

14. Training program

Motocross is a tough sport which physiologists say is one of the most physically demanding forms of activity known. Only riders in excellent physical condition can hope to succeed.

In brief, what makes a good motocross rider can be summed up as follows:

1. Good physical condition and mental well-being.
2. Balanced judgement.
3. Determination to win.
4. Technical ability.
5. Sense of responsibility.

As regards technical ability, this Owner's Manual provides all the advice and instructions that are necessary if you look after the machine yourself. In addition, and to help you prepare your own training program, this chapter is devoted to physical training.

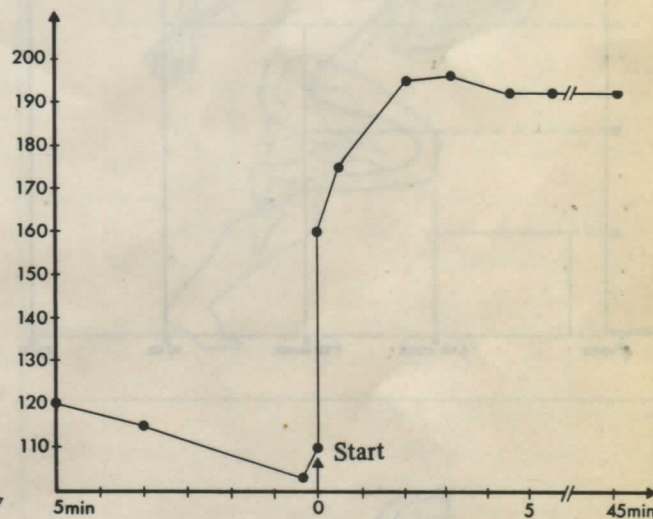


Fig. 67

What makes motocross such a demanding sport?

As the result of a combination of speed, movement, concentration, balance, vibration, bouncing and jolting, practically every part of the body is subjected to serve stresses. A rider in good physical shape uses up to 70 % of his maximum oxygen absorption during an average race lasting 45 minutes. At the same time his heart is working overtime with a pulse of up to 200 (see Fig. 67).

In no other branch of sport or athletics does the heart have to work so hard for such a long period of time. Added to this is the serve strain on muscles in the arms, back and legs.

A motocross rider who trains solely on his motorcycle will not be able to complete a race at the level of concentration and physical effort required to win, and at the end will be almost completely exhausted. If he has prepared for this by a regular and effective program of physical training, he will be able to maintain the same all out effort throughout the whole race. Riding will come easier to him.

Without physical training it will not be possible to take part in demanding races every week with good results. Your race results will suffer.



Fig. 68

General advice

Do not begin your physical training exercises earlier than two hours after a meal.

Try to do your training at definite times and at regular intervals. Do not skip training on account of bad weather.

Principles of training

Begin each training period with **WARMING UP EXERCISES** — to get ready for training proper, so that you obtain the maximum benefit from it and also to prevent injury.

Physical training should include the following three stages:

- A: **SPRINTING** — developing muscle power and speed.
- B: **STEADY RUNNING** — to increase the capacity of the lungs and blood circulation.
- C: **ENDURANCE EXERCISES** — to condition the bones, joints, ligaments and skin and to acclimatize you physically and mentally to working hard for long periods.

Intensity and increased effort

To ensure that your training exercises have the desired effect, each stage must be carried out at maximum intensity. To make this possible, each training period should only last between 30 and 60 minutes and comprise only one of the above stages. Effort expended in training should gradually be increased to a higher intensity (see Fig. 69).

NOTE: Tailor training to your physical condition and «make haste slowly». Beware of over-exerting yourself.

Warming-up

When the body heat rises to a temperature of 38–39°C, as a result of muscular activity, the ability to perform physical work is greatest and the danger of injury least.

The **PURPOSE** of warming up is

- a) to prevent injury to muscles and joints
- b) to stimulate heart activity
- c) to produce good results in training or racing.

Warming-up exercises may be carried out according to the following plan:

1. Running 3–5 minutes at an easy pace
2. Limbering-up exercises for 3–5 minutes.
3. Running 3–10 minutes alternately at an easy pace and at a fast pace.

Apart from warming you up, the purpose of these exercises is to give you more suppleness and muscle power. It is therefore advisable to include the following exercises in the order given:

1. arm and shoulder movements.
2. sideways bending.
3. sideways twisting.
4. back bending, forward and rearward.
5. stomach-muscle strengthening movements, such as raising and lowering legs when lying on the back.
6. arm-muscle strengthening movements, such as press-ups.

Continue each movement for 30–60 seconds.

Perspiration is a sure sign that the warming-up exercises are beginning to take effect.

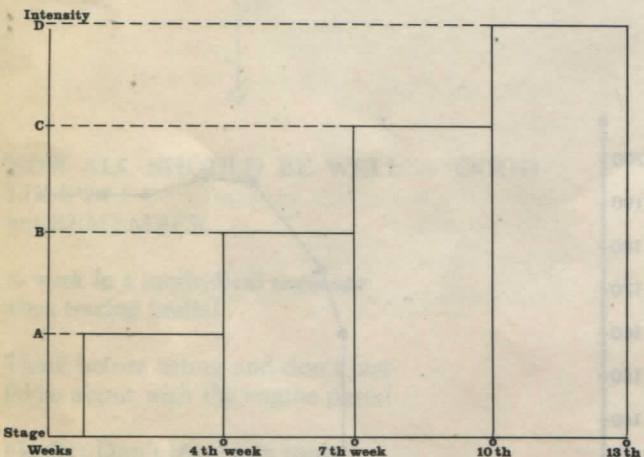


Fig. 69

Physical training

Fundamentals

In addition to a determination to win and sheer riding technique, your performance will depend on the proper functioning of

1. your muscles
2. heart and lungs
3. bones, joints and ligaments.

The body gradually adapts itself to the demands asked of it. If you intend to improve your physical condition and keep fit, **regular physical training** is essential.

Sprinting

Sprinting should be carried out for periods lasting not less than 10 seconds and not more than 60 seconds. A period of rest should be allowed between each sprint. Length of rest periods should be as follows:
After a 10-second sprint — at least 1 minute
After a 15-second sprint — at least 1-1/2 minutes
After a 20-second sprint — at least 2 minutes.
and so on but never more than four minutes.
Increased intensity is obtained by running up steeper inclines and for longer periods.

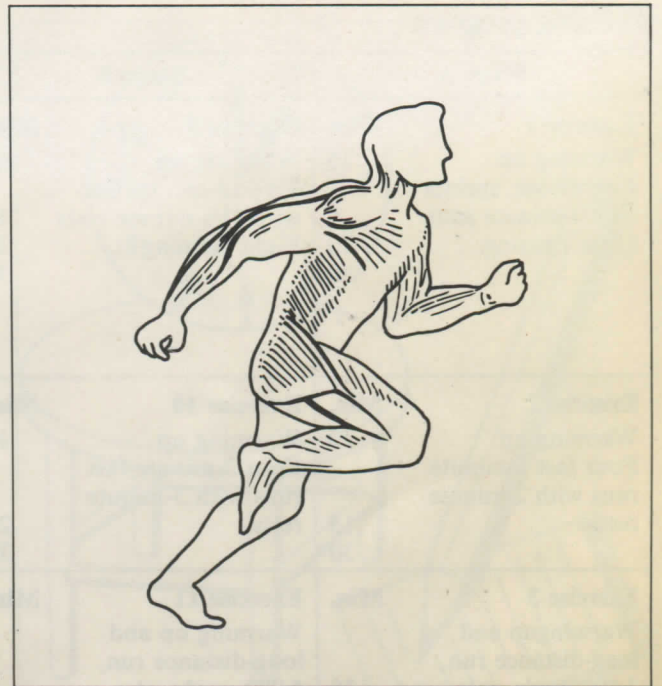


Fig. 70

Steady running

Steady running should be carried out for periods lasting not less than two minutes and not more than 10 minutes. Run at the highest steady speed that it is possible to maintain throughout the entire period. Rest periods should be allowed between each period of running, for getting breath back and gathering strength for the next period. Rest periods should be the same length as running periods, although never longer than four minutes. Increased intensity is obtained by running for longer periods and by running at gradually higher speeds.

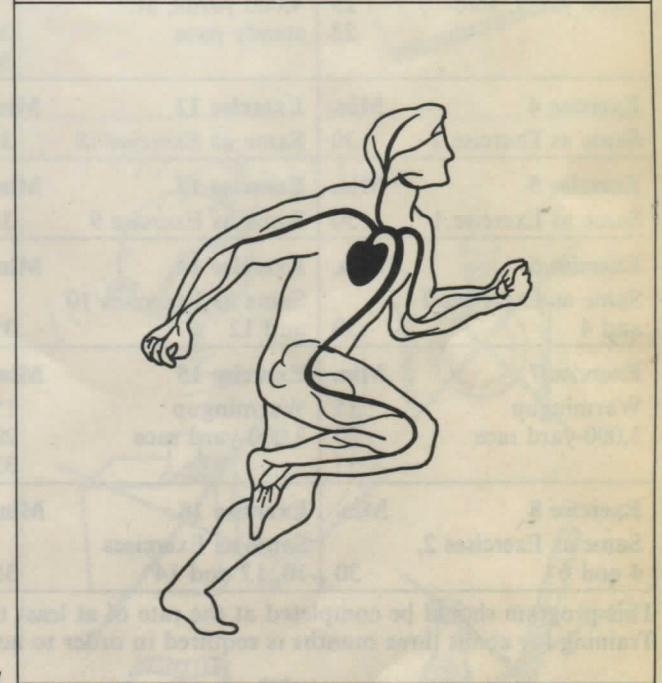


Fig. 71

Endurance exercises

This form of training may be used to check that the other training exercises have resulted in an improvement. Endurance exercises can be performed by running at a steady speed over gradually increasing distances. Cycling and cross-country ski-ing are excellent forms of endurance training.

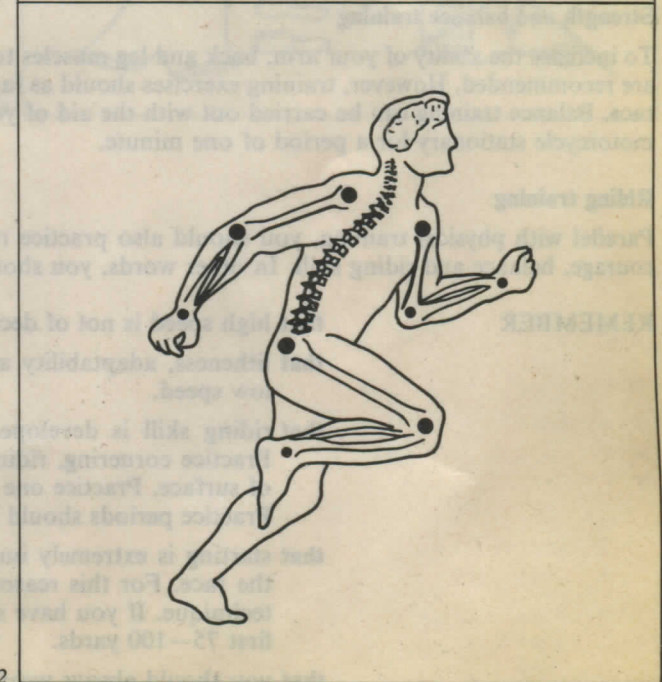


Fig. 72

Training program

Stage A		Stage B		Stage C		Stage D	
Exercise 1	Min.	Exercise 9	Min.	Exercise 17	Min.	Exercise 25	Min.
Warming up	15	Warming up	15	Warming up	15	Warming up	15
Five 10-sec. sprints with 1-minute rests	5	Five 15-sec. sprints with 1½-minute rests	10	Two 10-sec. sprints with 1-minute rests	5	Two 15-sec. sprints with 1½-minute rests	5
Light running	10	Light running	10	Three 20-sec. sprints with 2-minute rests	10	Three 25-sec. sprints with 2½-minute rests	10
	30		35		30		30
Exercise 2	Min.	Exercise 10	Min.	Exercise 18	Min.	Exercise 26	Min.
Warming up	15	Warming up	10	Warming up	10	Four 5-minute fast runs with 4-minute rests	
Four fast 2-minute runs with 2-minute rests	15	Four 3-minute fast runs with 3-minute rests	25	Four 4-minute fast runs with 4-minute rests	30		35
	30		35		40		35
Exercise 3	Min.	Exercise 11	Min.	Exercise 19	Min.	Exercise 27	Min.
Warmingup and long-distance run, 3,000 yards, solo	25	Warming up and long-distance run, 4,000 yards, at steady pace	30	Warmingup and long-distance run, 5,000 yards, at steady pace	35	Warmingup and long-distance run, 6,000 yards, at steady pace	40
	25		30		35		40
Exercise 4	Min.	Exercise 12	Min.	Exercise 20	Min.	Exercise 28	Min.
Same as Exercise 2	30	Same as Exercise 18	35	Same as Exercise 18	40	Same as Exercise 26	45
Exercise 5	Min.	Exercise 13	Min.	Exercise 21	Min.	Exercise 29	Min.
Same as Exercise 1	30	Same as Exercise 9	35	Same as Exercise 17	30	Same as Exercise 25	30
Exercise 6	Min.	Exercise 14	Min.	Exercise 22	Min.	Exercise 30	Min.
Same as Exercises 2 and 4	30	Same as Exercises 10 and 12	35	Same as Exercises 18 and 20	40	Same as Exercises 26 and 28	45
Exercise 7	Min.	Exercise 15	Min.	Exercise 23	Min.	Exercise 31	Min.
Warmingup	15	Warmingup	15	Warmingup	15	Warmingup	15
3,000-yard race	20	3,000-yard race	20	3,000-yard race	20	3,000-yard race	20
	35		35		35		35
Exercise 8	Min.	Exercise 16	Min.	Exercise 24	Min.	Exercise 32	Min.
Same as Exercises 2, 4 and 6	30	Same as Exercises 10, 12 and 14	35	Same as Exercises 18, 20 and 22	40	Same as Exercises 26, 28 and 30	45

This program should be completed at the rate of at least three exercises a week. Training for about three months is required in order to achieve good physical condition.

Strength and balance training

To increase the ability of your arm, back and leg muscles to withstand repeated loads, weight-lifting exercises and the like are recommended. However, training exercises should as far as possible resemble the stresses experienced during an actual race. Balance training can be carried out with the aid of your motorcycle. As your first objective, try balancing with the motorcycle stationary for a period of one minute.

Riding training

Parallel with physical training, you should also practice riding with the aim of improving your litheness, adaptability, courage, balance and riding skill. In other words, you should "be on good terms with your motorcycle".

REMEMBER

- that** high speed is not of decisive importance for achieving good practice results.
- that** litheness, adaptability and balance can best be improved by cross-country riding at low speed.
- that** riding skill is developed best on cross-country terrain and on motocross circuits. Practice cornering, riding uphill and downhill, jumping and riding on different types of surface. Practice one thing at a time until you are ready for riding a complete lap. Practice periods should be at least 45 minutes in duration without any lengtht breaks.
- that** starting is extremely important and sometimes may actually be decisive for winning the race. For this reason, devote special practice periods to improving your starting technique. If you have someone to help you, they can take acceleration times for the first 75—100 yards.
- that** you should always wear a crash helmet, gloves and long, heavy-duty boots.

Testing physical condition

Heart capacity is often the factor determining the ability of persons to perform heavy work for long periods. Measuring heart activity is therefore a fully satisfactory yardstick of maximum work capacity. Tish test is based on the fact that after a correct program of training the ability to absorb oxygen increases and the pulse rate is slower for the same amount of work. The most common methods of measurement are the ergometer cycle test and the step test. Of these, the step test is the most suitable for the individual motocross rider, since with this simple method it is possible for anybody to test himself without the use of special equipment or instruction.

General rules for testing

1. You should have slept soundly and be well rested. It is best to carry out the test in the morning.
2. You should not eat anything within two hours before the test.
3. You should not smoke within one hour before the test. (Smoking is not conducive to good physical condition and motocross riders are advised to abstain).
4. Light clothing should be worn.
5. Do not carry out the test if you are sick.

Materials

Chair, bench, box or the like about 40 cm in height.
Watch or clock with second hand.

Work

To carry out a step test, step up and down from the chair continuously for five minutes, each time with the same foot first and at a rate of 30 step-ups and 30 step-downs per minute.

This can be timed in such a way that you are standing on the chair with both feet after the first second and are back down on the floor with both feet after the second second, etc.

Carry out each step-up and step-down with the left foot first.

When standing up on the chair your knees should be straight, your hips slightly thrust forward and your head held high in a relaxed stance. Hold your arms naturally.

It is extremely important to learn these movements correctly from the start, so that the work involved in each test is as identical as possible. This is in order that the results of several tests can be compared.

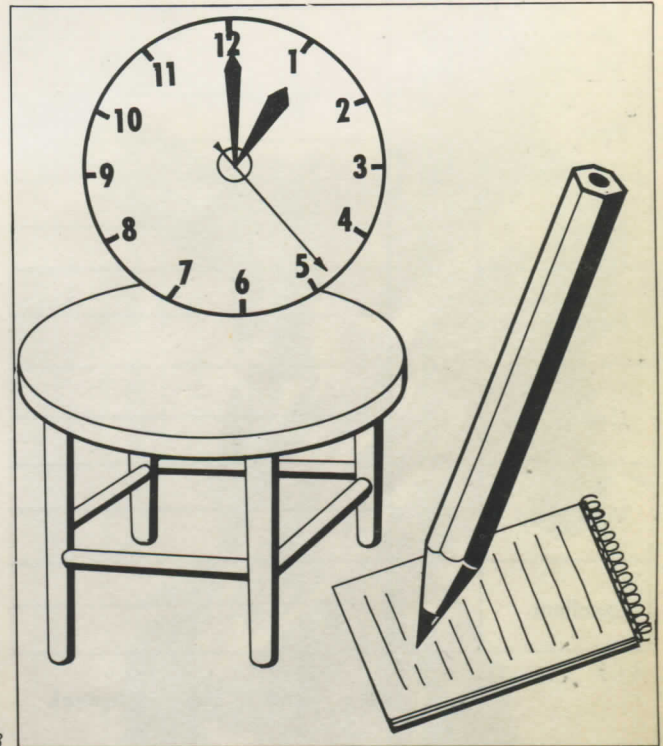


Fig. 73

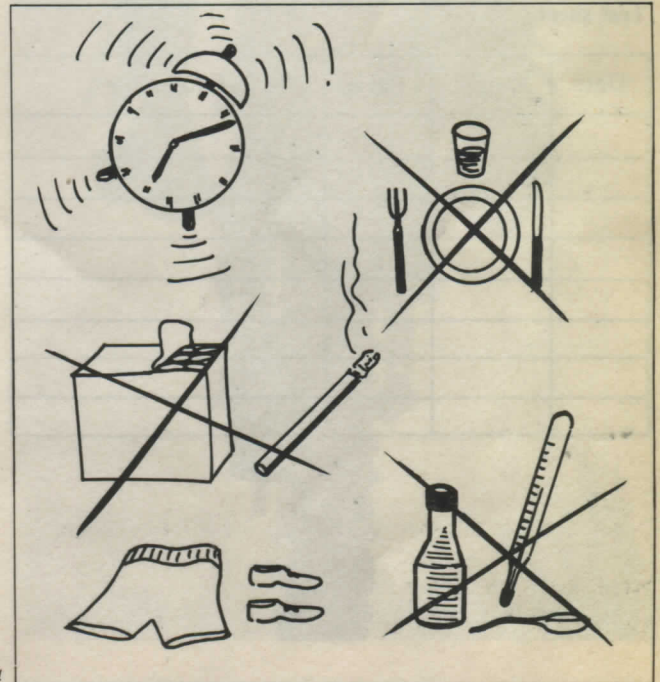


Fig. 74

Physical condition	Test pulse	
Poor	120	
Fair		
Fairly good	110	
Good		
Very good	100	
Excellent		
	90	
	80	

Fig. 75

1st 2nd 3rd 4th week

Pulse

After five minutes, sit down and rest for precisely one minute. Then take your pulse for 30 seconds. Double result and make a note on the test sheet. (Best way of feeling your pulse is to lay the flat of your hand against your heart on the left side of your chest or place your fingertips over the carotid artery which you will find just behind the larynx.)

Assessing test results

The test method described above provides a measure of the work capacity of the heart, taking into account the weight of the body, as the body is lifted up each time you step onto the chair. You could also enter the results on a graph (see Fig. 76) so that you can see at a glance how your physical condition improves.

Test sheet

Date	Weight	Pulse	Notes

Fig. 76

