

Table 1: Summary of Results Related to Exercise Capacity

Article and Year	Number of participants	Average Age (Years)	Coronary Artery Lesion (CALs)	Chronicity (Years since KD onset)	EST Results	D&B Score
Nakamura et al., 2020 <sup>2</sup>	KD group: 60	KD 9.8 (2.7) years	Not included in study	6.6 +/-2.6 years  Unknown for 6 participants	<ul style="list-style-type: none"> <li>No significant differences in each stage of Treadmill Exercise Test (TMET) or in number of patients in the final stage of TMET</li> <li>Heart rate (HR) recovery was significantly faster in KD group than in non-KD group</li> </ul>	19
	Non-KD group: 60	Non-KD 10.2 (2.7) years				
Tuan et al., 2018 <sup>3</sup>	Total KD group: 49	KD total: 12.39 +/- 3.6	KD total max Z score: 1.67+/-0.9	Time since KD diagnosis not reported	<ul style="list-style-type: none"> <li>KD group 2 had significantly lower peak metabolic equivalent (peak-MET), peak respiratory exchange ratio (RER), peak systolic blood pressure (BP), and peak rate-pressure product (PRPP) compared with KD group 1</li> <li>Children with KD with a coronary artery Max-Z <math>\geq 2.0</math> had significantly lower peak exercise capacity than those with a max-Z &lt;2.0</li> </ul>	19
	KD group 1: 36	KD group 1: 11.97 +/-3.4	KD group 1 (max Z score <2.0): 1.3+/- 0.44			
	KD group 2: 13	KD group 2: 13.54 +/-4.01	KD group 2 (max Z score $\geq 2.0$ ): 2.69 +/- 1.05			
Tuan et al., 2016 <sup>4</sup>	KD Group 1: 63 (total)	Group 1: 12.27 +/- 3.37	4 small CAA 2 giant CAA	3.92 years to greater than 5 years	<ul style="list-style-type: none"> <li>All routine parameters measured during standard exercise test were similar between KD and control groups, except that peak rate pressure products (PRPP)</li> <li>PRPP in KD group 1 to 3 were all lower than corresponding control groups significantly</li> </ul>	19
	KD Group 2: 12	Group 2: 8.67 +/- 3.99	Group 2: 1 small CAA	KD Group 2: <5 years		
	KD Group 3: 51	Group 3: 13.12 +/- 3.20	Group 3: 2 giant CAA 3 small CAA	KD Group 3: >5 years		
Chien et al., 2020 <sup>5</sup>	Group 1: 37	Group 1: 13.6 +/- 6.5	Group 1: 37 children with regressed CALs	Group 1: 9.9 +/- 4.3	<ul style="list-style-type: none"> <li>Group 1 had higher right and left brachial-ankle pulse wave velocity (baPWV) and lower oxygen consumption (VO<sub>2</sub> peak) compared to group III</li> <li>Negative correlation of the baPWV and VO<sub>2</sub> peak for patients with regressed coronary artery lesions (CALs)</li> <li>KD patents with regressed CALs had a lower VO<sub>2</sub> peak compared with normal controls and KD patients without CALs</li> </ul>	18
	Group 2: 43	Group 2: 13.9 +/- 6.2	Group 2: children with KD without CALS	Group 2: 9.7 +/- 4.9		
	Group 3: 78	Group 3: 13.2 +/- 6.9	Control	Group 3: N/A		
			Normal Z score: 37			17

Aggarwal et al., 2019 <sup>6</sup>	95 participants with KD	11.9 years	Dilated: 21	9.6 years	<ul style="list-style-type: none"> <li>Adequate heart rate (HR) (&gt;85% maximum predicted) achieved in 73.7% of participants including 74% with at least medium coronary artery aneurysms (CAA)</li> <li>Arrhythmias on EST were noted only among patients with CAA <math>\geq</math> 5</li> <li>Premature ventricular contractions (PVC) were not seen in any patients without coronary artery involvement</li> </ul>	
			Small: 10			
			Medium: 12			
			Large: 10			
			Severe: 5			
Kuan et al., 2022 <sup>7</sup>	KD: 204	Total 13.6 +/- 5.57	10 with CA Aneurysm (4 girls and 6 boys)	All participants with KD: 10.51 +/- 6.24	<ul style="list-style-type: none"> <li>No significant differences in cardiopulmonary fitness (CPF) for different body mass index (BMI) groups for whole KD analysis</li> <li>Significantly lower oxygen consumption (peak VO<sub>2</sub>) for overweight KD boys</li> <li>Girls, regardless of BMI status, had higher significant values on exercise stress test (EST), except underweight boys had higher peak metabolic equivalent (peak MET)</li> </ul>	19
	Males: 84	Males: 13.77 +/- 5.86	1 giant CAA 5 small CAA	Males: 11.12 +/- 5.6 years		
	Females: 120	Females: 13.36 +/- 5.15	1 medium CAA 3 small CAA	Females: 10.06 +/- 6.6		
Gravel et al., 2015 <sup>8</sup>	NS-KD: 117	NS-KD: 10.7 +/- 2.7	NS-KD: subjects without coronary sequelae	NS-KD: 6.8 +/- 3.1	<ul style="list-style-type: none"> <li>There were no significant differences between groups for heart rate (HR) and blood pressure (BP) response at any stages of exercise and recovery</li> <li>Lower heart rate at 1 minute into recovery as well as lower diastolic BP at 1 and 5 minutes into recovery in patients with abnormal SPECT imaging</li> <li>Prevalence of myocardial perfusion defects was similar among study groups</li> </ul>	17
	CAA-KD: 133	CAA-KD: 11.0 +/- 2.7	CAA-KD: Subjects with documented coronary aneurysm(s) at onset	CAA-KD: 7.5 +/- 3.6		
Lin et al., 2022 <sup>9</sup>	KD: 30	KD 1 <sup>st</sup> CPET: 12.68 $\pm$ 3.77	Max Z score at first CPET 1.11 $\pm$ 0.72	Time since KD diagnosis not reported	<ul style="list-style-type: none"> <li>No differences observed in first cardiopulmonary exercise test (CPET) between KD and control group</li> <li>In final CPET, control group had a higher percentage of measured oxygen consumption (VO<sub>2</sub> at the anaerobic threshold to the predicted peak VO<sub>2</sub>) and higher VO<sub>2</sub> than those in KD group</li> <li>Aerobic metabolism and peak exercise load capacities of adolescents with KD were significantly lower than those of control adolescents</li> </ul>	20
		KD last CPET: 16.71 $\pm$ 4.83	Max Z score at last CPET 1.23 $\pm$ 0.70			
	Control: 30	Control 1 <sup>st</sup> CPET: 13.06 $\pm$ 3.64	N/A			
		Control last CPET: 16.12 $\pm$ 2.70				
	KD: 50	KD group: 15.98 $\pm$ 1.85	KD group: 14 small CAA	14.08 $\pm$ 2.85		19

Yang et al., 2020 <sup>10</sup>	Control: 30	Control group: 15.90 ± 1.83	10 large CAA No giant CAA		<ul style="list-style-type: none"> <li>• KD group demonstrated a significantly lower aerobic metabolic capacity measured by the ratio of VO<sub>2</sub>/kg at anaerobic threshold (AT%)</li> <li>• KD group had a significantly lower exercise capacity measured by a lower peak to the predicted VO<sub>2</sub>/kg at peak</li> <li>• Adolescents with KD history had significantly lower aerobic metabolism capacity and peak exercise load capacity than controls</li> </ul>	
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Table 2: Summary of Results Related to Physical Activity

Psychosocial Factors		D&B
Yang et al., 2020 <sup>10</sup>	<ul style="list-style-type: none"> <li>• Correlations of amount of weekly exercise with exercise motivation and self-efficacy were stronger in the KD group</li> </ul>	19
Baker et al., 2003 <sup>11</sup>	<ul style="list-style-type: none"> <li>• Parents of children in all KD groups reported lower general health perceptions than parents in the US population sample, suggesting that long-term concerns about their children's health exist regardless of overall health status</li> <li>• KD patients without coronary artery aneurysms were similar to the general population in their general physical and psychosocial health</li> <li>• Children with giant coronary artery aneurysms had lower overall physical summary scores</li> </ul>	18
Banks et al., 2012 <sup>12</sup>	<ul style="list-style-type: none"> <li>• KD patients performed less moderate-to-vigorous physical activity (MVPA) than healthy children</li> <li>• Male KD patients performed more MVPA than female KD patients</li> <li>• Lower MVPA in KD patients was significantly associated with female gender, lower child self-efficacy score; lower Child Health Questionnaire score (CHQ-PF50) scores for role functioning behavioral issues, physical functioning, and family cohesion; and higher CHQ-PF50 scores for self-esteem and family activity limitations</li> </ul>	16