Table 3: Kinematic results

	Movement duration (ms)	Transport component				Grasp component	
		Acceleration peak		Velocity peak		MGA	
		Latency (ms)	Amplitude (mm/s²)	Latency (ms)	Amplitude (mm/s²)	Latency (ms)	Amplitude (mm)
Healthy controls **DS** **ARX**	800 988 1284	220 259 326	4668 3180 2785	341 383 473	853 701 670	568 683 978	90.37 89.09 89.98
Group effect	[*F*(2,32)=10.6, p<0.001]****	[*F*(2,32)=9.2, p<0.001]****	[*F*(2,32)=6, p<0.01]**	[*F*(2,32)=9.8, p<0.001]****	[*F*(2,32)=3.5, p<0.05]*	[*F*(2,32)=11.3, p<0.001]****	NS
ARX/healthy controls ARX/DS DS/healthy controls	p<0.001**** p<0.01** NS	p<0.001**** p<0.01** NS	p<0.01** NS p<0.05*	p<0.001**** p<0.01** NS	p<0.05* NS p<0.05*	p<0.001**** p<0.005*** NS	
Orientation effect	[*F*(1,32)=31.3, p<0.0001]****	NS	[*F*(1,32)=4, p<0.05]*	NS	[*F*(1,32)=16, p<0.0005]****	[*F*(1,32)=17.2, p<0.0005]****	[*F*(1,32)=45.6, p<0.0001]****
[Orientation*group] interaction	NS	NS	[*F*(2,32)=3.5, p<0.05]*	NS	NS	NS	NS
Healthy controls	[*F*(1,12)=20.7, p<0.001]****	NS	[*F*(1,12)=7, p<0.05]*	NS	[*F*(1,12)=18.8, p<0.001]****	[*F*(1,12)=37, p<0.001]****	[*F*(1,12)=106, p<0.001]****
DS	[*F*(1,12)=32.3, p<0.0001]****	NS	[*F*(1,12)=6.3, p<0.05]*	NS	[*F*(1,12)=7, p<0.05]*	[*F*(1,12)=9.9, p<0.01]**	[*F*(1,12)=43, p<0.001] ****
ARX	[*F*(1,8)=5.3, p<0.05]*	NS	NS	NS	NS	NS	NS
Type of pinch effect	[*F*(2,64)=8.1, p<0.001]****	NS	NS	NS	NS	[*F*(2,64)=14.9, p<0.0001]****	[*F*(2,64)=7.8, p<0.001]****
[Type of pinch*group] interaction	[*F*(4,64)=3.1, p=0.02]*	NS	NS	NS	[*F*(4,64)=2.8, p=0.03]*	[*F*(4,64)=7.1, p<0.001]****	NS
Healthy controls	NS	NS	NS	NS	NS	[*F*(2,24)=4.4, p<0.05]*	[*F*(2,24)=9.23, p<0.005]***
DS	NS	NS	NS	NS	NS	NS	*F*(2,24)=3.01, p<0.06]
ARX	[*F*(2,16)=3.3, p=0.06]	NS	NS	NS	[*F*(2,16)=3.6, p=0.049]*	[*F*(2,16)=9.4, p<0.005]***	NS

NS: Non Significant; * means <0.05, ** means <0.01, *** means <0.005 and **** means <0.001

Kinematic parameters were analyzed within each group (ARX, DS, and Healthy Controls) using a repeated measure ANOVA with two within group factors: type of pinch and orientation. A between group analysis was also performed. Post-hoc analysis was performed using a Newman-Keuls test.