

VO₂Max Norms Chart

Age		Low	Fair	Avg.	Good	High	Athletic	Olympic
Women	20-29	<28	29-34	35-43	44-48	49-53	54-59	60+
	30-39	<27	28-33	34-41	42-47	48-52	53-58	59+
	40-49	<25	26-31	32-40	41-45	46-50	51-56	57+
	50-65	<21	22-28	29-36	37-41	42-45	46-49	50+
	Men							
Men	20-29	<38	39-43	44-51	52-56	57-62	63-69	70+
	30-39	<34	35-39	40-47	48-51	52-57	58-64	65+
	40-49	<30	31-35	36-43	44-47	48-53	54-60	61+
	50-59	<25	26-31	32-39	40-43	44-48	49-55	56+
	60-65	<21	22-26	27-35	36-39	40-44	45-49	50+

Source: VO₂Max norms were adapted from Astrand: ACTA Physiol Scand. 49 (Suppl): 169, 1960
 Note: VO₂ is expressed as milliliters of oxygen per kilogram of body weight per minute.

VO₂ at Threshold Norms Chart

Age		Low	Fair	Avg.	Good	High	Athletic	Olympic
Women	20-29	<24	25-29	30-37	38-41	42-45	46-50	51+
	30-39	<23	24-28	29-35	36-40	41-44	45-49	50+
	40-49	<21	22-26	27-34	35-38	39-42	43-47	48+
	50-65	<18	19-24	25-31	32-35	36-38	39-42	43+
	Men							
Men	20-29	<32	33-37	38-43	44-47	48-52	53-58	59+
	30-39	<29	30-34	35-40	41-43	44-48	49-54	55+
	40-49	<25	26-30	31-36	37-40	41-45	46-51	52+
	50-59	<21	22-26	27-33	34-36	37-41	42-47	48+
	60-65	<18	19-23	24-30	31-33	34-47	38-42	43+

Source: LT chart of norms above was determined by taking 85% of VO₂Max norms that were adapted from Astrand: ACTA Physiol Scand. 49 (Suppl): 169, 1960