

Physical qualities

Qualities	Characteristic	Intensity max	% of MHR	Duration	Muscles	Physiological systems	Metabolism	Fuel	Waste products	Recovering time in minutes	Limit in intensity	Limit in duration	Typical sports	Positive Side effects	Negative side effects	Mental
Endurance	Sustain long efforts	60-70 %	50 - 80	3 min to many hours	Slow fibers	Cardio vascular	Aerobic	Glucids stored in the body	H2O+CO2	2 à 3	Oxygen transport	Lack of glucids	Races from 1500 m to marathon	Helps recovering	Traumas due to repetition	Perseverance
Resistance	Maintain high intensity as long as possible	70-90 %	80 - 100	10 sec to 3 minutes	All types	Cardio vascular	Anaerobic lactic	Glucids stored in the body	Lactates	5 à 10	Anaerobic efficiency	Lactic acid	Races 200 to 500 m	Know your aerobic limit	Exhaustion	Push your limits
Speed	Fast and light	100%		Less than 10 sec	Fast fibers	Nervous system	Anaerobic Alactic	ATP stored in muscles		2 à 3	Number of fast fibers/strength	Lack of ATP in muscles	Races up to 100 m	Helps anticipating	Risk of injuries	Concentration
Power	Fast and heavy	100%		Up to 2 minutes	All types	Nervous system	Anaerobic lactic	ATP + Glucids	Lactates	3 à 6	Strength / Speed	ATP and lactates	Shot put	Gives "energy"	Risk of injuries	Give all
Strength	Maximum	100%		A few seconds	Fast fibers	Nervous system	Anaerobic Alactic	ATP stored in muscles		3 à 6	Muscle strength	Lack of ATP in muscles	Weightlifting	Less efforts	Risk of injuries	Focus
Agility	Coordinate moves			Very variable	All types	Nervous system			Nervous fatigue	0,5 à 3	Coordination	Nervous fatigue	Gymnastics	Makes you more efficient		Anticipation
Balance	Control			Very variable	All types	Nervous system			Nervous fatigue	0,5 à 3		Nervous fatigue	Gymnastics	Prevent falling		Self control
Flexibility	Avoid injuries			A few minutes	Stretch	Nervous system			Stressed muscles	0,5 à 3	Muscle stretch		Gymnastics	Helps recovering	Risk of injuries	Relax