Chapter 3

Numbers Count

IN THE LAST CHAPTER, WE wrote that you must identify the symptoms you want to free yourself from—the symptoms you suspect your slow metabolism is causing. After identifying them, you must estimate their intensity at intervals. How often you estimate the intensity of your symptoms will depend on your intention.

If you've never eaten a wholesome diet, taken nutritional supplements, or exercised to tolerance, you may want to first measure how much these practices alone reduce the severity of your symptoms. Monitoring the severity of your symptoms once or twice each week will be often enough.

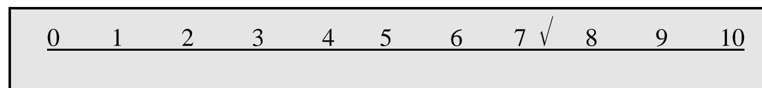
If taking thyroid hormone is part of your rehab, you should measure the severity of your symptoms at intervals long enough to tell you the benefits of a particular dose. If you use desiccated thyroid or a synthetic T_4/T_3 product, monitoring every two weeks will be often enough. Two week intervals are enough because improvements in your symptoms after an increase of your dose can take up to two weeks.

If taking T_3 is part of your rehab, monitoring your symptoms once each week is appropriate. Improvements come much faster after an increase in a dose of T_3.

To estimate the severity of your symptoms, you'll need to use what we call a "severity scale" for each symptom. Below is a severity scale. Notice that it contains numbers ranging from 0 on the far left to 10 on the far right. Let's say this is your severity scale for fatigue. On each occasion that you estimate the intensity of your fatigue, you'll place a mark, such as a √, somewhere on the line. You'll mark 0 if you have no fatigue, 5 if it's moderately severe, and 10 if it's as severe as it can be. Or you can place a mark anywhere along the line that represents how severe your fatigue is.

We want to emphasize that you don't have to pick one of the numbers along the scale; instead, you can mark the scale anywhere

you feel is accurate, including spaces between the numbers. For example, let's say you feel your fatigue over the past week has been about 7⅓, so you place a √ on the scale about ⅓ of the way between the 7 and 8.



Fatigue

Don't worry about pinpoint accuracy. What's important is that you mark the spot that at the moment seems most accurate to you. Whether you're first estimating the intensity of the symptom, or whether you've done it many times, estimate the average intensity of the symptom over the past week, or past two weeks.

We've included a page in *Forms* that contains five severity scales. Copy the page and label the scales with your main symptoms. If you have more than five, use another copy of the page to label your other symptoms. Use as many scales as you want—one for each of the symptoms of slow metabolism from which you want to free yourself.

Graphing Your Symptom Score

When you estimate the severity of a symptom, and you mark that symptom's severity scale, you then have a "score" for that symptom. Your next step is to post that score to a line graph. This is called "graphing." (We've included a line graph for you to copy and use. See *Forms*.)

In explaining how to think clearly and solve problems, writing and thinking expert Rudolf Flesch, Ph.D. advised the use of graphs:

> If the problem can be stated graphically, state it graphically. A graph often helps you understand something that looks unintelligible in words or figures. Louis Bean, the only man who has been consistently right in predicting [political] election results,

> says he performs this magic trick with charts and graphs. If you are not up on this technique, pass the problem on to someone who is.[241,p.276]

We don't want you to pass the "problem" of graphing along to someone else. It's too important, and besides, we've learned that most doctors aren't going to do it anyway. We prefer that you learn to do your own graphing, and then share your graphs with your doctor. Some patients—Vicky Massey is the best example (see *Foreword*)—have found that their doctors became more cooperative when the patients shared their graphs with them.

We can't overemphasize the importance of graphing to your getting satisfactory results from your metabolic rehab. A little work is involved in getting scores for your symptoms and posting them to line graphs. Because of this, many people would prefer not to do it. But that's a mistake; failing to graph your scores can sabotage your efforts to get well.

I (GH-L) know this from personal experience. When we guide patients through metabolic rehab, we collect our patients' symptom severity scores, and we post them to line graphs. When I first began treating patients with metabolic rehab, I declined to do the "busy work" of graphing my patients' scores. Instead, I just looked at the changed scores on the monitoring forms I had patients fill out.

It was a mistake not to graph my patients' scores. At that time, I had just begun learning metabolic rehab from Dr. Lowe. When I was having trouble making decisions about my patients' treatment, I had to consult with him. He pointed out the source of my trouble—no graphs of my patients' scores. I promptly made the graphs, and doing so eliminated my trouble in making clinical judgments. The graphs enabled me to make quick and precise decisions, and I immediately felt a sense of control in guiding my patients in the right direction. There is no substitute for graphing, and we urge you to do it.

Our friend and colleague, the late Dr. John Gedye,[39] felt that a major problem with medical practice nowadays is doctors' failure to use data and graphs to guide their clinical decisions. He noted,

though, that when it's really important, some doctors depend heavily on measures of how patients are doing—the equivalent of graphs. This is the reason for all the monitoring instruments around a patient who just came out of surgery, or a patient who is recovering from a heart attack. Making sure the patient recovers *critically* depends on measuring how she's doing, and some of the instruments provide graphs of the patient's changing status.

Dr. Alan Reichman, another of our colleagues and a family physician, once compared our monitoring and graphing to his management of patients with high blood pressure.[40] He said that a patient may not *look* like her blood pressure is high; measuring her blood pressure with an instrument (called a sphygmomanometer), however, shows that it is indeed high. Without the knowledge gained from measuring, Dr. Reichman wouldn't know to adjust his patient's treatment so that her blood pressure becomes normal. And without a record that shows the course of his patient's blood pressure over time, Dr. Reichman couldn't intelligently guide the patient in her treatment.

Consider this example: Jane's blood pressure was 144 over 98 until she stopped putting salt on her food. A week after she stopped the salt, her pressure went down to 135 over 95. The next week it dropped to 128 over 90. Since then, it's been 118 over 78. From this description, we know that Jane's blood pressure went down. But we don't have a clear picture of how it happened.

Now, compare your impression of the improvement in Jane's blood pressure with what you get from the line graph in Figure 1. The line with the ▲ symbol shows the changes in her systolic blood pressure during each of the six weeks. The line with the ◆ symbol shows the diastolic pressure during each week. The two lines are what we call "trend lines." Looking at the trend lines gives us a clear view of Jane's improvement over the six-week time frame.

The clear view that line graphs provide can have quite an impact on helping you to solve a health problem. We'll illustrate how in the example below.

A TYPICAL HYPOTHYROID PATIENT

Here we'll describe the use of scoring and graphing by a hypothetical patient as she goes through metabolic rehab. We'll call her Mary, although her story is a composite of several patients' experiences.

Mary is hypothyroid. Her main symptoms are depression, disturbed sleep, and widespread pain. One doctor told her that her depression was the cause of her other symptoms. But a year of treatment with several different antidepressants didn't improve any of her symptoms, including her depression. Another doctor diagnosed her pain as fibromyalgia, but six months of treatment with amitriptyline and cyclobenzaprine didn't help at all (see *Chapter 11*, section titled "Antidepressants as Sleep Aids").

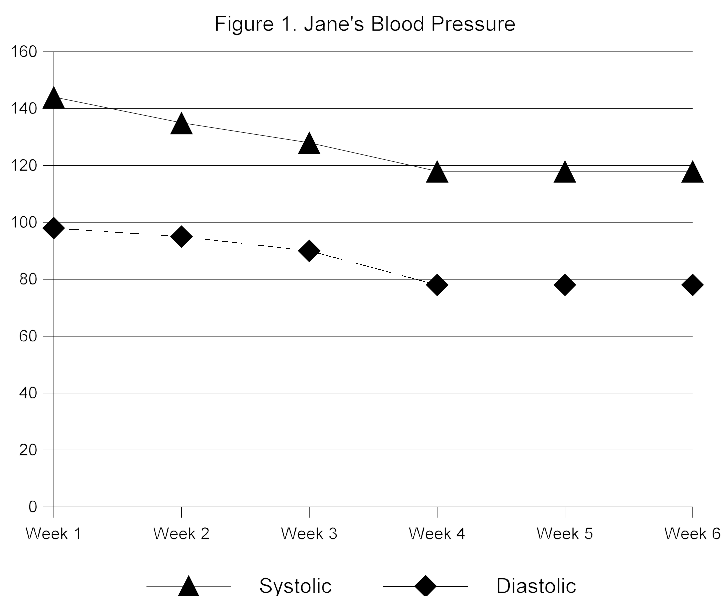
Finally, Mary came under the care of a naturopathic doctor in her hometown in New Hampshire. At the same time, she consulted me (GH-L) long distance at our Boulder, Colorado Center for Metabolic Health. I agreed to work long distance with her and her naturopathic doctor. I diagnosed hypothyroidism, and her naturopathic doctor agreed to prescribe desiccated thyroid and to examine her at intervals. I taught Mary to make her own graphs to help guide her therapy. I also advised her to find a chiropractic doctor or therapist to evaluate her for physical sources of pain, such as trigger points or spinal subluxations.

Mary had tried for years to overcome her symptoms with lifestyle practices. She maintained a wholesome diet, took a wide array of nutritional supplements, and exercised regularly. Because she was already doing these metabolism-regulating practices, I expected her to have an uncomplicated recovery by using the desiccated thyroid.

Mary got her baseline symptom scores and posted them to her line graph before she began to take desiccated thyroid. Then she started taking 1 grain (60 mg) of desiccated thyroid at the beginning of the second week of her self-monitoring. Figure 2 shows what her graph looked like at the end of the first month.

The trend lines suggest that after her third week taking the thyroid hormone, all three of her major symptoms (depression, disturbed sleep, and widespread pain) were improving. She was keeping a diary of her subjective feelings about her symptoms, and the diary reflected what the trend lines showed. She said she felt a little less depressed, was sleeping a little better, and that her pain wasn't as severe.

At the end of the fourth week, Mary increased her dose of des-



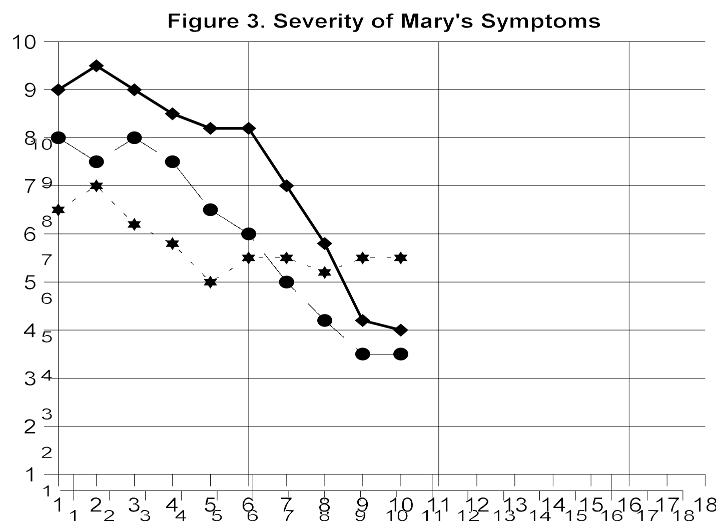
iccated thyroid to 2 grains (120 mg). She continued to assess her symptom severity with her three symptom scales, and she continued posting the scores to her graph. Her 2-grain (120-mg) dose apparently was effective for her.

Mary's graph suggests that by the end of eight weeks (see Figure 3), she had made substantial improvement. The trend line of her pain scores, however, suggests that the severity of her pain had reached a plateau. But a temporary leveling off of a trend line isn't

unusual. When I asked Mary about physical treatment, she said she hadn't yet been able to find a doctor or therapist to evaluate her. She promised to diligently search for one.

I recommended that she contact Richard Finn, Director of the Pittsburgh School of Pain Management in Pennsylvania to get a re-

Figure 3. Severity of Mary's Symptoms

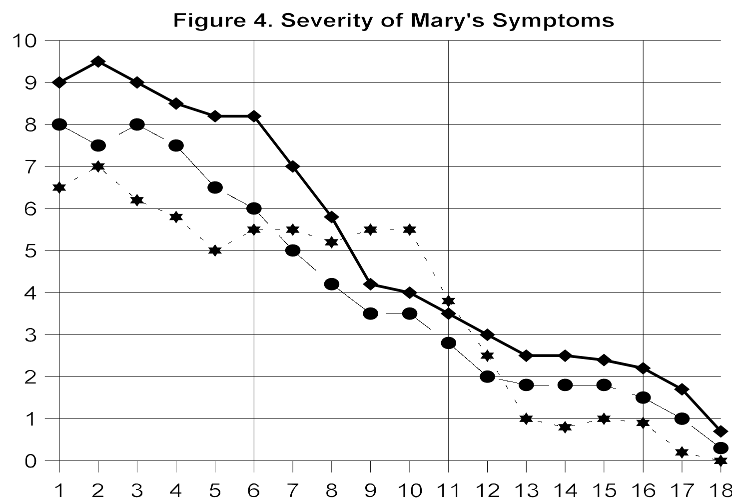


ferral to a certified myofascial trigger point therapist (see *Resources*). Richard referred her to a therapist who practiced twenty miles from her. Fortunately, the therapist practiced in the same clinic as a chiropractic doctor—the therapist's wife. Unfortunately, both of them were on vacation, but Mary made an appointment for two weeks in the future.

At the end of the two weeks, but still *before* her appointment (look at weeks 9 and 10 in Figure 3), the trend lines show something we've often observed. We've seen it so often that we've described it in publications on fibromyalgia.[132][137] When a patient has a physical problem that's causing pain, and she doesn't get effective physical treatment to relieve the problem, her pain scores

won't improve beyond a certain level—even though her metabolic treatment is improving her other symptoms. In addition, her other symptoms will improve only to a certain level; then the improve

ment levels off and won't get any better. But as you'll see below, when the patient gets appropriate physical treatment, her pain and other symptoms continue to improve under the influence of the



metabolic treatment.

At the end of the 10th week, the trigger point therapist and the chiropractic doctor evaluated Mary's muscles and spine. The therapist found multiple trigger points in the muscles of Mary's neck and upper back, and he began treating these. The doctor found subluxations in Mary's cervical and thoracic spinal areas and she adjusted them.

After the combined treatments, Mary felt immediate and profound relief from both pain and tension. She underwent the combined treatments three times a week for the next two weeks. The benefits are reflected by the trend lines in her graph over the next four weeks (weeks 11, 12, 13, and 14) shown in Figure 4.

At the end of the 15th week, Mary increased her dose of desiccated thyroid hormone to 2.5 grains (150 mg). She did this because her symptom status, although dramatically improved, had leveled off again, and the extra ½ grain (30 mg) was calculated to be enough to totally relieve her symptoms. This indeed happened, and she was released from treatment after 18 weeks. It's now been two years, and Mary continues to maintain her full recovery.

More Than Graphing

Mary's line graph was instrumental in helping her fully recover. Had she not seen the leveling off of her trend line for pain, she might not have appreciated the importance of getting physical treatment. And without seeing her three trend lines level off after the 12th week, her substantial improvement may have caused her to mistakenly think she had improved as much as she could. She obviously had more improvement to come, and she got it with a slight increase in her thyroid hormone dose.

What we said in the previous paragraph bears repeating—that Mary's graph was instrumental in "*helping* her fully recover." This is what graphs are supposed to do: help. The trend lines in the graphs shouldn't alone dictate what treatment decisions the patient and her doctor make. The patient and her doctor should also calculate their subjective judgments into their treatment decisions.

Just as Mary's naturopathic doctor made progress notes on her status each time he saw her, Mary also made notes in her diary. And, she recorded the dates that she wrote the notes. It's important for all patients undergoing metabolic rehab to maintain diary notes. This is because it's too easy for a patient to forget exactly how she felt even a couple of days ago, a week ago, and especially further back in time. Usually, the patient's subjective judgment of how she's doing corresponds pretty closely to what her graphs show.

Unfortunately, the patient—like all of us—will occasionally have a bad day. On that day, she's likely to misjudge how much progress she's made since she began treatment. In fact, some pa-

tients who are nearly well will swear on bad days that they haven't improved a bit! Looking at the graphs and reviewing one's diary notes can effectively bring one's judgment closer to reality.

SUMMARY

In summary, here's the process you need to follow to guide yourself to recovery:

- Select the symptoms of slow metabolism you want to eliminate.
- Label a severity scale with the name of each symptom (see *Forms*).
- Decide how often you're to reassess your symptoms.
- Post your symptom scores to a line graph (see *Forms*).
- Decide what metabolic therapies and lifestyle practices you must include in your regimen of metabolic rehab. Read the chapters on the different therapies and lifestyle practices so that you understand them and can use them effectively.
- Commence your treatment program and reassess the severity of your symptoms at regular intervals.
- If the trend lines in your graph descend, indicating improvement, and your diary notes reflect the improvement indicated by your graph, continue with your current treatment regimen.
- If the trend lines don't indicate improvement, and this corresponds to your diary notes, troubleshoot your treatment regimen to figure out why you're not improving. Re-read any chapters about therapies and lifestyle practices that you may not fully understand or may not be using effectively.
- If you're stumped, see *Chapter 15*, Troubleshooting. If you decide you need help, we'll be happy to hear from you and help get you on the right track. In most cases, we can do this through long-distance consulting (see *Resources*).

■ For extensive information on monitoring metabolic status and using graphs to guide treatment, see Chapter 5.2, titled "Treatment Protocol," pages 937-979 in *The Metabolic Treatment of Fibromyalgia*.[1]

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