Table S1. Average daily number of deaths by cause and age group during the summer months of the study period in the 9 cities participating in the EuroHEAT project.

		Total mortality					CVD mortality					Respiratory mortality				
	Study Period	**All ages**	**0-64 yrs**	**65-74 yrs**	**75-84 yrs**	**85+ yrs**	**All ages**	**0-64 yrs**	**65-74 yrs**	**75-84 yrs**	**85+ yrs**	**All ages**	**0-64 yrs**	**65-74 yrs**	**75-84 yrs**	**85+ yrs**
Athens	1997-2004	75	13	16	25	21	37	4	7	13	13	6	1	1	2	2
Barcelona	1991-2004	36	6	7	12	11	12	1	2	4	5	3	0	1	1	1
Budapest	1992-2001	62	16	15	19	12	33	5	8	11	9	2	0	1	1	0
London	1990-2004	144	27	30	48	39	58	8	12	21	17	20	2	3	7	8
Milan	1990-2003	26	5	5	8	8	9	1	1	3	4	2	0	0	1	1
Munich	1992-2004	31	7	6	9	9	13	1	2	4	6	2	0	0	1	1
Paris	1990-2002	114	31	19	28	36	32	4	4	10	14	7	1	1	2	3
Rome	1992-2004	53	9	12	17	15	21	2	3	7	9	3	0	1	1	1
Valencia	1994-2003	15	3	3	5	4	5	0	1	2	2	1	0	0	1	0

Table S2. Pooled interaction coefficient indicating the effect modification of the heat wave effect by ozone and PM_{10} concentrations on the daily number of total, cardiovascular and respiratory deaths for all ages and by age group.* Results from random effects meta-analysis in A: all cities; B: Mediterranean cites and; C: North Continental cities participating in the EuroHEAT project.

All cities			
		Heat-wave (HW)	
		Short Duration	**Long Duration**
Total mortality	**Age group**	**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	0.0004 (-0.0001, 0.0009)	0.0008 (-0.0013, 0.0028)
	0-64	0.0013 (0.0001, 0.0026)	0.0002 (-0.0023, 0.0026)
	65-74	0.0003 (-0.0006, 0.0012)	-0.0002 (-0.0031, 0.0026)
	75-84	0.0006 (-0.0002, 0.0014)	0.0012 (-0.0012, 0.0037)
	85+	-0.0004 (-0.0015, 0.0007)	0.0018 (-0.0005, 0.0042)
PM_{10}	all	0.0001 (-0.0006, 0.0009)	0.0030 (0.0003, 0.0057)
	0-64	0.0004 (-0.0016, 0.0025)	-0.0007 (-0.0037, 0.0022)
	65-74	-0.0002 (-0.0019, 0.0015)	0.0016 (-0.0010, 0.0042)
	75-84	-0.0005 (-0.0019, 0.0010)	0.0047 (0.0007, 0.0086)
	85+	0.0002 (-0.0024, 0.0027)	0.0044 (0.0011, 0.0076)
Cardiovascular mortality		**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	-0.0001 (-0.0009, 0.0007)	0.0007 (-0.0014, 0.0027)
	0-64	0.0005 (-0.0017, 0.0027)	0.0009 (-0.0024, 0.0041)
	65-74	0.0005 (-0.0017, 0.0027)	0.0009 (-0.0024, 0.0041)
	75-84	0.0005 (-0.0008, 0.0017)	0.0032 (0.0013, 0.0051)
	85+	-0.0003 (-0.0020, 0.0014)	0.0031 (-0.0002, 0.0064)
PM_{10}	all	0.0005 (-0.0008, 0.0017)	0.0034 (-0.0018, 0.0086)
	0-64	-0.0022 (-0.0063, 0.0019)	-0.0034 (-0.0096, 0.0029)
	65-74	-0.0008 (-0.0040, 0.0024)	0.0005 (-0.0042, 0.0053)
	75-84	0.0001 (-0.0022, 0.0024)	0.0055 (-0.0032, 0.0141)
	85+	0.0018 (-0.0022, 0.0058)	0.0041 (-0.0020, 0.0103)
Respiratory mortality		**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	0.0001 (-0.0017, 0.0019)	-0.0024 (-0.0066, 0.0018)
	0-64	0.0014 (-0.0039, 0.0068)	0.0018 (-0.0050, 0.0087)
	65-74	0.0005 (-0.0011, 0.0021)	0.0006 (-0.0029, 0.0041)
	75-84	0.0002 (-0.0022, 0.0027)	-0.0035 (-0.0104, 0.0035)
	85+	0.0001 (-0.0035, 0.0036)	-0.0003 (-0.0093, 0.0086)
PM_{10}	all	-0.0003 (-0.0042, 0.0037)	0.0049 (0.0004, 0.0095)
	0-64	0.0130 (0.0026, 0.0234)	0.0039 (-0.0127, 0.0205)
	65-74	0.0018 (-0.0041, 0.0077)	0.0099 (-0.0242, 0.0440)
	75-84	-0.0043 (-0.0125, 0.0038)	0.0045 (-0.0131, 0.0222)
	85+	-0.0080 (-0.0232, 0.0071)	0.0055 (-0.0032, 0.0142)

Mediterranean cities			
		Heat-wave (HW)	
		Short Duration	**Long Duration**
Total mortality	**Age group**	**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	-0.0000 (-0.0009, 0.0009)	-0.0001 (-0.0030, 0.0028)
	0-64	0.0006 (-0.0009, 0.0021)	-0.0011 (-0.0060, 0.0037)
	65-74	-0.0000 (-0.0013, 0.0013)	0.0007 (-0.0050, 0.0063)
	75-84	0.0011 (-0.0004, 0.0026)	0.0018 (-0.0030, 0.0065)
	85+	-0.0015 (-0.0031, 0.0001)	0.0017 (-0.0017, 0.0051)
PM_{10}	all	-0.0002 (-0.0016, 0.0012)	0.0007 (-0.0009, 0.0022)
	0-64	0.0005 (-0.0027, 0.0038)	-0.0018 (-0.0057, 0.0021)
	65-74	-0.0021 (-0.0051, 0.0009)	0.0017 (-0.0015, 0.0050)
	75-84	-0.0011 (-0.0048, 0.0026)	0.0017 (-0.0023, 0.0058)
	85+	0.0006 (-0.0050, 0.0062)	0.0011 (-0.0022, 0.0043)
Cardiovascular mortality		**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	-0.0009 (-0.0019, 0.0002)	0.0005 (-0.0021, 0.0031)
	0-64	0.0007 (-0.0023, 0.0038)	0.0013 (-0.0034, 0.0061)
	65-74	-0.0008 (-0.0031, 0.0015)	0.0019 (-0.0027, 0.0064)
	75-84	-0.0003 (-0.0028, 0.0021)	0.0039 (0.0006, 0.0072)
	85+	-0.0012 (-0.0036, 0.0012)	0.0028 (-0.0001, 0.0058)
PM_{10}	all	0.0010 (-0.0015, 0.0034)	-0.0010 (-0.0033, 0.0014)
	0-64	-0.0015 (-0.0085, 0.0055)	-0.0057 (-0.0166, 0.0051)
	65-74	-0.0034 (-0.0088, 0.0019)	-0.0030 (-0.0091, 0.0031)
	75-84	-0.0002 (-0.0059, 0.0054)	-0.0029 (-0.0086, 0.0028)
	85+	0.0037 (-0.0041, 0.0115)	-0.0004 (-0.0051, 0.0042)
Respiratory mortality		**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	-0.0001 (-0.0033, 0.0032)	-0.0022 (-0.0088, 0.0045)
	0-64	0.0087 (-0.0272, 0.0446)	-0.0014 (-0.0109, 0.0082)
	65-74	0.0078 (-0.0048, 0.0205)	-0.0092 (-0.0164, -0.0020)
	75-84	-0.0007 (-0.0056, 0.0042)	-0.0030 (-0.0139, 0.0078)
	85+	-0.0001 (-0.0074, 0.0071)	-0.0002 (-0.0138, 0.0134)
PM_{10}	all	-0.0057 (-0.0144, 0.0031)	0.0022 (-0.0025, 0.0070)
	0-64	0.0156 (-0.0069, 0.0382)	-0.0074 (-0.0311, 0.0163)
	65-74	0.0003 (-0.0126, 0.0132)	0.0181 (0.0011, 0.0350)
	75-84	-0.0039 (-0.0211, 0.0134)	0.0032 (-0.0059, 0.0123)
	85+	-0.0169 (-0.0343, 0.0005)	-0.0018 (-0.0104, 0.0068)

North-Continental cities			
		Heat-wave (HW)	
		Short Duration	Long Duration
Total mortality	**Age group**	**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	-0.0003 (-0.0019, 0.0013)	0.0087 (0.0055, 0.0118)
	0-64	0.0006 (-0.0009, 0.0020)	0.0030 (0.0009, 0.0050)
	65-74	0.0006 (-0.0009, 0.0020)	0.0019 (-0.0019, 0.0057)
	75-84	0.0001 (-0.0022, 0.0024)	0.0092 (0.0054, 0.0130)
	85+	0.0001 (-0.0022, 0.0024)	0.0087 (0.0037, 0.0138)
PM_{10}	all	0.0032 (-0.0032, 0.0096)	0.0052 (-0.0046, 0.0150)
	0-64	0.0119 (0.0027, 0.0212)	0.0146 (-0.0028, 0.0321)
	65-74	0.0118 (0.0015, 0.0220)	0.0146 (-0.0028, 0.0321)
	75-84	0.0031 (-0.0012, 0.0074)	0.0032 (-0.0036, 0.0100)
	85+	0.0031 (-0.0012, 0.0074)	-0.0006 (-0.0161, 0.0149)
Cardiovascular mortality		**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	0.0005 (-0.0004, 0.0014)	0.0016 (0.0002, 0.0029)
	0-64	0.0005 (-0.0004, 0.0014)	0.0008 (-0.0029, 0.0044)
	65-74	0.0001 (-0.0014, 0.0017)	0.0094 (0.0063, 0.0126)
	75-84	0.0001 (-0.0014, 0.0017)	0.0094 (0.0063, 0.0126)
	85+	0.0002 (-0.0030, 0.0033)	-0.0002 (-0.0052, 0.0048)
PM_{10}	all	0.0022 (-0.0044, 0.0088)	0.0013 (-0.0113, 0.0140)
	0-64	0.0022 (-0.0044, 0.0088)	-0.0254 (-0.1213, 0.0706)
	65-74	0.0006 (-0.0023, 0.0034)	0.0004 (-0.0039, 0.0047)
	75-84	0.0006 (-0.0023, 0.0034)	-0.0050 (-0.0165, 0.0064)
	85+	-0.0009 (-0.0055, 0.0037)	0.0112 (0.0027, 0.0197)
Respiratory mortality		**Pooled HW-pollutant interaction coeff (95% CI)**	**Pooled HW-pollutant interaction coeff (95% CI)**
Ozone	all	-0.0003 (-0.0041, 0.0036)	-0.0002 (-0.0052, 0.0048)
	0-64	-0.0026 (-0.0076, 0.0025)	-0.0005 (-0.0094, 0.0084)
	65-74	-0.0026 (-0.0076, 0.0025)	-0.0005 (-0.0094, 0.0084)
	75-84	0.0016 (-0.0005, 0.0037)	0.0006 (-0.0029, 0.0040)
	85+	0.0016 (-0.0005, 0.0037)	-0.0014 (-0.0076, 0.0048)
PM_{10}	all	-0.0055 (-0.0177, 0.0067)	0.0056 (-0.0443, 0.0556)
	0-64	0.0016 (-0.0018, 0.0050)	0.0021 (-0.0025, 0.0067)
	65-74	0.0016 (-0.0018, 0.0050)	0.0018 (-0.0037, 0.0074)
	75-84	0.0037 (-0.0012, 0.0086)	0.0123 (0.0042, 0.0203)
	85+	0.0037 (-0.0012, 0.0086)	0.0123 (0.0042, 0.0203)

* adjusting for barometric pressure, wind speed, calendar month, day of the week, holiday and time trend.