

Does Weight Matter?

Body Weight

Horse Body Weight is published by HKJC a couple of days before each event, it would be good if it were rechecked and published just before the race, as in Japan, but this does not seem to be the case. Body Weight can vary up to +/- 30Lbs between races, rarely more. Body Weight fluctuations can be due to fat or muscle. It is difficult to form a fitness opinion based on body weight, but that is the only real clue that is available to the general public, so these are a few pointers that I consider.

Body Weight Increase

- If first up after a break and body weight is significantly high, then the chances are that the reason is excessive fat, so the horse will probably not be at his best.
- If in full training and horse has had a few runs and body weight increases gradually, then this is probably muscle build up. A positive sign.
- If at any time body weight increases a lot, say 30Lbs or so, then this is probably fat. A negative sign.

Body Weight Decrease

- If a horse has a negative veterinary report, then a large decrease in weight must imply that he has lost condition, and probably not at his best.
- Otherwise I tend to feel that a decrease in weight is probably a good sign. I expect that the horse has less fat to carry.

Body Weight Stats

It is pretty difficult to be confident about a horse's body weight, I adopt the following method, the results of which are shown in the Hkrules future race dashboard.

In the Statistics section of the Hkrules future race dashboard there a number of rows that relate to Body Weight, similar to the following.

Body Wgt: 1162 - 1181	0	0	1
Body Wgt: 1182 - 1201	4	6	17
Body Wgt: 1202 - 1221	0	0	3
Body Wgt: 1222 - 1241	0	1	1

In this example the horses current body weight is 1211 Lbs, so the highlighted range is -9Lbs to +10Lbs of the current weight. The other rows are 20Lb ranges above or below this current range. Each range shows the number of wins, place and total runs when the horse weighed somewhere between the upper and lower bounds of the range in the past calendar year. So in the above example the horse seemed to perform best when weighted between 1182-1201 Lbs. Therefore his weight is slightly high today, I would say his weight is classed as Good-High.

The following body weight ranges are used by Hkrules

- **Good** when best weight stats range is shown as -9Lbs and +10Lbs (inclusive) of current weight.
- **Good-Low** when best weight stats range is shown as -29Lbs and -10Lbs (inclusive) of current weight.
- **Low** when best weight stats range is shown as -999Lbs and -30Lbs (inclusive) of current

weight.

- **Good-High** when best weight stats range is shown as +11Lbs and +30Lbs (inclusive) of current weight.
- **High** when best weight stats range is shown as +31Lbs and +999Lbs (inclusive) of current weight.

Weight Carried

The following table shows counts and percentages by weight carried for all handicap races run on turf in Hong Kong over approximately seven years. It can be seen that there is a slight increase in winners and placed horses that carry higher weights. This implies, rather obviously, that the better horses carry higher weights, but also that the HKJC handicapping possibly does not penalise the better horses quite as much as they should.

_Lbs	_Wins	_Plc	_Cnt	_WinPcent	_WinPlcPcent
113	72	216	1572	4.6%	18.3%
114	83	205	1570	5.3%	18.3%
115	167	342	2192	7.6%	23.2%
116	202	366	2443	8.3%	23.3%
117	174	411	2549	6.8%	23.0%
118	218	469	3025	7.2%	22.7%
119	192	469	2857	6.7%	23.1%
120	260	516	3258	8.0%	23.8%
121	242	493	3072	7.9%	23.9%
122	242	479	3116	7.8%	23.1%
123	280	542	3496	8.0%	23.5%
124	268	472	3128	8.6%	23.7%
125	343	599	3925	8.7%	24.0%
126	300	528	3484	8.6%	23.8%
127	280	512	3000	9.3%	26.4%
128	235	496	2872	8.2%	25.5%
129	213	430	2434	8.8%	26.4%
130	229	467	2555	9.0%	27.2%
131	215	489	2427	8.9%	29.0%
132	229	411	2088	11.0%	30.7%
133	451	806	3987	11.3%	31.5%
134	6	13	74	8.1%	25.7%
135	9	34	154	5.8%	27.9%

Weight Carried Calculations

The usage of weight carried as part of speed rating calculation is a pretty contentious subject, I am not totally convinced by the figures that follow, as there does not seem to be a way of proving the basic LbsPerLen(gths) beaten premise. However, I do use the following figures to adjust race times depending on weight carried as I endeavour to produce speed figures that are normalised to a weight carried of 126 Lbs.

<u>_Course</u>	<u>_Dist</u>	<u>_LbsPerLen</u>	<u>_HorseLen</u>	<u>_LbsPerMeter</u>	<u>_MetersPerSec</u>	<u>_SecsPerMeter</u>	<u>_LbsPerSec</u>	<u>_SecsPerLb</u>
HAPP	1000	3.00	2.7	1.11	17.340	0.058	19.266	0.052
HAPP	1200	2.67	2.7	0.99	16.967	0.059	16.778	0.060
HAPP	1650	2.00	2.7	0.74	16.315	0.061	12.085	0.083
HAPP	1800	1.75	2.7	0.65	16.247	0.062	10.531	0.095
SHA_	1000	3.00	2.7	1.11	17.471	0.057	19.412	0.052
SHA_	1200	2.67	2.7	0.99	17.092	0.059	16.902	0.059
SHA_	1400	2.33	2.7	0.86	16.855	0.059	14.545	0.069
SHA_	1600	2.00	2.7	0.74	16.716	0.060	12.382	0.081
SHA_	1800	1.75	2.7	0.65	16.518	0.061	10.706	0.093
SHA_	2000	1.50	2.7	0.56	16.165	0.062	8.981	0.111

- **LbsPerLen** is the normal handicapping adjustment to weight carried depending of number of lengths beaten
- **HorseLen** standard in meters. Figures of 8 foot or 9 foot for a racing length are used by different racing jurisdictions, so I have settled for 2.7 meters.
- **LbsPerMeter** is LbsPerLen divided by 2.7
- **MetersPerSec** is the average race speed for ever horse that ran on turf in Hong Kong on good ground during the 19/20, 20/21 and 21/22 seasons.
- **SecsPerMeter** is the inverse on MetersPerSec giving the fraction of a second that is the time taken to cover one meter
- **LbsPerSec** is the weight required to enable the horse to run one second faster (or slower). This is calculated by dividing LbsPerMeter by SecsPerMeter
- **SecsPerLb** is the inverse of LbsPerSec giving the perceived time difference when adjusting weight carried by one pound.

The SecsPerLb value is then used to adjust the race time for each runner to give an estimated race time that would have been achieved if the horse carried 126 Lbs. As such if he carried more than 126 Lbs the race time would be decreased and vice versa if he carried less than 126 Lbs.

The SecsPerLb value is also used to adjust the Speed Rating figure used in future races, depending on the weight to be carried. Refer to the Speed Rating Calculation help topic for more details.