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TREATMENT OF INJURIES

By most estimates, 70% of all athletes will experience an injury annually that will cause them to take time off from their sport. The majority of injuries are chronic soft tissue inflammations. The onset of these injuries is not sudden, but usually follows a history of neglect and abuse. Most are preventable, and don't "just happen". Because of their progressive nature, the majority of injuries could be avoided or reduced in severity with early detection and treatment.

Four Stages Exhibited With Injuries

Stage 1

Symptoms: Pain noticed only after training, sometimes hours after or the next morning

Prognosis: 1-2 day recovery possible with proper treatment and elimination of cause

Treatment: Ice, compression, elevation, massage

Stage 2

Symptoms: Discomfort or tightness, but not pain while training Normal training still seems possible

Prognosis: 4-7 day recovery possible with proper treatment and elimination of cause

Treatment: 2-4 day rest or cross training, ice, compression, elevation, massage, anti-inflammatories, seek professional help if no improvement or worse after 7 days of rest and treatment

Stage 3

Symptoms: More severe discomfort described as pain felt while training. Usually have to alter training levels because of pain

Prognosis: 2-4 week recovery possible with proper treatment and elimination of cause

Treatment: 4-7 day rest or cross training, ice, compression, elevation, massage, anti-inflammatories, seek professional help if no improvement or worse after 7 days rest and treatment. Usually requires rehabilitation with a return to sport when no pain on activity.

Stage 4

Symptoms: Severe pain. Unable to train

Prognosis: 6 week or longer recovery possible with proper treatment and elimination of cause

Treatment: Seek professional help immediately.

General Guidelines for Injury Treatment

Fight injuries in the making following the RICE principle:

Rest: The most important treatment of an injury but also the most ignored

Ice: Immediately after training, ice any spot that “feels funny” for 15-20 minutes. Repeat several times a day if possible until there are no more symptoms.

Compression: Compressing an injury as soon as possible after you’re hurt helps decrease the amount of swelling that occurs and minimizes pain and speeds recovery.

Elevation: Elevate the injured area above the level of your heart as much as possible during the first 48 hours post injury to minimize swelling.

Admit that getting well is more important than training: Keep injuries from progressing beyond level 1 or level 2. At those levels, a little rest and treatment can prevent lots of time off later.

Admit that most injuries are caused: If you want a long term fix for your problem, you must identify and treat the cause, not just the symptoms.

Use anti-inflammatories only for inflammation, not to kill the pain: Most anti-inflammatories are also pain killers. This is dangerous since they will mask the pain, possibly leading to more severe injury.

Don’t be afraid to seek professional advice: If the professional is not interested in seeking the cause and returning you to your sport as soon as possible, get another opinion.

Use caution coming back: There are two basic adjustments that must be made in your training program when returning from an injury. These adjustments include altering your volume and intensity of training. Plan a gradual increase from zero to your previous training level and stick with it no matter how good you feel.

How to Make Adjustment in Training After Time Off

Intensity

Depending on the length of time off from your injury/illness, you will invariably experience some deterioration in fitness. Your need to cut back on the intensity of your training will be inversely proportional to your time off for the injury (i.e. the longer you are off, the lower the intensity will need to be to resume training). The following table may be used as a general guideline for adjusting the intensity of your training after time off. For example, if you normally run at a pace of 8 min./mile for your easy runs and you are off with an injury for 3 weeks while cross training, you would resume easy running at a pace of 8:15/mile.

Time off from training	% of previous intensity if no cross training while injured	% of previous intensity if cross training while injured
less than two weeks	100	100
2 weeks	97	98
3 weeks	95	97
4 weeks	93	96
5 weeks	91	95
6 weeks	89	94
7 weeks	87	93
8 weeks	85	92
9 weeks	83	91
10 weeks	81	90
72 days or more	80	90

Volume

Just as important as cutting back on the intensity of your training is making the proper adjustments in your volume. To come back at your previous volume level after an extended time off is only asking for trouble. In general, you should train **EASY** for the same number of days that you were off with the injury at the intensity indicated in the previous table. The following provides further details with regard to increasing volume after an injury or illness:

1. 1 week or less off from training: May perform easy workouts at 100% or normal weekly volume for amount of time you took off. For example if you were off for 5 days from running, train for 5 days for the number of miles you would have run before your injury.

2. 2-4 weeks off from training: Take the same number of days to resume your normal training as you were off with the first half at 50% normal volume and the second half at 75% normal pre-injury volume. For example, if you are off for 4 weeks from running, run 2 weeks at 50% and 2 weeks at 75% of your normal pre-injury mileage.

3. 4-8 weeks off from training: Take the same number of days to resume your normal volume as you were off with the first third at 33%, second third at 50%, and final third at 75% of your normal pre-injury volume. For example, if you are off for 8 weeks from running, run 18 days at 33%, 19 days at 50% and 19 days at 75% pre-injury mileage.

4. 8 weeks or more off from training: Take of 3 weeks at 33%, 3 weeks at 50%, 3 weeks at 70%, 3 weeks at 85%, and 3 weeks at 100% pre-injury volume levels.

5. 12 plus weeks off from running or following major surgery or injury: Do not attempt to resume a regular running schedule until you have gone one to two weeks without pain in daily activities following a major surgery or extended time off from running. The following guidelines may be used to return to running safely:

Level 1: Walk 2 minutes, jog 2 minutes. Repeat 4 times.

Level 2: Walk 2 minutes, jog 2 minutes. Repeat 6 times.

Level 3: Walk 2 minutes, jog 4 minutes. Repeat 3 times.

Level 4: Walk 2 minutes, jog 4 minutes. Repeat 4 times.

Level 5: Walk 2 minutes, jog 4 minutes. Repeat 5 times.

Level 6: Walk 2 minutes, jog 5 minutes. Repeat 4 times.

Level 7: Walk 2 minutes, jog 6 minutes. Repeat 4 times.

Level 8: Walk 2 minutes, jog 8 minutes. Repeat 3 times.

Level 9: Walk 2 minutes, jog 10 minutes. Repeat 3 times.
Level 10: Walk 1 minute, jog 10 minutes. Repeat 3 times.
Level 11: Jog 30 minutes.

Begin each session with a 5-10 min. brisk walk to warm up and cool down followed by stretching. Only progress to the next level if you experience no pain and rest for at least one day between runs. Once all levels are completed, you may follow the 10% rule for increasing your longest run and total mileage for the week. Once you have reached 33% of previous running volume, you may follow the return to run program outlined for 8-12 weeks off from running.

What To Do If You Experience Pain When Training or Returning from Injury?

Whenever you feel pain, no matter how slight, you should try to figure out what it means. Ask yourself the following questions about your pain or pains. The pains are listed roughly in order of seriousness, from least to most severe.

- 1. Did your pain begin after an extra-hard effort (such as a race or track workout) and last less than 2-3 days?** If yes, it probably was normal post-effort soreness requiring no treatment other than reduced training or rest.
- 2. Did your pain result from a sudden increase in training (increased mileage/long run, lifting more than normal), a change in surface or terrain (flats to hills) or a switch in shoes or other equipment?** If yes, avoid the aggravating workout or equipment and try to correct your sensitivity toward them. Seek professional advice to find out if you need different shoes, an orthotic or other treatment.
- 3. Does one type of training (such as speedwork, plyometrics, hills) cause your pain while another type (such as slow distance work, light weight training) causes no problem?** Back away from that type of training until the pain subsides then make the change more gradually and carefully the next time. You may want to consult with a coach or personal trainer for a more customized training program.
- 4. Do you feel pain before training which then eases or even disappears as you warm up?** If yes, this signals an unresolved problem which could escalate but you may continue training if the pain does not alter your normal pattern. You should not attempt any increase in intensity or volume during this time.
- 5. Did your pain first appear only after you had cooled down from the training session?** If yes, your body was probably masking the pain until it had completed its work. You may not feel it until the next time your train.
- 6. Does your pain increase during your training?** If yes, this is a more serious sign than pains that decrease or ones that remain constant. Increasing pain means you're clearly making the condition worse with each minute you train.
- 7. Does your pain cause a change in your form (such as favoring one leg or a shorter stride when you run)?** If yes, this is a tip-off to the injury's severity and can trigger secondary injuries in other areas now under unusual stresses.
- 8. Did your pain occur sharply in mid-activity?** If yes, stop immediately. Anything

traumatic enough to override the body's pain-masking mechanism must be taken seriously. Seek professional guidance.

9. Did your pain recur at an old injury site? If yes, accept the fact that there probably is scarring in that area and you have a permanent weakness for that sort of injury and develop a program to correct it.

10. Did you "hear" (cracking, snapping, popping, etc.) the source of your pain? If yes, this may be a warning sign of possible permanent damage being done to tendons, ligaments, cartilage or bone.

References:

1. Ellis, Joe: *Running Injury Free*, Rodale Press, 1994
2. Daniels, Jack: *Daniels' Running Formula*, Human Kinetics, 1998