A. Why are hills so easy to hate?

The answers are probably obvious...

- B. Why is training on hills beneficial?
  - --- Make the workout harder. There are heart/lung benefits to threshold and anaerobic exercise.
  - ---Iniury prevention. You can have an anaerobic workout (AKA a "hard day") and have less impact on your joints than if you did just as hard a workout on flat ground.
  - —Build leg strength and make a longer stride. Instead of building strength in the weight room, build it while you are RUNNING. Studies show...
  - —Greater economy. (What does that mean?) A study of marathoners at the Karolinska Institute in Sweden showed that marathoners who did twice weekly hill workouts were able to improve their O2 efficiency (their economy) by approximately 3%. (That would be hard for runners that well conditioned to do on flat ground workouts)
  - --- Racing advantage. If you know how to run hills correctly in a race, you gain an IMMEDIATE advantage over those who don't know how to run hills.
- C. Running hills with correct form:

## Running UPHILL

- 1. When starting uphill shorten your stride. Why?
- As the gradient changes, change your <u>stride</u> length?
- 3. Goal: even effort as on flat ground...NOT even speed. Why?
- 4. You can increase your turnover rhythm.
- 5. Posture should be almost straight up, actually a VERY SLIGHT forward lean.
- 6. Arms: Have more arm action. Your arms should pull you up the hill.

The arm motion should be more up & down and less forward & back than in flat ground running.

## Running DOWNHILL

- 7. Lean slightly forward. I.e. use the gravity of the hill.
- 8. Tuck your <u>feet</u>. Strike should still be <u>mid-foot</u> if possible. Your center of gravity should stay out in <u>front</u> of you. KEEP USING THAT GRAVITY...THE GRAVITY SHOULD PULL YOU ALL THE WAY TO THE BOTTOM OF THE HILL.

THIS IS WHAT WE CALL FREE SPEED.

 Arms: Loose and relaxed. Also <u>less</u>/ <u>no</u> arm action than flat ground running. Why? Keep your elbows <u>out</u> for balance.