	7 d
	55.5	52	NA			218					
Stergiou GS	46.6	48.5	NA	Washout	HT	33	Sphyg.	Omron HEM-705CP	2	ME	5 d
Suzuki H	56	59.3	NA	Washout	HT	113	Sphyg.	Omron HEM 401C	1	ME	2 d
Mengden T	57.7	54.7	28.1	T, NonT	HT	53	Usual device	TensioPhone 2	≥1	ME	?
Mion D	66.3	27.7	27.0	Placebo	HT	65	Omron IC	Omron IC	3	ME	7 d
Staessen JA	52.6	48.2	27.7	T, NonT	HT	197	Shyg. ?	Omron HEM-705CP	3	ME	7 d
	54.2	47.3	28.5	T, NonT	HT	203					
Girerd X	64	44	29	Treated	HT	171	TensioPhone	TensioPhone	3	ME	4 d
Halme L	57.4	30.1	28.1	T, NonT	HT	113	Omron M4	Omron M4	2	ME	7 d
Borie G	60	60	28.0	T, NonT	HT	227	Sphyg. or Electrical device	Tensio Day Monitor	3	ME	5 d
	59	53	27.6			222					
Hashimoto J	61.6	55.3	26.4	Treated	HT	76	NA	Omron HEM701C,	1	ME	5 d
Kamoi K	67.0	36.0	24.2	T, NonT	Mo. HT	50	FT-200	Semiautomatic	1	M	?
Niiranen TJ	53.8	36.5	28.2	Washout	HT	56	Sphyg.	Omron M4, HEM-722C	2	ME	7 d
Ewald S	57.7	54.7	28.1	T, NonT	HT	53	NA	TensioPhone 2	≥1	ME	?
Karotsis AK	63.9	44	28.6	Treated	HT	185	A&D767	A&D767	?	ME	3 d
Yamagishi T	58	42.6	23.8	T, NonT	Mo. HT	54	NA	Omron HEM401C	1	ME	?
	61.7	42.6	24.1	T, NonT	Mo. HT	54	NA	Omron HEM401C	1	ME	?
Yamagishi T	61.7	62.8	24.6	T	HT	43	NA	Automatic	1	M	?
	61.6	53.3	23.7	Non T	HT	15	NA		1	M	?
Ashizawa N	66.9	56.5	NA	Treated	HT	23	NA	Automatic	?	ME	?
Ikeda T	57.5	75.5	24.1	Treated	HT	49	Omron, HEM907	Omron HEM-737	2	ME	?

Verberk WJ	55	55	28	T, NonT	HT	214	Omron, HEM705CP	Omron, HEM705CP	3	ME	7 d
Eguchi K	70.2	45.1	24.1	T, NonT	HT	308	Omron, HEM705IT	Omron, HEM705IT	2	ME	3 d
Nakamoto H	51.4	71.4	NA	NA	HT	21	Omron, HEM705IT	Omron, HEM705IT	≥1	ME	?
	54.2	68.4	NA	NA	HT	19	Omron, HEM705IT	Omron, HEM705IT	≥1	ME	Tel

NA indicates not applicables; T, treated hypertension; non-T, non-treated hypertension; HT, hypertension; Mo. HT, morning HT; DM, diabetes; N. Sub., Number of enrolled subjctets; Sphyg., sphygnomamometer; N. HBP, number of home blood pressure measurements in one occasions; ME, morning and evening; M, morning; W, weeks; d, days; Tel, telemedicine. Paper of Suzuki et al. included subjects with chronic renal insufficiency. In the paper of Girerd X et al. home blood pressure was measured in the standing position.

Changes in blood pressures and baseline blood pressure levels

First author	N	Antihypertensive treatments				Reduction of systolic / diastolic BPs (mmHg)					Baseline systolic / diastolic BP levels (mmHg)				
		Drug name	Dose	Night	Dur.	CBP	HBP	MoBP	EveBP	24hBP	CBP	HBP	MoBP	EveBP	24hBP
Mengden T	19	Amlodipine	5mg	No	4W	13 / 8	12 / 7	10 / 6	13 / 7	NA	158 / 103	151 / 98	149 / 96	153 / 99	NA
	19	Amlodipine	5mg	Yes	4W	12 / 5	7 / 4	6 / 3	8 / 5	NA	158 / 103	151 / 98	149 / 96	153 / 99	NA
Chatellier G	816	Trandpril	2mg	No	4W	22 / 15	14 / 9	13 / 8	15 / 9	NA	166 / 101	153 / 94	153 / 94	154 / 94	NA
Vaur L	24	Trandpril	2mg	No	4W	10 / 8	11 / 6	10 / 5	11 / 6	NA	163 / 101	146 / 94	NA	NA	NA
Bailey B	31	Perindopril	NA	No	2M	8 / 4	8 / 4	7 / 5	9 / 6	NA	156 / 93	146 / 89	147 / 90	145 / 87	137 / 79
Fernandez-G	1395	Verapamil SR	240mg	No	12W	20 / 13	17 / 11	NA	NA	NA	166 / 98	159 / 93	NA	NA	NA
Leeman MJ	760	Diltiazem SR	300mg	No	2M	20 / 13	11 / 8	NA	NA	NA	162 / 99	155 / 95	NA	NA	NA
Ragot S	105	Losartan	50mg	No	6W	17 / 14	9 / 4	7 / 3	11 / 6	7 / 5	160 / 100	144 / 89	NA	NA	138 / 86
	94	Trandpril	2mg	No	6W	16 / 12	10 / 5	8 / 5	11 / 6	8 / 5	160 / 100	144 / 91	NA	NA	137 / 85
Broege PA	20	Cholrthalidone Additionally Prinivil	12.5-25mg 10-20mg	No	3M	-3 / -5	2 / 0	NA	NA	NA	153 / 78	140 / 77	NA	NA	NA
Mancia G	215	Valsartan	80mg	No	8W	10 / 7	8 / 5	7 / 4	9 / 6	8 / 5	158 / 101	150 / 96	149 / 96	150 / 95	144 / 89
	211	Irbesartan	150mg	No	8W	16 / 10	11 / 7	10 / 6	12 / 8	10 / 6	160 / 101	140 / 96	149 / 97	149 / 94	142 / 88
Ragot S	217	Telmisartan	40-80mg	No	12W	13 / 8	12 / 7	NA	NA	NA	158 / 98	152 / 94	NA	NA	NA
	218	Perindopril	4-8mg	No	12W	10 / 6	9 / 5	NA	NA	NA	159 / 98	152 / 95	NA	NA	NA
Stergiou GS	33	Lisinopril	20mg	No	5W	15 / 10	17 / 10	NA	NA	12 / 8	144 / 96	145 / 93	NA	NA	137 / 88
	33	Losartan	50mg	No	5W	8 / 5	8 / 5	NA	NA	7 / 5	144 / 96	145 / 93	NA	NA	137 / 88
Suzuki H	113	Amlodipine Benazepril	5-20mg 2.5-5mg	No	12M	19 / 20	20 / 16	19 / 9	22 / 23	NA	148 / 89	155 / 91	160 / 90	150 / 92	NA
Mengden T	53	Olmesartan	23.53 mg*	No	12W	27 / 16	9 / 7	NA	NA	NA	163 / 96	150 / 86	NA	NA	NA
Mion D	65	Amlodipine	2.5mg	No	16W	2 / 5	7 / 1	6 / 1	7 / 1	3 / 1	164 / 99	160 / 94	159 / 94	161 / 93	155 / 93
		Lisinopril, Hydrochlorotiazide,	10-20mg 25mg												
Staessen JA	197	Amlodipine, or Prazosin by CBP guided Tx.	5-10mg 6mg	No	12M	22 / 14	16 / 10	NA	NA	14 / 10	159 / 102	146 / 92	NA	NA	141 / 88
	203	Lisinopril, Hydrochlorotiazide, Amlodipine, or Prazosin by HBP guided Tx.	10-20mg 25mg 5-10mg 6mg	No	12M	15 / 10	11 / 7	NA	NA	10 / 7	161 / 102	147 / 92	NA	NA	142 / 88
Girerd X	171	Valsartan Hydrochlorothiazide	160mg 12.5mg	No	6W	6 / 4	6 / 4	NA	NA	NA	157 / 91	152 / 87	NA	NA	NA
Halme L	113	Any	NA	NA	6M	12 / 7	8 / 3	NA	NA	NA	160 / 94	143 / 85	NA	NA	NA

Borie G	227	Valsartan Hydrochlorothiazide	80mg 12.5mg	No	8W	11 / 6	11 / 7	10 / 7	12 / 8	NA	153 / 90	149 / 89	NA	NA	NA
	222	Irbesartan Hydrpchlorothiazide	150mg 12.5mg	No	8W	15 / 8	13 / 10	12 / 9	14 / 10	NA	153 / 91	149 / 90	NA	NA	NA
Hashimoto J	76	Indapamide	1mg	No	4W	9 / 5	12 / 6	12 / 6	12 / 6	NA	145 / 86	143 / 83	147 / 87	138 / 79	NA
Kamoi K	50	Doxazosin	2.9mg*	Yes	3M	9 / 4	18 / 5	18 / 5	NA	NA	151 / 87	164 / 85	164 / 85	NA	NA
Niiranen TJ	56	Candesartan Hydroclorothiazide Felodipine (Stepwisely added)	8-16mg 12.5mg 5mg	No	24W	18 / 10	17 / 10	NA	NA	17 / 11	149.3 / 94.4	143 / 91	NA	NA	145 / 91
Ewald S	53	Olmesartan	23.5mg* 12.5mg	No	12W	29 / 16	9 / 7	NA	NA	NA	163 / 96	148 / 86	NA	NA	NA
Karotsis AK	185	Chlorthalidone, Felodipine, Lisinopril, or Valsartan	5mg 10mg 80mg	No	8W	21 / 7	15 / 6	NA	NA	NA	160 / 86	150 / 83	NA	NA	NA
Yamagishi T	54	Azelnidipine	8-16mg	No	8W	28 / 17	24 / 14	24 / 14	NA	NA	166 / 99	160 / 98	160 / 98	NA	NA
	54	Amlodipine	5-10mg	No	8W	23 / 14	21 / 12	21 / 12	NA	NA	157 / 96	155 / 95	155 / 95	NA	NA
Yamagishi T	43	Cilnidipine	10-20mg	Yes	8W	15 / 9	12 / 7	12 / 7	NA	NA	146 / 88	146 / 89	146 / 89	NA	NA
	15	Cilnidipine	10-20mg	Yes	8W	30 / 19	19 / 12	19 / 12	NA	NA	164 / 100	150 / 95	150 / 95	NA	NA
Ashizawa	23	Cilnidipine	10mg	Yes	NA	7 / 2	12 / 4	18 / 10	6 / 3	NA	144 / 84	143 / 82	150 / 88	136 / 75	NA
Ikeda	49	Doxazosin	2.4mg*	Yes	12M	2 / 3	7 / 4	13 / 8	1 / 1	NA	138 / 88	137 / 86	146 / 92	129 / 80	NA
Verberk WJ	214	NA	NA	NA	48W	22 / 12	22 / 12	NA	NA	18 / 11	166 / 97	156 / 93	NA	NA	144 / 88
Eguchi K	308	Doxazosin, Atenolol (Stepwisely added)	3.4mg*, 12.6mg*	Yes	6M	12 / 10	10 / 7	13 / 8	8 / 6	NA	157 / 83	146 / 79	153 / 82	140 / 75	NA
Nakamoto H	21	Telmisartan	44.76mg*	No	8W	19 / 9	10 / 10	15 / 11	13 / 9	NA	167 / 97	144 / 93	145 / 93	144 / 93	NA
	19	Amlodipine	4.87mg*	No	8W	14 / 10	8 / 6	13 / 8	6 / 4	NA	164 / 95	143 / 91	144 / 92	140 / 90	NA

CBP indicates clinic blood pressure; HBP, home blood pressure; MoBP, morning blood pressure; EveBP, evening blood pressure; 24hBP, 24-hr average ambulatory blood pressure. Dose of antihypertensive medication with * is shown in the average.