

Standardbred Heartzone Training Program . ©

Introduction to the Standardbred Heartzone Training Program. ©

	Weeks
Foundation	3
Aerobic	3
Aerobic Intervals	3
Lactate Tolerance	2
Taper	2

This Standardbred HT Program is for mature horses (>2 yrs old)

When working in zones containing heart rates of 150bpm - 200 bpm it would be desirable to use some form of resistance as the volume of work on normal tracks may lead to injuries of the legs.

Sand or hill work are recommended.

To make the program specific to your horse, insert your horse's Maximum recorded heart rate in the red box at the start of each phase.(click here for more information) [Maximum Heart Rate](#)

Most zones have two ranges, eg Z2 (lower) and Z2 (upper) = 60-65%MHR and 65-70%MHR.

- Z1 = 50%-60% of max HR*
- Z2 = 60%-70% of max HR*
- Z3 = 70%-80% of max HR*
- Z4 = 80%-90% of max HR*
- Z5 = 90%-100% of max HR*

This is a program which requires careful monitoring.A 610 HRM is recommended

Adequate recovery and plenty of carbo hydrate in the food is required to keep your horse healthy.

Please proceed at your own risk.

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Horse:

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Phase 1: Foundation

Week No.: 1 of 3

Max Heart Rate **230 Insert your Horse's Maximum Heart Rate**

Day	Type of Training	Time (mins)	HR/Low (bpm)	HR/High (bpm)
Monday	Warm-up	5	138	150
	Endurance	20	150	161
	(Low Intensity)	5	138	150
	Warm-dwn			
Tuesday	Warm-up	5	138	150
	Endurance	25	150	161
	(Low Intensity)	5	138	150
	Warm-dwn			
Wednesday	Warm-up	5	138	150
	Endurance	30	150	161
	(Low Intensity)	5	138	150
	Warm-dwn			
Thursday	Warm-up	5	138	150
	Endurance	20	150	161
	(Low Intensity)	5	138	150
	Warm-dwn			
Friday	Warm-up	5	138	150
	Endurance	20	150	161
	(Low Intensity)	5	138	150
	Warm-dwn			
Saturday	Warm-up	5	138	150
	Endurance	25	150	161
	(Low Intensity)	5	161	173
	Warm-dwn	5	138	150
Sunday	Rest - No Training			
Week 2 of 3				
Monday	Warm-up	5	138	150
	Endurance	25	161	173
	(Low Intensity)	5	138	150
	Warm-dwn			

<i>Tuesday</i>	<i>Warm-up</i>	5	138	150
	<i>Endurance</i>	30	161	173
	<i>(Low Intensity)</i>	5	138	150
	<i>Warm-dwn</i>			
<i>Wednesday</i>	<i>Warm-up</i>	5	138	150
	<i>Endurance</i>	35	161	173
	<i>(Low Intensity)</i>	5	138	150
	<i>Warm-dwn</i>			
<i>Thursday</i>	<i>Warm-up</i>	5	138	150
	<i>Endurance</i>	20	161	173
	<i>(Low Intensity)</i>	5	138	150
	<i>Warm-dwn</i>			
<i>Friday</i>	<i>Warm-up</i>	5	138	150
	<i>Endurance</i>	20	161	173
	<i>(Low Intensity)</i>	5	138	150
	<i>Warm-dwn</i>			
<i>Saturday</i>	<i>Warm-up</i>	5	138	150
	<i>Endurance</i>	20	150	161
	<i>(Low Intensity)</i>	10	161	173
	<i>Warm-dwn</i>	5	173	184
		5	138	150
<i>Sunday</i>	<i>Rest - No Training</i>			
Week 3 of 3				
<i>Monday</i>	<i>Warm-up</i>	5	138	150
	<i>Endurance</i>	20	150	161
	<i>(Low Intensity)</i>	5	161	173
	<i>Warm-dwn</i>	5	138	150
<i>Tuesday</i>	<i>Warm-up</i>	5	138	150
	<i>Aerobic Endurance</i>	20	150	161
		10	161	173
		5	138	150
<i>Wednesday</i>	<i>Warm-up</i>	5	138	150
	<i>Aerobic Endurance</i>	20	150	161
		10	161	173
		5	173	184
		5	138	150
<i>Thursday</i>	<i>Warm-up</i>	5	138	150
	<i>Aerobic Endurance</i>	20	150	161
		5	138	150
<i>Friday</i>	<i>Warm-up</i>	5	138	150

	<i>Aerobic Endurance</i>	20	150	161
		5	138	150
<i>Saturday</i>	<i>Warm-up</i>	5	138	150
	<i>Aerobic Endurance</i>	15	150	161
		10	161	173
		5	173	184
		5	184	196
		5	138	150
<i>Sunday</i>	<i>Rest - No Training</i>			

Maximum Heart Rate

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Before answering the question 'How do I determine the maximum heart rate of a horse?' it is important that you are aware of some of the following facts about a horse's maximum heart rate:

Maximum heart rate is genetically determined so there will obviously be the possibility of big differences between individual horses. For example, maximum heart rates of 190 to 255 beats per minute have been reported in the equine scientific literature. However, it would seem that a 'ball park' figure of 230 beats per minute is a reasonable approximation for the maximum heart rate of a horse if you did not want to actually test for maximum heart rate.

In humans, maximum heart rate declines with age according to the formula: Max HR = 220 - age. However, there seems to be no predictable relationship between age and maximum heart rate in horses.

Maximum heart rates that are high do not predict better racing performance, just as maximum heart rates that are low do not predict worse racing performance. Maximum heart rate does not increase with training or fitness.

Maximum heart rate can be affected by the type of exercise the horse is performing. For example, the maximum heart rate for a horse swimming may be significantly different to that for galloping. This, of course, has implications when it comes to setting heart rate training zones for swimming and running.

Drugs can affect maximum heart rate.

Maximum heart rate can be reduced as a result of overtraining and fatigue.

It seems horses can achieve their maximum heart rate in a very short period of time. One study which examined thoroughbreds (Krzywanek et al, 1970) reported a rise in heart rate from 121 to 221 beats per minute within 7.5 seconds! However, on average, it took 22 seconds for the heart rate to rise from the pre-start level to the peak heart rate level. However, in standardbreds trotting at speeds of 12.0 to 12.5 metres per second, maximum heart rates were not reached until after 700 metres or 56 to 58 seconds.

*Determining the maximum heart rate of your horse
As is the case with human athletes, maximum heart rate*

can either be predicted or measured. Both techniques have advantages and disadvantages.

Prediction

For humans, the formula of 220 - age is often used to predict the maximum heart rate of an individual. While this formula is reasonably accurate, there doesn't seem to be a predictable link between a horse's age and its maximum heart rate. As a starting point, it would seem that the figure of 230 beats per minute would be a reasonable 'guesstimate' for your horse's maximum heart rate.

You should not assume that maximum heart rates will be the same for all types of exercise.

Keep in mind that while the prediction method requires no effort and gives you a starting point for setting heart rate training zones, it is not specific to swimming and may be an over or under estimation of what the true maximum heart rate of your horse really is.

Measurement

*The best way to actually identify the true maximum heart rate of your horse is to measure it during a strenuous exercise session. The following are some suggested methods:
an all-out trial over 1000 - 1600 metres*

*a continuous progressive test
a hill test*

*An all-out trial over 1000 - 1600 metres
It is not uncommon for horses to be barrier trialed under competition conditions during their preparation-training phase. This is an excellent opportunity to measure maximum heart rate (assuming the horse goes 'all-out' during the trial).*

The heart rate at the end of the race can be assumed to be a good indication of the horse's maximum heart rate. In general, maximum heart rate in a horse can be measured after one minute of maximum effort, provided the horse has undertaken a suitable warm-up.

A continuous progressive test

This test requires progressive increases in galloping speed, in steps, over a period of 2-3 minutes until maximum effort

is achieved. An example of this type of test is given below. Remember that the galloping speeds you use will vary depending on the fitness and ability of the horse. The test itself could quite easily take the place of a training session. The above test would take approximately 2.5-3 minutes to complete with only the last three steps being really strenuous. Step 6 requires an all-out effort - maybe which lasts only for 5-10 secs. The maximum heart rate ought to occur at the end of the test.

A hill test

Many trainers prefer to use a long steep hill to identify their horses' maximum heart rates. However, before attempting the test, it is suggested the horse has travelled the hill many times in training at gradually increasing speeds over several weeks.

It is suggested to roll into the hill and gradually increase running speed until you get to the top or until the horse starts to tire (hopefully both occur at the same time!) Check the heart rate at the end of the climb.

Irrespective of which method you decide to use, you should include the following procedures:

Where possible, try and standardise conditions such as the time of day (morning, afternoon or evening) and weather conditions (cool, warm or hot). Record these each time you conduct the test.

Plan the time of your horse's feed before it takes the test. Wait at least 2-3 hours after a medium to large feed before you conduct the test.

A true maximum heart rate can only be established when the horse is fully rested. At least one recovery or easy training day before the test is necessary. If the horse has exercised or trained hard 1-2 days beforehand, you have very little chance of reaching its true maximum heart rate. Warm-up the horse thoroughly!

Cool-down the horse thoroughly!

If you and/or the horse are inexperienced in conducting the maximum heart rate test, you may wish to repeat it a few days later in order to verify the reading.

With some Polar watches (receivers) you can record the heart rate in the memory and retrieve the information at the end of the test. This function certainly makes it easier for the rider who can concentrate on 'horse control' and riding speed.