

Back-Leg-Chest Dynamometer



Baseline[®] back-leg-chest dynamometer

Measure strength of back, leg and chest. Base provides sure footing. Chain length is adjusted to accommodate for height differences or to vary the point of force application. Shows pounds and kilograms. Pointer remains at maximum until reset. Unit comes with everything in upper left picture. Available models below.

AL-63346C large base, 660 lb. adult
AL-63346A regular base, 600 lb. adult



additional back-leg-chest hardware accessories

handles

Call single handle
Call double handle

bases

AL-63344A regular base
AL-63344C large base

chains/straps

Call chain (ft)
Call strap (ft)

ovals

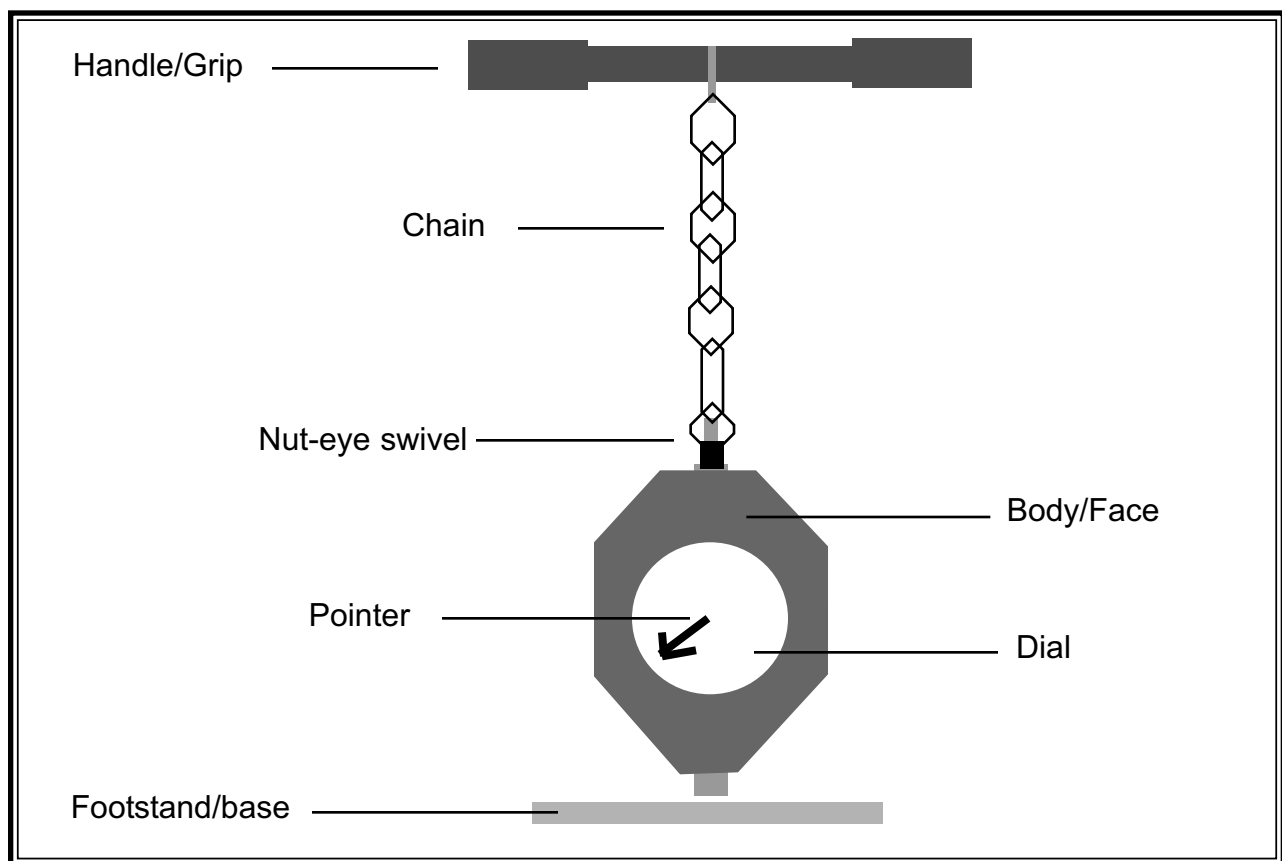
Call snap oval
Call threaded oval

Parts and Assembly

The following parts make up the Back-Leg-Chest dynamometer: Body (face), Dial, Pointer, Footstand (base), Grip and Chain. Locate all of these parts. When assembled, should look like diagram and like photographs on previous page.

To assemble your unit:

- 1) Locate and remove contents from packaging.
- 2) Attach handle/chain unit to swivel on top of face by using adjustable chain link. Make chain short-er by putting adjustable chain link higher on the chain. If chain is not long enough obtain additional chain footage. Unit is now ready for use.



Back-Leg-Chest dynamometer in raised position

Testing Protocol

1. Subject should stand with both feet on base. (see picture on upper right corner of previous page)
2. Adjust chain to accomodate test protocol. Perform the test. Subject should lift in a gradual vertical motion.
3. The pointer on the dial indicates the force exerted. Each test should consist of three trial measurements. The result is the average.

(1)
ARM LIFT
90°



(2)
TORSO LIFT
V=38cm
H=38cm



(3)
LEG LIFT
V=38cm
H=0cm



(4)
HIGH FAR
LIFT
V=152cm
H=51cm



(5)
FLOOR LIFT
V=15cm
H=25cm



(6)
HIGH NEAR
LIFT
V=152cm
H=25cm



Maximal Voluntary Isometric Strength (Pounds)

Test	Males							Females						
	Sample Size	Coeff. of Variation	Population Percentile					Sample Size	Coeff. of Variation	Population Percentile				
			10	25	50	75	90			10	25	50	75	90
Arm Lift (1)	1052	0.07	51	68	86	106	123	187	0.08	20	33	48	62	75
Torso Lift (2)	1052	0.09	57	75	99	132	169	187	0.10	29	37	53	73	97
Leg Lift (3)	638	---	42	152	200	251	295	133	---	11	59	88	117	141
High Far Lift (4)	309	0.09	35	42	51	62	75	35	0.12	20	24	29	35	42
Floor Lift (5)	309	0.08	130	163	200	238	271	35	0.08	70	97	123	152	176
High Near Lift (6)	309	0.08	77	97	121	145	167	35	0.11	35	26	64	79	92

References: Keyserling, W.M., Herrin, G.D. and Chaffin, D.B. "An Analysis of Selected Work Muscle Strength." Proceedings of the Human Factors Society 22nd Annual Meeting, Detroit 1978.