How Much Exercise Is Too Much or Too Little?

By Matthew D. Hansen, DPT, MPT, BSPTS

For chronically ill patients, the amount of exercise needed depends upon what is right for each individual, but inactivity is not an option.

As human beings, we often struggle with knowing how much is too much and how much is too little in many aspects of our lives. For instance, we wonder about how much sleep, food, drink, attention, work, entertainment, relaxation, fiber, etc., we really need. But, for those patients who live with a chronic illness, few questions have consequences that are more far-reaching than: "How much exercise/activity is too much, and how much is too little?"

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One day of really overdoing exercise may put someone with a chronic illness out of the game for the rest of the week; worse yet, with some diagnoses, it may actually exacerbate the condition! Consequently, many patients find it easier to simply justify not exercising at all. "After all," they think, "why risk getting worse when I barely have the energy to get started anyhow?" Unfortunately, this is a fallacy in thought that is all too common, and it's not just found with patients who experience a chronic illness.

Risks of Inactivity

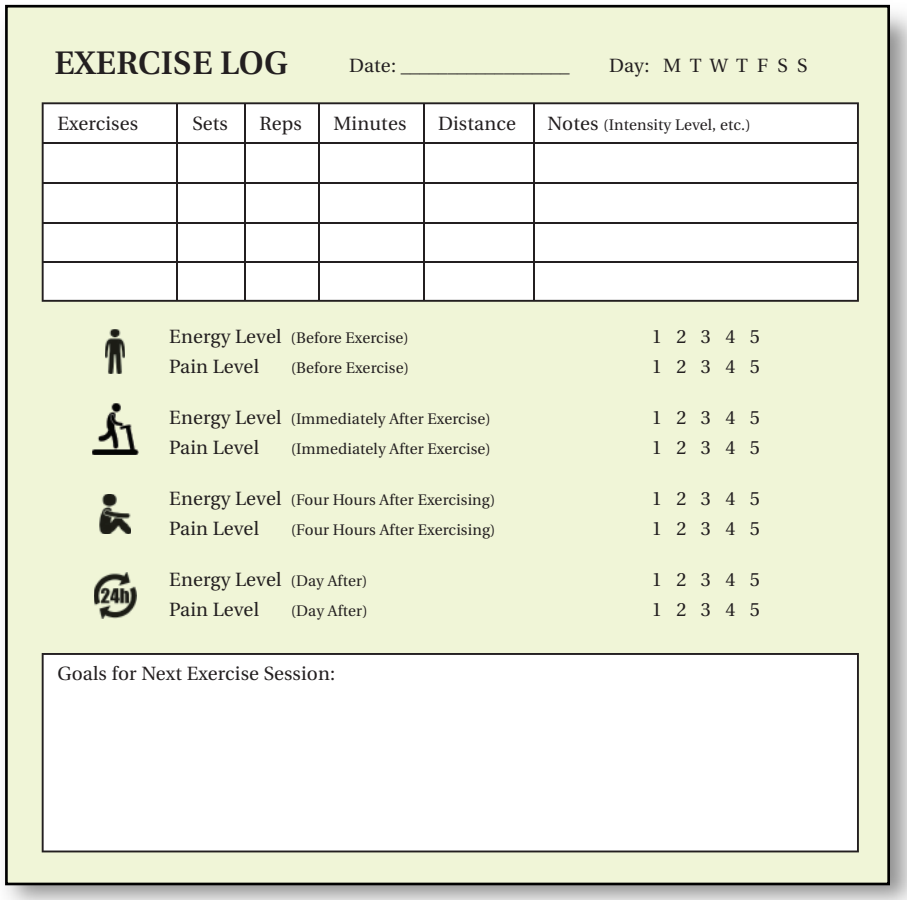
Scientific research has long established many of the risks of not exercising, including high blood pressure and/or heart disease, obesity and associated type 2 diabetes, possible increased risk of certain cancers, osteoporosis, increased risk of muscular and soft tissue injuries, anxiety and depression. Living with a chronic illness can present enough anxiety. Why add any more?

A meta-analysis published in the February 2010 issue of *Archives of Internal Medicine* reviewed 40 studies on the effects of exercise in nearly 3,000 participants living with a chronic illness. In 90 percent of the studies analyzed, those who exercised regularly reported an approximately 20 percent reduction in anxiety symptoms compared with those who did not exercise. Co-author Rod Dishman, PhD, explained that "because not all study participants completed every exercise session, the effect of exercise on anxiety reported in our study may be underestimated."[1]

Overactivity certainly can lead to greater exhaustion. However, somewhat ironically, inactivity deconditions the body and may not only lead to exhaustion, but it can actually make symptoms of the condition even worse. So, what's the answer to this seeming "catch-22"? If the solution isn't inactivity, and it's not just grinning and bearing it, it must be — as is often the case in life — somewhere in between. The easiest formula for finding the right amount of exercise is for patients to take note of how they feel afterward. All people may experience some tiredness and muscle soreness after exercising (especially when they are just getting started); however, those feelings should not be debilitating, and after patients have had a chance to rest, they should usually feel better than they did previous to exercising. If any pain or exhaustion persists to the point that it is interfering with patients' normal daily routine the next day, they have likely overdone it (gotten too much exercise). If they don't have any discomfort or exhaustion after exercising, but aren't experiencing any of the apparent benefits either, they can probably afford to increase at least one component of their routine (intensity, frequency and/or duration).

Seems simple enough, right? It may seem simple, but finding the proper balance can be a confusing and sometimes frustrating process. In order to assist in the

Figure 1.



EXERCISE LOG Date: _____ Day: M T W T F S S

Exercises	Sets	Reps	Minutes	Distance	Notes (Intensity Level, etc.)

Energy Level (Before Exercise) 1 2 3 4 5
Pain Level (Before Exercise) 1 2 3 4 5

Energy Level (Immediately After Exercise) 1 2 3 4 5
Pain Level (Immediately After Exercise) 1 2 3 4 5

Energy Level (Four Hours After Exercising) 1 2 3 4 5
Pain Level (Four Hours After Exercising) 1 2 3 4 5

Energy Level (Day After) 1 2 3 4 5
Pain Level (Day After) 1 2 3 4 5

Goals for Next Exercise Session:

This exercise log can be downloaded for use at www.IGLiving.com/IGResources.aspx.

task, I have found two tools to be invaluable: the exercise log and visual charts used to monitor pain and exhaustion.

Exercise Log

An exercise log is basically a journal that records patients' activities for the day and their physical response to those activities (see Figure 1). It also can be used to set goals, measure progress and serve as a visual motivator. If patients have ever kept an infusion or diet log, they're already familiar with the concept of keeping these types of records. However, I highly recommend that they personalize their log to meet individual needs and style. Here are several components for consideration and an example of a log that patients may use:

- Date and time
- How patient felt before exercise
- Type of exercise(s) performed
- Length of time of each exercise
- Intensity level (one to five) experienced while performing exercise(s)
- How patient felt immediately after exercising
- How patient felt four hours after exercising
- How patient felt the day after exercising
- Goals for the next exercise session

Again, there's no standard format. Patients can use narratives, check boxes, graphs or whatever they like to track these or other factors of their own. The key to using an exercise log is for patients to find or develop a system that works for them and to *use it*! This means not only recording in their exercise log daily, but also reviewing past entries to discover patterns, such as what exercises made them feel better, what exercises made them feel worse, how far they can walk on a flat surface without becoming exhausted, and how many repetitions of a given exercise they can perform before it causes pain.

Visual Chart

A regular element of each of the exercise logs that I helped to develop is a visual chart to monitor exhaustion and pain. I prefer to keep it simple and use a graduated five-point scale (five- and 10-point scales seem to be the norm, though there isn't anything that says that a seven-point scale can't be used if it's someone's favorite number). Patients may also choose to use a color scale and/or figures to represent their energy and/or pain status. (See Figure 2.)

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How to Avoid Doing Too Much

It's almost always better for patients to ease into activity versus overdoing it and getting discouraged as a result. However, as a rule of thumb, I like to recommend that patients use their current activity level as their baseline and increase activity (intensity and/or duration) by no more than 10 percent to 20 percent per week until they experience any hint that they may be starting to overdo it. At that point, it's important to slightly scale back until the initiation of symptoms disappears. Despite my rules (and my thumbs), patients with a chronic illness should always visit with their doctor prior to beginning a new exercise program or significantly increasing an established one.

What might the 10 percent rule look like? Patients who may be able to walk five minutes without stopping to rest, for example, may attempt to begin by increasing their routine to walking five and a half minutes without stopping. Maybe they are able to walk 100 feet, arm curl 5 pounds, or perform 10 knee bends. The point is to increase this amount by just 10 percent to 20 percent per week. As you can imagine, by increasing activity level in small intervals, it may take chronically ill patients a number of weeks (even months) to establish their maximum symptom-free exercise routine. However, consistency is important, because deconditioning may occur even more quickly if no exercise is performed over an extended period of time.

Exercise tolerance can vary daily in the chronically ill patient population. It's all right to avoid exercise during a symptom flare-up, scale back to a prior level, or substitute for an exercise with an easier activity or light stretching. Pacing techniques also are important. Oftentimes, it's safer and just as effective for chronically ill patients, depending on the purpose of the program, to exercise several times a day for shorter intervals than to lump it all together into one longer session. If a planned activity becomes too much, it's better to stop than to push through the exercise and pay for it later.

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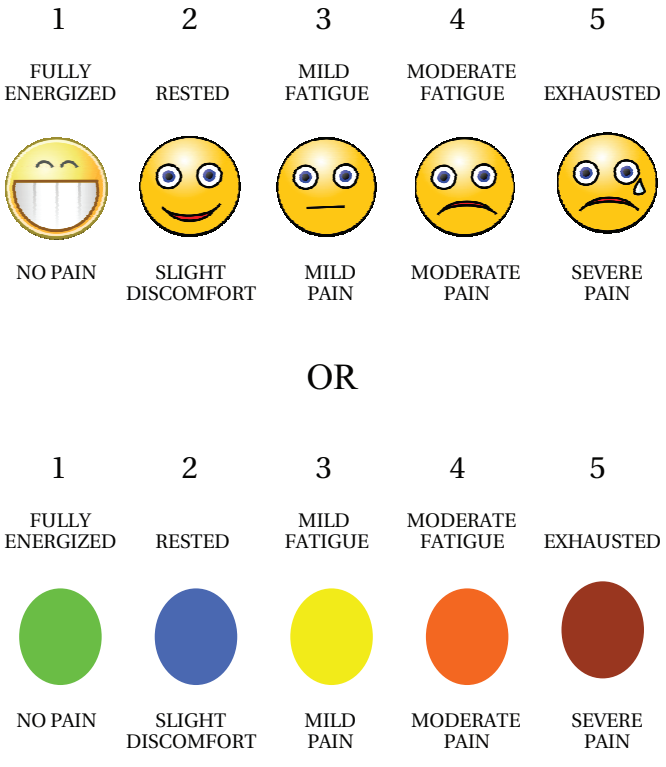
Meditation techniques also can be used as a warm-up to aerobic or strengthening exercises, and will oftentimes help patients to direct their session. Moreover, meditation is a fantastic stress-reducing activity that can be utilized in just about any situation. It can be performed through the use of yoga, tai chi, stretching or simply sitting still and listening.

By learning to listen to their own body, and using tools such as exercise logs and visual charts to assist, patients will soon discover how to tell how much exercise is too much and how much is too little. The rest is a walk in the park, or at least it could be — that's up to the patient!

Figure 2.



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Reference

1. Herring, MP, and O'Connor, PJ. The Effect of Exercise Training on Anxiety Symptoms Among Patients, *Archives of Internal Medicine,* (reprinted) February 2010.