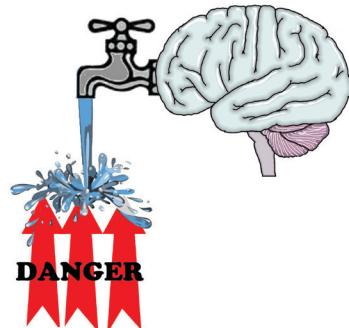


# Homework 13.1

## Immune System and Pain: Questions

People who know more about their pain and how it works experience less pain. This allows the brain to produce a variety of pain medicine, helping you get better. The more you know, the better off you will be. Think about everything you learned about pain today. Write down any questions you may have so we can discuss them next time. This ongoing learning is key to your recovery.

- 1.
- 2.
- 3.
- 4.
- 5.

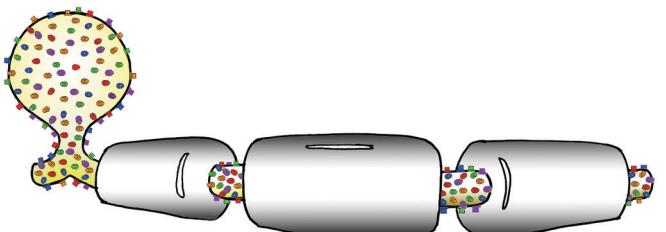


# Homework 13.2

## Immune System and Pain: Nerve Sensors

- When you have the flu, where do you hurt?
- All over, right?
- When we have the flu, immune molecules float through the body and set off nerve sensors that are sensitive to immune molecules.
- When the nerves all wake up, the end result is sore areas all over the body.

Use these images and explain this concept to a friend or family member, or write it down for yourself.



TEMPERATURE



STRESS



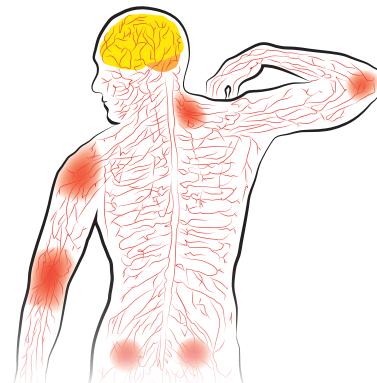
MOVEMENT



IMMUNITY



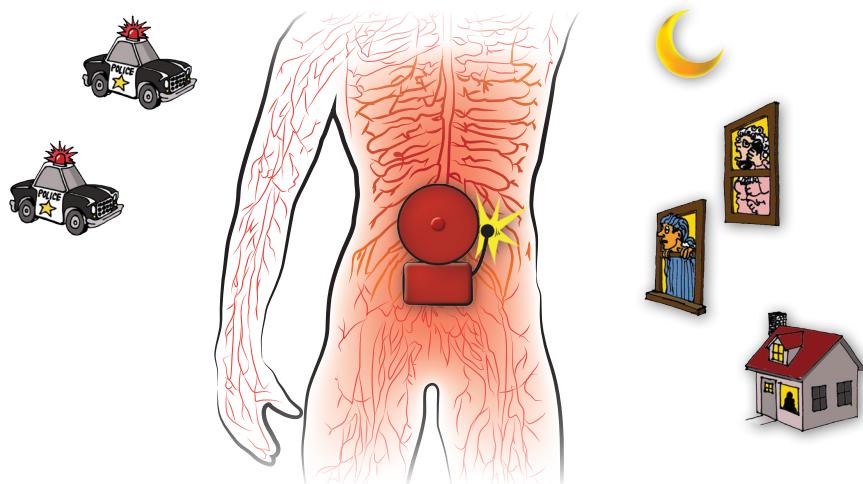
BLOOD FLOW



# Homework 13.3

## Immune System and Pain: Nosy Neighbors

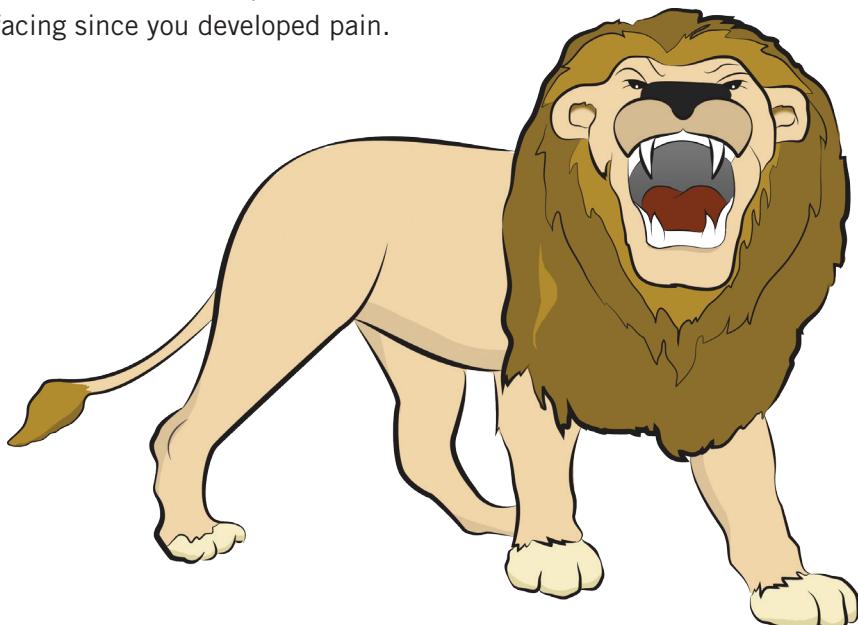
Can you explain nosy neighbors? Using the images below, explain to your friends and family how nosy neighbors result in you experiencing spreading pain. You can also write it out for yourself on a piece of paper.



# Homework 13.4

## Immune System and Pain: The Lion in your Life

The lion in our story represents the collection of issues you deal with on a daily basis since experiencing pain. Below is a blank picture of a lion. Take some time and write in all the issues you have been facing since you developed pain.



# Homework 13.5

## Immune System and Pain: Sleep Hygiene

Below is a list of strategies to help you develop a healthy sleeping pattern. Choose one every day, and over time you will see the benefit. Use this as your sleep checklist:

- Set a time to go to bed—before 11pm.
- Quiet the house by turning off the computer and the TV.
- Reduce fluid intake in the evening.
- Reduce alcoholic beverages in the late evening.
- Darken and cool the bedroom.
- Remove kids and pets from your bed (no bed buddies).
- Park your ideas. Place a notepad and pen next to your bed.
- Relax, meditate or read a book before bed.
- Avoid checking e-mails or messages before bed.
- Stay in bed. If you cannot sleep, close your eyes and relax.
- Set a wake time, and stay in bed until then.
- Eliminate naps. If naps are needed, limit them to power naps of fewer than 20 minutes.
- Avoid caffeine in the late afternoons or evenings.
- Exercise during the day.

# Homework 13.6

## Immune System and Pain: Develop an Exercise Program

Most people who don't exercise just don't have a plan. Research shows that 90 percent of exercise is setting a plan in place. Follow the sequence below to start:

- Measure your current resting heart rate. Find your pulse on your wrist or neck, and count the beats for 10 seconds. Multiply by six. Your resting heart rate is: \_\_\_\_\_. Remember that you only need to get your heart rate up to 100-105 beats/minute, so it won't take much to get there.
- Choose your exercise. Make it something easily accessible, such as walking. If walking is not an option, substitute with biking or swimming.
  - Walking  Biking  Swimming
  - Other \_\_\_\_\_
- Choose the days of the week you'll be doing the exercise. We suggest five days a week, with two days off. Best to schedule a few days of exercise, a rest day, a few more days of exercise and then a day off. Schedule around your work and daily and family tasks to avoid undue stress.

Monday  Tuesday  Wednesday  Thursday  
 Friday  Saturday  Sunday

- Pick a time of day you'll do the exercise. The time can be different on different days. Write it next to the days you will exercise.
- Let people know your plan. You can share this with a spouse, a friend, a work colleague or a family member. Better yet, ask them to join you.
- Start small. If you have not done much exercise lately, do as little as three to five minutes to get started. Remember, you are very sore and sensitive. Take it slow, but get going. Every two to three days, add a minute. The goal is to reach 20-30 minutes of exercise, five days a week.
- Log your progress. Write down the date, time, duration and something positive that happened in your day. Log your sleep hours as well.

# Homework 13.7

## Immune System and Pain: Logbook

Date	Sleep hours	Exercise	What was good today	Relaxation/Breathing?
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# Homework 13.8

## Immune System and Pain: Setting Goals

Goals are important. They drive your recovery. Many people in pain have no goals or poorly defined goals. Below are some categories of goals. Read each one, develop a goal for each and write it down. Bring your goals list back so we may discuss it.

- **Exercise:** This could include a percentage of scheduled workouts from your exercise plan that you completed, a certain distance or time, completing a charity walk by a certain date, or losing X number of pounds.
- **Social:** Think of social activities you haven't done for a while and would love to get back into. This could include going to the mall; family gatherings; having the family, neighbors or friends over for dinner; date night; going to movies; going out to dinner; or meeting someone for coffee.
- **Tasks:** Think of tasks that would add to your quality of life if you could do them regularly. Certainly, no one likes doing laundry, but the satisfaction of being productive and helping the family is meaningful. This can include doing laundry, cleaning floors, vacuuming, cutting the grass, taking care of the flower beds, organizing closets or a garage, etc. Remember, it doesn't have to be done all at once.
- **Fun:** Think of the things you'd really like to do, such as dance, take a trip, complete a degree or start a business.

# Homework 13.9

## Immune System and Pain: Coping Plan

Your recovery will definitely have “ups” and “downs.” This is to be expected. On a “bad day,” many people ask themselves, “what do I do now?” The good news is that if you’re well-prepared and know what to do on a “bad day,” the pain, stress and anxiety will be less and the process will actually help your recovery. Below are some easy strategies. Work through them systematically:

- **Normal:** Pain is normal and part of being human.
- **Problem solve:** Try to identify the trigger issues for your pain. By identifying them, you can develop strategies to deal with similar situations in the future. Remember, stress and emotions can also trigger pain.
- **Reduce pain:** Use any measure possible to ease pain. You may have found a little heat or cold to help. Perhaps a certain medicine eases the pain.
- **Move:** Once you stop, think and take action to ease some pain, start moving as soon as you can. Do a few stretches; walk a little, but keep moving.
- **Get Away:** Remove yourself from stressful situations. Take a short walk; go get a drink of water; take deep cleansing breaths as you walk.
- **No On/Off Switch:** When you’re having a bad day, don’t just cross out all your plans and stop. Prioritize; get some tasks done. This active way allows for better coping strategies and better recovery.

# Homework 13.10

## Immune System and Pain: Breathing

Breathing properly helps ease your pain, gets more blood and oxygen to your sensitive nerves and calms you down. Use the following strategies to help you breathe better:

- Try to perform this exercise during a quiet time—time for yourself.
- Lie on your back on a flat surface or in bed with your knees bent and your head supported. You can use a pillow under your knees to support your legs. Place one hand on your upper chest and the other just below your rib cage on your belly. This will allow you to feel your diaphragm move as you breathe.
- Breathe in slowly through your nose so that your stomach moves out against your hand. The hand on your chest should remain as still as possible.
- Relax and let your stomach muscles go down as you exhale through your lips. The hand on your upper chest must remain as still as possible.
- Learn to do this while lying down. As you get better, you can do it while sitting, standing, etc.

