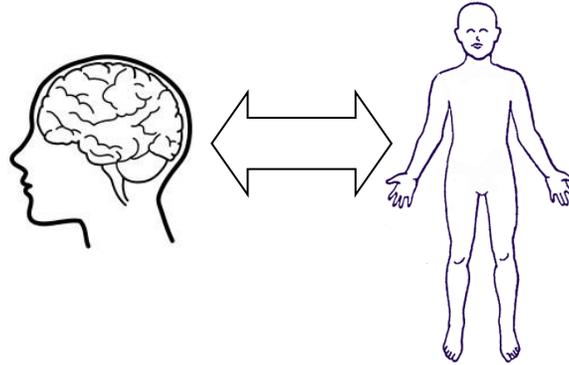


## The Mind-Body Connection

We often think of our minds and bodies as two separate things. In fact, they work together and affect each other.



**Research shows that there is two-way communication between our brains and bodies. This happens because:**

- Signals travel down the nerves from the brain to the body ... and back again from the body to the brain.
- Natural chemicals, called “hormones,” circulate in the bloodstream. Some are produced by the brain and affect the body ..... and some are made in the body and affect the brain.

**Every day, thoughts, feelings, and stresses play a part in making changes in our bodies. This usually happens “behind the scenes.” For example:**

- When we feel embarrassed, we blush.
- Feeling worried or frightened can cause "butterflies in the stomach," heart beating faster, sweaty palms, and other feelings.
- When we get upset we feel our throat tighten – “a lump in the throat.”

**We also know that the way we think and the emotions we have can affect how we feel. For example:**

- Feeling blue or stressed makes any pain we have feel worse
- Long-term stress can affect our health over time (e.g., high blood pressure)
- Even short-term stress can cause physical symptoms or worsen symptoms that we already have

### **How does feeling stressed cause physical symptoms?**

Over thousands of years, human have evolved a way of responding to stress that gets our body ready for physical action. This was useful when life was more dangerous. If a caveman or cavewoman was attacked by a tiger, it was important to be able to fight the tiger or run away very fast. This is sometimes called the “fight or flight response.”



**How does the “fight or flight response” work?** Our mind recognizes the danger. The brain then sends signals to the body via the nerves and chemicals in the blood stream, particularly adrenaline. These signals get the body ready for action. We breathe more quickly to get more oxygen into our blood stream. Our heart pumps faster and harder to get blood to our muscles. Our muscles become tense so that they are ready for action. Digestion is “paused” so that the body’s energy can be used for physical action.

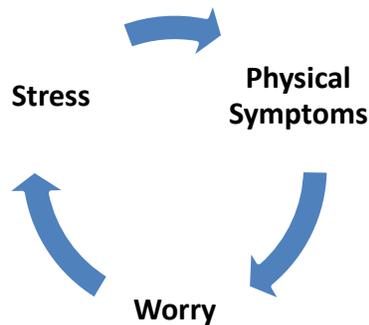
**Modern-day life is safer...but still stressful.** We may feel under stress if we take an exam, give a presentation, have a busy schedule, or if we are running late. Many kids and teens say that they experience one or more stressors like these:

Homework  
 science projects  
 essays  
**tests**  
 STUDYING  
 curriculum choices  
**peer pressure**  
 report cards  
**Bullying**  
**BEDTIME**  
 OUTSIDE ACTIVITIES  
**family stress**

Nowadays, we don't need to physically react to most of these stressors by fighting or running away. However, our mind still recognizes these stressors as dangers. The body reacts the same way whether the stressor is life-threatening (a tiger) or not (a final exam). So, the body gets ready for physical action - but there is nowhere for the energy to go. This kind of stress response can cause:

- rapid heartbeat and palpitations
- chest tightness and breathlessness
- dizziness, faintness and feeling light-headed
- difficulty concentrating or feeling "spaced out"
- shakiness and tremor
- indigestion, feeling sick, diarrhea
- dry mouth
- tightness in the throat
- numbness and tingling
- headache, muscle tension, or neck stiffness
- sweating and feeling hot or cold.

These physical stress symptoms can make us feel quite ill and cause worry, especially if we don't know why these symptoms are happening. (Remember, mind-body communication happens "behind the scenes," so we often don't realize that it happened.) Worrying about these symptoms can cause even more stress and bodily symptoms, making us feel even worse ... and so on.



**What to do?** You can use different skills and strategies to help quiet the "flight or flight" system and instead turn on the body's "rest and digest" system. These skills and strategies can include:

- Relaxation or guided imagery
- Deep breathing
- Thought-changing (thinking differently about the physical symptoms and what they mean)
- Regular sleep and activity routines to help the body re-balance