

LCM Time	SCM Time	15m	20m	25m (hand)	35m	40m	45m	50m (hand)	60m	65m	70m	75m (hand)	85m	90m	95m	1st 50m	2nd 50m	100m SCM	100m LCM
58.0	56.1	6.44	9.38	12.07	17.55	20.46	23.37	26.15	31.80	35.67	38.08	40.96	46.83	49.97	53.11	26.15	29.99	56.1	58.0
59.0	57.1	6.59	9.57	12.32	17.90	20.86	23.82	26.65	32.41	36.32	38.78	41.72	47.69	50.88	54.08	26.65	30.49	57.1	59.0
60.0	58.2	6.75	9.77	12.57	18.25	21.26	24.27	27.16	33.01	36.97	39.49	42.48	48.55	51.80	55.05	27.16	31.00	58.2	60.0
61.0	59.2	6.90	9.97	12.82	18.60	21.66	24.72	27.66	33.62	37.62	40.19	43.24	49.41	52.71	56.01	27.66	31.50	59.2	61.0
62.0	60.2	7.05	10.17	13.08	18.95	22.06	25.17	28.17	34.22	38.27	40.90	44.00	50.28	53.63	56.98	28.17	32.01	60.2	62.0
63.0	61.2	7.20	10.37	13.33	19.30	22.46	25.62	28.67	34.83	38.92	41.60	44.76	51.14	54.54	57.95	28.67	32.51	61.2	63.0
64.0	62.2	7.36	10.57	13.58	19.65	22.86	26.07	29.18	35.43	39.57	42.31	45.52	52.00	55.45	58.91	29.18	33.02	62.2	64.0
65.0	63.2	7.51	10.77	13.83	20.00	23.26	26.52	29.68	36.04	40.22	43.01	46.29	52.87	56.37	59.88	29.68	33.52	63.2	65.0
66.0	64.2	7.66	10.96	14.08	20.35	23.66	26.97	30.19	36.64	40.87	43.72	47.05	53.73	57.28	60.84	30.19	34.03	64.2	66.0
67.0	65.2	7.81	11.16	14.34	20.70	24.06	27.42	30.69	37.25	41.52	44.42	47.81	54.59	58.20	61.81	30.69	34.53	65.2	67.0
68.0	66.2	7.97	11.36	14.59	21.05	24.46	27.87	31.20	37.85	42.17	45.13	48.57	55.46	59.11	62.78	31.20	35.04	66.2	68.0
69.0	67.2	8.12	11.56	14.84	21.40	24.86	28.32	31.70	38.46	42.82	45.83	49.33	56.32	60.03	63.74	31.70	35.54	67.2	69.0
70.0	68.3	8.27	11.76	15.09	21.75	25.26	28.77	32.21	39.07	43.47	46.54	50.09	57.18	60.94	64.71	32.21	36.05	68.3	70.0
71.0	69.3	8.42	11.96	15.34	22.10	25.66	29.22	32.71	39.67	44.12	47.24	50.85	58.04	61.86	65.67	32.71	36.55	69.3	71.0
72.0	70.3	8.58	12.16	15.60	22.45	26.06	29.67	33.22	40.28	44.77	47.95	51.61	58.91	62.77	66.64	33.22	37.06	70.3	72.0
73.0	71.3	8.73	12.35	15.85	22.80	26.46	30.12	33.72	40.88	45.42	48.65	52.37	59.77	63.68	67.61	33.72	37.56	71.3	73.0
74.0	72.3	8.88	12.55	16.10	23.15	26.86	30.57	34.23	41.49	46.07	49.36	53.13	60.63	64.60	68.57	34.23	38.07	72.3	74.0
75.0	73.3	9.03	12.75	16.35	23.50	27.26	31.02	34.73	42.09	46.72	50.06	53.89	61.50	65.51	69.54	34.73	38.57	73.3	75.0
76.0	74.3	9.19	12.95	16.60	23.85	27.66	31.47	35.24	42.70	47.37	50.77	54.65	62.36	66.43	70.50	35.24	39.08	74.3	76.0
77.0	75.3	9.34	13.15	16.86	24.20	28.06	31.92	35.74	43.30	48.02	51.47	55.42	63.22	67.34	71.47	35.74	39.58	75.3	77.0
78.0	76.3	9.49	13.35	17.11	24.55	28.46	32.37	36.25	43.91	48.67	52.18	56.18	64.08	68.26	72.44	36.25	40.09	76.3	78.0
79.0	77.3	9.64	13.55	17.36	24.90	28.86	32.82	36.75	44.51	49.32	52.88	56.94	64.95	69.17	73.40	36.75	40.59	77.3	79.0
80.0	78.4	9.79	13.74	17.61	25.25	29.26	33.27	37.26	45.12	49.97	53.59	57.70	65.81	70.09	74.37	37.26	41.10	78.4	80.0
81.0	79.4	9.95	13.94	17.86	25.60	29.66	33.72	37.76	45.72	50.62	54.29	58.46	66.67	71.00	75.33	37.76	41.60	79.4	81.0
82.0	80.4	10.10	14.14	18.12	25.95	30.06	34.17	38.27	46.33	51.27	55.00	59.22	67.54	71.91	76.30	38.27	42.11	80.4	82.0
83.0	81.4	10.25	14.34	18.37	26.30	30.46	34.62	38.77	46.93	51.92	55.70	59.98	68.40	72.83	77.27	38.77	42.61	81.4	83.0
84.0	82.4	10.40	14.54	18.62	26.65	30.86	35.07	39.28	47.54	52.57	56.41	60.74	69.26	73.74	78.23	39.28	43.12	82.4	84.0
85.0	83.4	10.56	14.74	18.87	27.00	31.26	35.52	39.78	48.14	53.22	57.11	61.50	70.13	74.66	79.20	39.78	43.62	83.4	85.0
86.0	84.4	10.71	14.94	19.13	27.35	31.66	35.97	40.29	48.75	53.87	57.82	62.26	70.99	75.57	80.16	40.29	44.13	84.4	86.0
87.0	85.4	10.86	15.14	19.38	27.70	32.06	36.42	40.79	49.35	54.52	58.52	63.02	71.85	76.49	81.13	40.79	44.63	85.4	87.0
88.0	86.4	11.01	15.33	19.63	28.05	32.46	36.87	41.30	49.96	55.17	59.23	63.78	72.71	77.40	82.10	41.30	45.14	86.4	88.0

### How to use the British Swimming 'SpeedCharts'

- Use an athlete's target longcourse race time to set training times for short sprints – athletes should aim to achieve actual race speed in training for up to 60% of race distance\*\*\*. E.g., An athlete aiming to swim 62.0 longcourse, should be able to repeat 34.22 for 60m efforts.
- Determine projected 100m times, based on training times over shorter distances. Use the charts in this way to ensure that your training is speed specific. This is not a tool to predict race times, but merely a means of ensuring that sufficient speed is achieved in training.

**Always use the 'SpeedCharts' in conjunction with other race analysis information – e.g. Stroke Rates, Stroke Counts, Underwater Parameters (distance, no. of kicks) and Breathing Patterns – to further improve the specificity of training, and always ensure that speed is achieved through technically excellent swimming!**

**All Times are based on the time from GUN to HEAD**

If any other timing method is used then the appropriate adjustment must be made!

Timing Method Adjustments:	
Feet Off Blocks	+0.75
Time to Hand	+0.25
Feet Off Wall	-0.50

- If calculating training times for short intervals – look up chart for time, then subtract the adjustment
- If determining projected 100m time – add adjustment then look up chart with adjusted time

\* Adjustments are approximate

LCM Time	SCM Time	Last x Metres*					2nd 50m Push Targets (feet off)**								SCM 100m	LCM 100m
		Last 35m	Last 30m	Last 25m	Last 15m	Last 10m	15m	20m	25m	35m	40m	45m	50m			
58.0	56.1	20.46	18.06	13.88	9.31	6.17	8.22	10.63	13.51	19.38	22.52	25.66	28.69	56.1	58.0	
59.0	57.1	20.82	18.36	14.12	9.46	6.26	8.37	10.83	13.77	19.73	22.93	26.13	29.19	57.1	59.0	
60.0	58.2	21.18	18.67	14.37	9.60	6.36	8.51	11.03	14.02	20.09	23.34	26.59	29.70	58.2	60.0	
61.0	59.2	21.54	18.97	14.62	9.75	6.45	8.66	11.23	14.28	20.45	23.75	27.05	30.20	59.2	61.0	
62.0	60.2	21.90	19.28	14.87	9.90	6.55	8.80	11.43	14.53	20.81	24.16	27.51	30.71	60.2	62.0	
63.0	61.2	22.26	19.58	15.12	10.04	6.64	8.95	11.63	14.79	21.17	24.57	27.97	31.21	61.2	63.0	
64.0	62.2	22.62	19.89	15.37	10.19	6.74	9.09	11.83	15.05	21.52	24.98	28.43	31.72	62.2	64.0	
65.0	63.2	22.98	20.19	15.62	10.34	6.84	9.24	12.03	15.30	21.88	25.39	28.89	32.22	63.2	65.0	
66.0	64.2	23.34	20.50	15.87	10.48	6.93	9.38	12.23	15.56	22.24	25.79	29.35	32.73	64.2	66.0	
67.0	65.2	23.70	20.80	16.12	10.63	7.03	9.53	12.43	15.81	22.60	26.20	29.82	33.23	65.2	67.0	
68.0	66.2	24.06	21.11	16.37	10.78	7.12	9.67	12.63	16.07	22.96	26.61	30.28	33.74	66.2	68.0	
69.0	67.2	24.42	21.41	16.62	10.93	7.22	9.82	12.83	16.33	23.32	27.02	30.74	34.24	67.2	69.0	
70.0	68.3	24.78	21.72	16.86	11.07	7.31	9.96	13.03	16.58	23.67	27.43	31.20	34.75	68.3	70.0	
71.0	69.3	25.14	22.02	17.11	11.22	7.41	10.11	13.23	16.84	24.03	27.84	31.66	35.25	69.3	71.0	
72.0	70.3	25.50	22.33	17.36	11.37	7.50	10.26	13.43	17.09	24.39	28.25	32.12	35.76	70.3	72.0	
73.0	71.3	25.86	22.63	17.61	11.51	7.60	10.40	13.63	17.35	24.75	28.66	32.58	36.26	71.3	73.0	
74.0	72.3	26.22	22.94	17.86	11.66	7.69	10.55	13.83	17.61	25.11	29.07	33.04	36.77	72.3	74.0	
75.0	73.3	26.58	23.24	18.11	11.81	7.79	10.69	14.03	17.86	25.46	29.48	33.51	37.27	73.3	75.0	
76.0	74.3	26.94	23.55	18.36	11.95	7.89	10.84	14.23	18.12	25.82	29.89	33.97	37.78	74.3	76.0	
77.0	75.3	27.30	23.85	18.61	12.10	7.98	10.98	14.43	18.37	26.18	30.30	34.43	38.28	75.3	77.0	
78.0	76.3	27.66	24.15	18.86	12.25	8.08	11.13	14.63	18.63	26.54	30.71	34.89	38.79	76.3	78.0	
79.0	77.3	28.02	24.46	19.11	12.39	8.17	11.27	14.83	18.89	26.90	31.12	35.35	39.29	77.3	79.0	
80.0	78.4	28.38	24.76	19.35	12.54	8.27	11.42	15.03	19.14	27.25	31.53	35.81	39.80	78.4	80.0	
81.0	79.4	28.74	25.07	19.60	12.69	8.36	11.56	15.23	19.40	27.61	31.94	36.27	40.30	79.4	81.0	
82.0	80.4	29.10	25.37	19.85	12.84	8.46	11.71	15.43	19.65	27.97	32.35	36.73	40.81	80.4	82.0	
83.0	81.4	29.46	25.68	20.10	12.98	8.55	11.85	15.63	19.91	28.33	32.76	37.19	41.31	81.4	83.0	
84.0	82.4	29.82	25.98	20.35	13.13	8.65	12.00	15.83	20.17	28.69	33.17	37.66	41.82	82.4	84.0	
85.0	83.4	30.18	26.29	20.60	13.28	8.74	12.14	16.03	20.42	29.04	33.58	38.12	42.32	83.4	85.0	
86.0	84.4	30.54	26.59	20.85	13.42	8.84	12.29	16.23	20.68	29.40	33.99	38.58	42.83	84.4	86.0	
87.0	85.4	30.90	26.90	21.10	13.57	8.93	12.43	16.43	20.93	29.76	34.40	39.04	43.33	85.4	87.0	
88.0	86.4	31.26	27.20	21.35	13.72	9.03	12.58	16.63	21.19	30.12	34.81	39.50	43.84	86.4	88.0	

## 100M BREASTSTROKE FACTS

Men's LCM Records (Current at 1 September 2020)				
Record	Time	Split	Name	Date
World	56.88	(26.63)	Adam PEATY	21 Jul 2019
European	56.88	(26.63)	Adam PEATY	21 Jul 2019
Commonwealth	56.88	(26.63)	Adam PEATY	21 Jul 2019
British	56.88	(26.63)	Adam PEATY	21 Jul 2019
Fastest Start	5.87		Kirill PRIGODA	
Fastest Turn	8.60		Kosuke KITAJIMA	
Men's LCM International Benchmarks				
Gold	57.13	These represent the fastest time it has taken to Win, Medal, make a final or semi- final at World Championships or Olympics between 2015 and 2020.		2016
Medal	58.63			2019
Final	59.21			2019
Semi	59.75			2019

Women's LCM Records (Current at 1 September 2020)				
Record	Time	Split	Name	Date
World	1:04.13	(29.08)	Lillia KING	25 Jul 2017
European	1:04.35	(29.97)	Ruta MEILUTYTE	29 Jul 2013
Commonwealth	1:05.09	(30.83)	Leisel JONES	20 Mar 2006
British	1:06.34	(31.39)	Siobhan O'CONNOR	1 Jul 2016
Fastest Start	7.08		Ruta MEILUTYTE	
Fastest Turn	9.60		Yuliya EFIMOVA	
Women's LCM International Benchmarks				
Gold	1:04.13	These represent the fastest time it has taken to Win, Medal, make a final or semi- final at World Championships or Olympics between 2015 and 2020.		2017
Medal	1:05.05			2017
Semi	1:06.73			2016
Final	1:07.22			2016

### Using the British Swimming 'SpeedCharts' to develop specific training sets

- Use short intervals of 15m-35m, from a dive, to develop alactic power and maximum swimming speed. Ensure enough recovery to repeat fast swimming.
- Use medium distance intervals (35m-75m), also from a dive, to develop the lactate production systems. The efforts must be performed maximally on long rest (preferably with some active recovery), to ensure adequate recovery and repeatable high quality efforts.
- Use the 'Last x Metres' and '2nd Lap Push Targets' to create lactate tolerance sets incorporating repeats of varying distances that are specific to the 2nd 50m of a 100m race. Rest intervals for these sets should be short enough to allow accumulation of lactate, but not so short that race specific speeds are no longer attainable.

Always use the 'SpeedCharts' in conjunction with other race analysis information – e.g. Stroke Rates, Stroke Counts, Underwater Parameters (distance, no. of kicks) and Breathing Patterns – to further improve the specificity of training, and always ensure that speed is achieved through technically excellent swimming!

\* 'Last x Metres' times are timed from head to hand, except for 'last 25m', which is timed from feet-off to hand.

\*\* '2nd Lap Push Targets' are based on time from feet-off the wall to head at the specified distance, except for the 25m and 50m push target, which are to hand-touch. (Calculated based on a hands-to-feet-off time for a breaststroke turn of 1.3s)

\*\*\*The physiological effect of different distance intervals, and the ability to achieve race-specific speeds, is dependent upon gender, training background, fatigue and the physiology of the individual athlete. Conversion of Shortcourse to Longcourse times is also individual, depending particularly on an athlete's turn ability.