The association between sleep duration and type 2 diabetes may come as a surprise to many of us, but this week we share a large study regarding this and what decreased sleep duration means for those of us monitoring patients for obesity-related complications such as type 2 diabetes. Rudnika et al. (10.1542/peds.2017-0338) share with us their cross-sectional analysis of more than 4500 multi-ethnic children in the United Kingdom who shared their time going to bed and getting up on a school day by self-report. To validate such self-report, a subset of children also turned in sleep data using accelerometers. In addition, the investigators obtained fasting blood levels of lipids, insulin, glucose and hemoglobin A1C in association with their height, weight, blood pressures and other markers for diabetes and cardiovascular risk adjusting for potential confounders.

The results are dramatic and show graded relationships between sleep duration, being overweight or obese and type 2 diabetes risk factors. While no cardiovascular risk factor was seen, there was an inverse relationship between sleep duration and risk markers for type 2 diabetes. This represents a new finding and raises perhaps more questions than answers such as whether or not increasing sleep duration can prevent the development of type 2 diabetes if a patient is obese. To shed further light on why this association might exist, we asked endocrinologists Dr. Nicole Glaser and Dennis Styne to weigh in with an accompanying commentary (10.1542/peds.2017-2015). They explore why these findings may be more than just being due to obese children being less active and less sleepy or staying up later to play video games. Neither the study nor commentary will put you to sleep when you think about this interesting association.