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Smart Shopping for Your Home Gym

The author analyzes 18 months of main-site WODs and comes to some surprising conclusions about what equipment you should buy and when.

Matthew Hall

For less than $1,500 in equipment purchases, you can perform 80 percent of the WODs on CrossFit.com in your home gym.

Invest in a bar, squat stand and bumper plates right away. Buy those rings. Get a pull-up bar and an AbMat. Put dumbbells, kettlebells, a Concept2 rower and a GHD machine at the bottom of your priority list.

Surprised? So was I.

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Breaking Down the WODs

To determine the most important pieces of equipment, I went through all the main-site WODs from January 2008 to mid-June 2009. I tallied how many times each particular exercise was performed and then broke each exercise down by the required pieces of equipment. I also looked online at three common CrossFit equipment suppliers and averaged the prices for each product. I was able to compile a list of the equipment and sort it by how many times each item was used (Table 1). I then figured how much it would cost per use based on the average price over those 18 months (Table 2). I also wanted to see how much of the CrossFit program could be accomplished with different purchases, so I made a third table showing how many more exercises could be done with each additional piece of equipment purchased, and how that would affect the total cost of the gym (Table 3).

I did not take into account many desirable but non-essential purchases such as floor mats, collars or weight stands. But the analysis still has value in showing the order in which equipment should be bought for CrossFitters doing the main-site WODs in home gyms. It may also be of interest to new affiliate owners who want to start small and then add equipment.

The Data

I wanted to allow for heavy Olympic lifts without breaking the bank on bumpers, which can get pricey. When calculating the cost of the weights, I totaled the average cost of 45 and 25 lb. bumpers and then sets of 2.5, 5, 10 and 45 lb. iron plates. One of each of these sets plus an extra set of iron and rubber 45s gives a total weight (with the bar) of 490 lbs. This also yields 310 pounds (bar, bumpers and change plates) for Oly work.

Table 1: The most-used pieces of equipment

Equipment	Total uses	Average price ($)	Price/use ($)
Bar	276	192.00	0.70
Weights	269	640.22	2.38
Pull-up bar	114	152.50	1.34
Squat stand	109	258.00	2.37
Place to run	90	0.00	0.00
Rings	44	68.67	1.56
Back-ext. bench	37	200.00	5.41
AbMat	36	29.95	0.83
24-inch plyo box	22	109.00	4.95
20 lb. medicine ball	21	101.00	4.81
Concept2	19	895.00	47.11
GHD	17	437.00	25.71
Jump rope	17	12.75	0.75
2 pood kettlebell	10	124.00	12.40
1.5 pood kettlebell	9	83.00	9.22
1 pood kettlebell	7	64.00	9.14
Bench	7	152.50	21.79
15-foot rope	7	237.00	33.86
40 lb. dumbbells	4	83.00	20.75
Body armor	4	115.00	28.75
30 lb. dumbbells	2	63.00	31.50
50 lb. dumbbells	2	105.00	52.50
35 lb. dumbbells	1	72.50	72.50

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The squat stands are more necessary for some exercises (back squats) than movements where the weight can easily be cleaned into position (thrusters). For this analysis, I decided squat stands would be used for push jerk, push press, shoulder press, thruster, back squat, front squat, overhead squat and bench press. If you do not mind cleaning weight before the prescribed exercise, then you may want to reduce the importance of the squat stand relative to its position in my analysis.

Table 1 illustrates the frequency of use for each item: the equipment is simply sorted by the total number of times it was used in the 18-month sample. Make sure you have at the least the top six items on this list. The price is the average cost from three suppliers: Again Faster, The Garage Gym Store and Rogue Fitness. This list is sorted based on the most-used items.

Table 2 includes the same information as Table 1, but it is sorted by the price per use of each piece of equipment. This table is best used to figure what small or infrequently used pieces of equipment are the most economical and what can wait until later. The cost is divided by the total number of uses to yield the cost per use over the 18-month sample time frame. The equipment is listed with the most economical items at the top.

I sorted Table 3 by my rough guess as to the order in which I would outfit my gym based on frequency of use and price per use. It illustrates the number and percentage of main-site exercises you can do with each additional purchase, as well as the total cost of each addition.

Table 2: Equipment sorted by price/use

Equipment	Total uses	Average price ($)	Price/use ($)
Place to run	90	0.00	$0.00
Bar	276	192.00	0.70
Jump rope	17	12.75	0.75
AbMat	36	29.95	0.83
Pull-up bar	114	152.50	1.34
Rings	44	68.67	1.56
Squat stand	109	258.00	2.37
Weights	269	640.22	2.38
20 lb. medicine ball	21	101.00	4.81
24-inch plyo box	22	109.00	4.95
Back-ext. bench	37	200.00	5.41
1 pood kettlebell	7	64.00	9.14
1.5 pood kettlebell	9	83.00	9.22
2 pood kettlebell	10	124.00	12.40
40 lb. dumbbells	4	83.00	20.75
Bench	7	152.50	21.79
GHD	17	437.00	25.71
Body armor	4	115.00	28.75
30 lb. dumbbells	2	63.00	31.50
15-foot rope	7	237.00	33.86
Concept2	19	895.00	47.11
50 lb. dumbbells	2	105.00	52.50
35 lb. dumbbells	1	72.50	72.50

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As an example, an AbMat was used 36 times (4.72 percent of all exercises). Adding an AbMat would increase the percentage of exercises you could do from 70.73 percent to 75.46 percent at a cost of about $30. Exercises low on the list may require equipment from the top of the list to be completed. A bar, for example, was only used on its own 7 times in the 18-month sample. However, another 123 exercises can be done when plates are purchased. That number increases to 139 when squat stands are bought.

Table 3: Progression of equipment purchases

	Total uses	Percent (%) of exercises	Accrued percent (%) of exercises	Average cost ($)	Accrued cost ($)
Place to run	90	11.81	11.81	0.00	0.00
Bar	7	0.92	12.73	192.00	192.00
Weights	123	16.14	28.87	640.22	832.22
Squat stand	139	18.24	47.11	258.00	1,090.22
Pull-up bar	136	17.85	64.96	152.50	1,242.72
Rings	44	5.77	70.73	68.67	1,311.39
AbMat	36	4.72	75.46	29.95	1,341.34
Jump rope	17	2.23	77.69	12.75	1,354.09
20 lb. medicine ball	21	2.76	80.45	101.00	1,455.09
24-inch plyo box	22	2.89	83.33	109.00	1,564.09
Back-ext. bench	37	4.86	88.19	200.00	1,764.09
Concept2	19	2.49	90.68	895.00	2,659.09
GHD	17	2.23	92.91	437.00	3,096.09
Kettlebells	26	3.41	96.33	271.00	3,367.09
Dumbbells	9	1.18	97.51	177.25	3,544.34
15-foot rope	7	0.92	98.43	237.00	3,781.34
Bench	7	0.92	48.03	152.50	3,933.84
Weighed vest	4	0.52	98.95	115.00	3,896.34

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$1,500 Goes a Long Way in CrossFit

The most important idea to take away from the data: it costs close to $4,000 to completely outfit a CrossFit home gym, but 80 percent of exercises can be completed by spending about $1,500. Most of that total goes to CrossFit staples such as a bar and weights. They cost less than $1 per use. Less expensive items such as rings and medicine balls are used frequently. Buying them adds to the percentage of the program that can be completed. A jump rope is used infrequently but costs just $13. Buy one.

One surprise was how high a back-extension bench placed on the list. It is not sold by any of the three suppliers I used for compiling average prices, but a quick online search yields many items in the $200 range. The GHD is an obvious substitute, but even when all back extensions are done on the GHD, the cost per use only falls from $25.71 to $9.44, which is still almost twice the cost per use of the back-extension machine ($5.41). It appears that a back-extension machine would be a wise purchase for those with a more limited budget.

The other notable conclusion is the occasional use of kettlebells and dumbbells. While both are frequently listed in a garage-gym equipment package, they are not used often enough in main-site WODs to justify purchasing in the initial stages of outfitting a home gym.

The Concept2 rower is used a fair amount but costs $900. If one-third of all runs were replaced by rowing done on a used machine purchased for $400, the price per use is still relatively high at $8.16. This indicates the rower should be one of your final purchases unless you will use it more than prescribed.

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About the Author

Matt Hall is a second-year medical student at Case Western Reserve University in Cleveland, Ohio. He recently proved the efficacy of the CrossFit program by scaling Mount Rainier (elevation: 14,411 feet) in his home state of Washington with no training other than the daily WODs.

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