

Average Finish Times by Year

Year	#Runners	#Female	%Female	Temp at 3pm	Avg time M (s)	Avg time M	Std M (s)	Std M	Avg time F (s)	Avg time F	Std F (s)	Std F	Avg time all (s)	Avg time	std all (s)	Std all
2010	37982	10996	29,0%	21,7	7439	02:03:59	1175	00:19:35	8145	02:15:45	1162	00:19:22	7644	02:07:24	1214	00:20:14
2011	42838	13179	30,8%	16,6	7026	01:57:06	1107	00:18:27	7799	02:09:59	1126	00:18:46	7264	02:01:04	1169	00:19:29
2012	44094	13750	31,2%	13,6	6964	01:56:04	1141	00:19:01	7750	02:09:10	1145	00:19:05	7209	02:00:09	1199	00:19:59
2013	44919	14814	33,0%	25	7522	02:05:22	1193	00:19:53	8206	02:16:46	1200	00:20:00	7747	02:09:07	1238	00:20:38
2014	47187	16323	34,6%	18,9	7178	01:59:38	1224	00:20:24	7990	02:13:10	1218	00:20:18	7459	02:04:19	1282	00:21:22
2015	46207	16086	34,8%	14,7	7063	01:57:43	1200	00:20:00	7845	02:10:45	1184	00:19:44	7335	02:02:15	1251	00:20:51
2016	44972	15662	34,8%	15,1	7058	01:57:38	1200	00:20:00	7876	02:11:16	1187	00:19:47	7343	02:02:23	1257	00:20:57
2017	42252	14557	34,5%	13,9	7047	01:57:27	1183	00:19:43	7849	02:10:49	1213	00:20:13	7323	02:02:03	1253	00:20:53
2018	39911	13775	34,5%	20	7224	02:00:24	1277	00:21:17	8080	02:14:40	1302	00:21:42	7520	02:05:20	1349	00:22:29
2019	33134	11267	34,0%	19,4	7198	01:59:58	1344	00:22:24	8066	02:14:26	1325	00:22:05	7493	02:04:53	1399	00:23:19
Total	423496	140409	33,2%	17,89		01:59:28		00:20:14		02:12:33		00:20:15		02:03:49		00:21:08

Proportion of Runners Hitting the Wall and Running Negative Splits per year

Hitting the wall

Year	Temp at 3pm	#runners	M	F	F HTW	F HTW %	M HTW	M HTW %	Tot HTW	HTW %
2010	21,7	37982	26986	10996	622	5,7%	4519	16,7%	5141	13,5%
2011	16,6	42838	29659	13179	507	3,8%	1851	6,2%	2358	5,5%
2012	13,6	44094	30344	13750	607	4,4%	2161	7,1%	2768	6,3%
2013	25	44919	30105	14814	1123	7,6%	5066	16,8%	6189	13,8%
2014	18,9	47187	30864	16323	1179	7,2%	3828	12,4%	5007	10,6%
2015	14,7	46207	30121	16086	794	4,9%	2545	8,4%	3339	7,2%
2016	15,1	44972	29310	15662	573	3,7%	1949	6,6%	2522	5,6%
2017	13,9	42252	27695	14557	559	3,8%	1661	6,0%	2220	5,3%
2018	20	39911	26136	13775	814	5,9%	2800	10,7%	3614	9,1%
2019	19,4	33134	21867	11267	757	6,7%	2426	11,1%	3183	9,6%
Total		423496	283087	140409	7535	5,4%	28806	10,2%	36341	8,6%

Negative Splits

Year	Temp at 3pm	#runners	M	F	Neg Split F	Neg Split F %	Neg split M	Neg Split M%	Tot Neg split	Neg Split%
2010	21,7	37982	26986	10996	740	6,7%	1431	5,3%	2171	5,7%
2011	16,6	42838	29659	13179	1597	12,1%	4343	14,6%	5940	13,9%
2012	13,6	44094	30344	13750	1725	12,5%	4572	15,1%	6297	14,3%
2013	25	44919	30105	14814	1178	8,0%	1819	6,0%	2997	6,7%
2014	18,9	47187	30864	16323	1058	6,5%	2107	6,8%	3165	6,7%
2015	14,7	46207	30121	16086	1592	9,9%	3547	11,8%	5139	11,1%
2016	15,1	44972	29310	15662	1601	10,2%	2841	9,7%	4442	9,9%
2017	13,9	42252	27695	14557	1834	12,6%	3969	14,3%	5803	13,7%
2018	20	39911	26136	13775	1035	7,5%	2098	8,0%	3133	7,8%
2019	19,4	33134	21867	11267	611	5,4%	1788	8,2%	2399	7,2%
Total		423496	283087	140409	12971	9,2%	28515	10,1%	41486	9,8%

Proportion of runners hitting the wall and running negative splits by age group

Female

Age	#Runners	HTW	HTW %	Neg split	Neg split %
F 17 - 29	39 300	2751	7,0%	4849	12,3%
F 30 - 39	41 320	1957	4,7%	4173	10,1%
F 40 - 49	38 938	1648	4,2%	3014	7,7%
F 50 -59	16 488	912	5,5%	770	4,7%
F > 60	3 331	179	5,4%	99	3,0%

Male

Age	#Runners	HTW	HTW %	Neg split	Neg split %
M 17 - 29	49 731	6447	13,0%	7322	14,7%
M 30 - 39	84 164	8597	10,2%	9792	11,6%
M 40 - 49	85 337	7638	9,0%	7653	9,0%
M 50 -59	45 773	4245	9,3%	2881	6,3%
M > 60	15 941	1579	9,9%	700	4,4%

Proportion of runners hitting the wall and running negative splits by finish time group

HTW

Time (min)	#runners	F	M	HTW	HTW F	HTW M	% F HTW	% M HTW	% HTW
< 75	595	62	533	1	0	1	0,0%	0,2%	0,2%
75-89	11358	519	10839	37	0	37	0,0%	0,3%	0,3%
90-104	63032	7063	55969	831	24	807	0,3%	1,4%	1,3%
105-119	128446	32625	95821	4701	217	4484	0,7%	4,7%	3,7%
120-134	109619	44164	65455	9649	1078	8571	2,4%	13,1%	8,8%
135-149	64177	31194	32983	10185	2155	8030	6,9%	24,3%	15,9%
150-165	28515	15146	13369	6052	1977	4075	13,1%	30,5%	21,2%
165-179	11529	6342	5187	3105	1263	1842	19,9%	35,5%	26,9%
> 180	6225	3294	2931	1780	821	959	24,9%	32,7%	28,6%
Total	423496	140409	283087	36341	7535	28806	5,4%	10,2%	8,6%

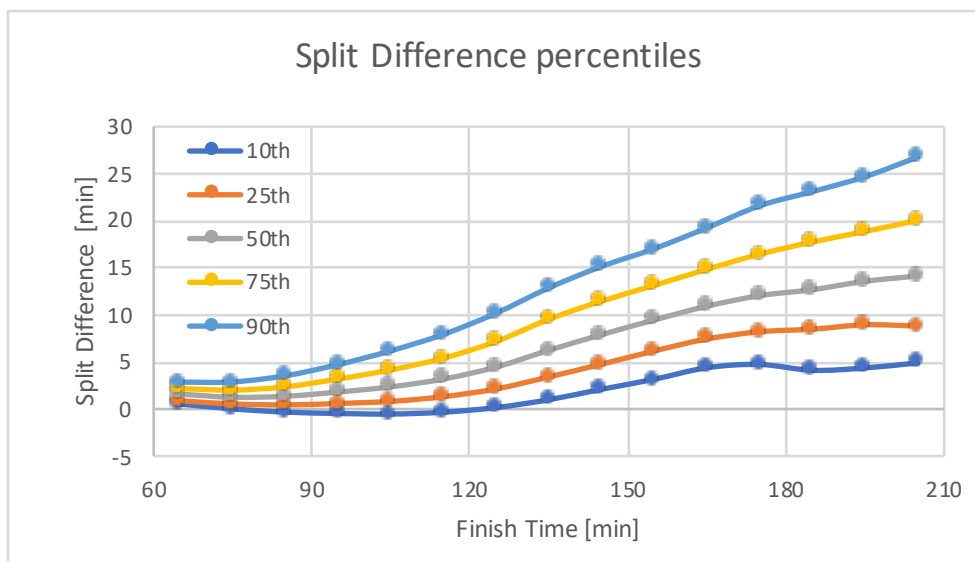
Negative Splits

Time (min)	#runners	F	M	Neg Split	F Neg Split	M Neg Split	% F Neg Split	% M Neg Split	% Neg Split
< 75	595	62	533	30	0	30	0,0%	5,6%	5,0%
75-89	11358	519	10839	1690	35	1655	6,7%	15,3%	14,9%
90-104	63032	7063	55969	9895	1009	8886	14,3%	15,9%	15,7%
105-119	128446	32625	95821	16388	4720	11668	14,5%	12,2%	12,8%
120-134	109619	44164	65455	9240	4615	4625	10,4%	7,1%	8,4%
135-149	64177	31194	32983	3044	1890	1154	6,1%	3,5%	4,7%
150-165	28515	15146	13369	718	433	285	2,9%	2,1%	2,5%
165-179	11529	6342	5187	273	155	118	2,4%	2,3%	2,4%
> 180	6225	3294	2931	208	114	94	3,5%	3,2%	3,3%
Total	423496	140409	283087	41486	12971	28515	9,2%	10,1%	9,8%

Time lost during second half of race (split difference) and
pacing patterns for relative pace during each segment.

Column1	10th	25th	50th	75th	90th
3600	31,992375	53,3619375	95,431875	130,5746875	171,395375
4200	1,056275	32,20825	74,958125	120,8079375	173,020975
4800	-19,55875	26,564125	81,5145	141,3473125	212,12425
5400	-28,1391	35,4643125	108,3335	191,12625	283,238625
6000	-31,94455	48,8506875	141,657875	249,4039375	371,129
6600	-20,017	78,9430625	191,427875	324,5218125	476,05575
7200	9,363	128,289625	267,78925	430,7731875	611,338075
7800	59,59625	204,815625	374,662125	572,057875	772,326
8400	126,1955	285,86525	474,164125	688,0320625	909,102125
9000	189,9169	370,416	567,5375	787,9265	1021,96485
9600	263,3016	446,564	655,64875	890,98925	1155,18395
10200	284,18875	492,516	722,69975	986,8575	1295,5395
10800	246,6415	509,036625	760,77375	1064,754125	1385,69925
11400	261,944025	536,6329375	814,27525	1131,584875	1480,965675
12000	294,132	528,930375	847,887	1202,93425	1605,70095

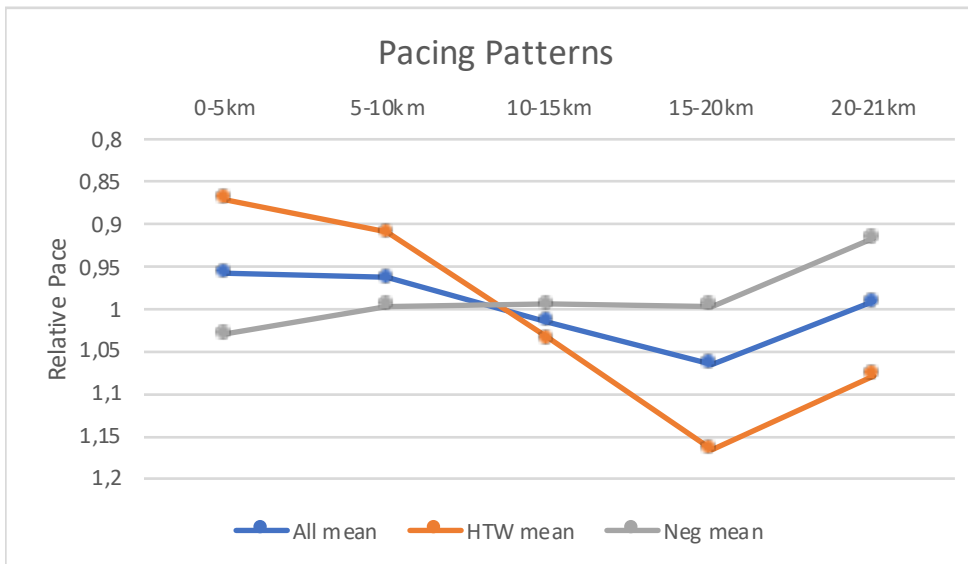
Column1	10th	25th	50th	75th	90th
65	0,53320625	0,889365625	1,59053125	2,176244792	2,856589583
75	0,01760458	0,536804167	1,24930208	2,013465625	2,883682917
85	-0,3259792	0,442735417	1,358575	2,355788542	3,535404167
95	-0,468985	0,591071875	1,80555833	3,1854375	4,72064375
105	-0,5324092	0,814178125	2,36096458	4,156732292	6,185483333
115	-0,3336167	1,315717708	3,19046458	5,408696875	7,9342625
125	0,15605	2,138160417	4,46315417	7,179553125	10,18896792
135	0,99327083	3,41359375	6,24436875	9,534297917	12,8721
145	2,10325833	4,764420833	7,90273542	11,46720104	15,15170208
155	3,16528167	6,1736	9,45895833	13,13210833	17,0327475
165	4,38836	7,442733333	10,9274792	14,84982083	19,25306583
175	4,73647917	8,2086	12,0449958	16,447625	21,592325
185	4,11069167	8,48394375	12,6795625	17,74590208	23,0949875
195	4,36573375	8,943882292	13,5712542	18,85974792	24,68276125
205	4,9022	8,81550625	14,13145	20,04890417	26,7616825



Relative Pace (compared to overall pace) on each segment

(mean runner, mean HTW runner, mean runner from negative/equal split categories).

	0-5km	5-10km	10-15km	15-20km	20-21km
All mean	0,95788	0,96	1,01	1,06541	0,99119
All std	0,05037	0,03105	0,03	0,05	0,07686
HTW mean	0,87125	0,91042	1,04	1,17	1,07766
Htw std	0,04221	0,0342	0,06	0,06	0,13683
Neg mean	1,02947	0,99667	1,00	1,00	0,91645
Neg std	0,02947	0,02736	0,02	0,02	0,0676

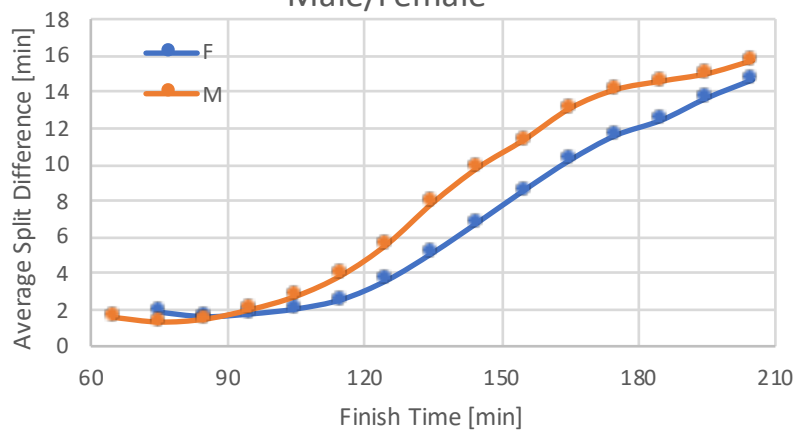


Split Difference by finish time for male/females.

Sec	F	M
3600		95,14610823
4200	112,5607288	79,85878864
4800	97,61997717	89,56147815
5400	106,6463318	121,075841
6000	123,2077482	165,2256076
6600	154,3454603	234,5911175
7200	218,3243999	337,5048583
7800	308,8979785	474,2263218
8400	410,6603249	591,0732615
9000	515,3749721	682,0115222
9600	614,2078232	785,2797413
10200	695,8531332	847,2449294
10800	746,1750439	875,2956642
11400	819,3723533	899,8708564
12000	879,5134355	943,0212559

Min	F	M
65		1,58576847
75	1,876012146	1,330979811
85	1,62699962	1,492691302
95	1,777438863	2,017930684
105	2,05346247	2,753760126
115	2,572424338	3,909851958
125	3,638739998	5,625080972
135	5,148299642	7,90377203
145	6,844338748	9,851221025
155	8,589582868	11,3668587
165	10,23679705	13,08799569
175	11,59755222	14,12074882
185	12,43625073	14,58826107
195	13,65620589	14,99784761
205	14,65855726	15,71702093

Average Split difference by finish time
Male/Female



Average Split Difference by finish time grouped by age

Sec	<30	30-40	40-50	>50
3600	96,08192568	85,91247283		
4200	93,76095923	74,4148533	68,85971154	
4800	94,79970276	88,00469749	88,01186094	86,9519405
5400	116,51362	121,1609225	121,346625	117,9999685
6000	150,1920756	161,441197	161,99696	154,5056915
6600	202,4894936	216,610398	214,8972982	210,8632086
7200	283,7049273	297,302528	291,6500541	289,7782066
7800	399,8178674	402,4518748	397,0897294	393,8893732
8400	518,7286457	505,0736208	493,7764599	486,2180192
9000	624,674482	597,2500409	588,1627722	573,0713705
9600	744,1168931	713,4213767	667,6318677	655,7853075
10200	857,7061975	782,3487477	735,9252995	708,5543326
10800	920,2649369	858,11917	768,3430577	739,7090273
11400	940,5777645	940,3346263	810,2421753	809,0260206
12000	1054,182101	989,0702683	882,3617396	858,931068

Min	<30	30-40	40-50	>50
65	1,601365428	1,431874547		
75	1,562682654	1,240247555	1,147661859	
85	1,579995046	1,466744958	1,466864349	1,449199008
95	1,941893667	2,019348708	2,02244375	1,966666141
105	2,50320126	2,690686616	2,699949334	2,575094858
115	3,374824893	3,6101733	3,581621637	3,514386811
125	4,728415455	4,955042133	4,860834235	4,829636776
135	6,663631123	6,707531247	6,618162157	6,564822887
145	8,645477428	8,417893681	8,229607665	8,103633653
155	10,41124137	9,954167349	9,80271287	9,551189508
165	12,40194822	11,89035628	11,12719779	10,92975513
175	14,29510329	13,03914579	12,26542166	11,80923888
185	15,33774895	14,30198617	12,80571763	12,32848379
195	15,67629607	15,67224377	13,50403626	13,48376701
205	17,56970168	16,48450447	14,70602899	14,3155178

