**Sleep Studies**

So, what can we do when you are already doing everything that we have talked about in the podcast, but you still cannot sleep?

Well, one option is to give up. Just kidding, that is never an option.

One option is to consider a sleep study. Especially if you snore when you sleep, wake up gasping for breath, or feel very tired during the day despite sleeping enough hours for your age.

A sleep study is a test that your doctor or sleep specialist can order. It is an overnight test where we monitor how you breathe and what your brain does when you are asleep (or trying to fall asleep).

So how do we do that? A sleep study is done overnight in a hospital, sleep clinic, or sometimes at home. There are lots of totally cool gadgets and gizmos. A technician attaches sticky white patches on your head which are hooked up to machine that can read brain waves. You will also have a couple on your face to measure eye movements and a few of these on your chest to measure your heartbeat. You will also have a band-aid like sticker on one of your fingers that measures the oxygen level in your blood. Don’t worry – all the sticky stuff comes off with soap and water.

You will have some plastic prongs underneath your nose and mouth. The prongs measure the air you are breathing out. You may also have a cloth or elastic belt around your chest and tummy to look at your breathing pattern. The belts are comfortable for most children. They are worn over pajamas. All these gadgets can sound very scary, but everything will be explained at the time of the test.

So, what are we looking for? We are trying to see whether you have a very treatable condition called sleep apnea. This means you have many brief pauses in your breathing while you sleep. This makes your brain jolt you multiple times to remind you that the brain and body need oxygen! Each time, you lose a bit of restful sleep and it adds up over the night.

Here’s how it works. Basically, your brain and lungs are best friends forever. Your brain knows that you need to keep breathing even while you sleep because the brain and the body cannot work without oxygen. Air needs to get into the lungs which loads your blood with the oxygen and sends it to the brain and the body. Air gets to your lungs through your nose down a windpipe in your neck that leads to the lungs in your chest. Sometimes the windpipe is floppy and closes in on itself when you aren’t awake or upright. Or something could be pressing down on the pipe and preventing air from getting in, like big tonsils and adenoids.

So, what do we do if we find out you do have sleep apnea? First, we figure out if it is because of tonsils/adenoids. If that is the cause they can be removed. If your windpipe is floppy or collapsing due to other reasons, sleep and lung doctors may recommend devices that can force oxygen through the windpipe and use the pressure of the oxygen to keep your pipes open. These can have scary names, like CPAP or BiPAP, but basically these come in many type of nose and face masks attached to a breathing machine. You only wear it when you go to bed!