



Teresa Stewart: Family Solutions

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Fall Daylight Saving Time- What does it mean for sleep?



On Sunday, November 1, 2015, we will change our clocks at 2am. In the fall, we change the clocks BACK, so at 2am, the time will become 1am. For adults, this often means a morning of “sleeping in” for an extra hour. However, if you’re a parent of young children, chances are you won’t be sleeping in; and in fact, you’ll likely be woken up by your child an hour early (according to the clock). This article will help you understand what biologically happens during the time-change and how you can help your child (and entire family!) achieve optimal sleep.



First, why does the time change cause challenges for sleep patterns?

The **Circadian Rhythm** (the body's internal clock) regulates the body's cycle of many biological processes, including sleep. There are three important characteristics of the Circadian Rhythm (CR) that are important to remember on an ongoing basis:

1. **The CR does best if kept regular.** *Wake-time and bedtime should be kept within a 30 minute range as often as possible. (Example: a target wake-time of 7am, would have a range of 6:45-7:15; a target bedtime of 8:15pm, would have a range of 8:00- 8:30pm.)*
2. **The CR is influenced by exposure to light.** Light does not cause a wake-up in the morning, but it does reinforce to the CR to wake-up at that time again tomorrow morning. *(Examples: if your target wake-time is 7am, but your child wakes at 6am and you exposed him to light, it is likely your child will wake again tomorrow at 6am. Likewise, light at night, will tell the CR to stay awake. If you want your child in bed at 8pm, but she resists falling asleep and you allow her to watch tv until 9, then it is likely that the following night, she won't fall asleep at 8pm either.)*
3. **It usually takes between 5-10 days,** depending on the individual child (age, stage of development, temperament, and his unique biology all play a role in how quickly the transition happens) to make a shift to a new wake-time and/or bedtime. Bedtime usually shifts first, with the morning wake-time taking a few days longer.

****** Please see the attached sleep environment hand out for more information on light and the environment, as all of these suggestions will help you in the time change adjustment; but the two most important things to implement on a regular basis and especially during the time change are:

1. Keep the room as dark as you can make it from your target bedtime until your target wake-time.
2. Remember that cool colors (blue, green, purple) have a negative impact on sleep and should not be used as nightlights, on sound machines, humidifiers, or video monitors. If you choose to use a nightlight, make sure the light is dim and a warm color (red, yellow, orange), since warm colors are neutral and don't impact sleep.



Second, what happens during the fall DST?

Since we change clocks back an hour, this means there will be light an hour earlier each morning, and darkness an hour earlier each night. If you were hoping to shift your child's schedule earlier, then this time change will do it naturally for you and you don't need to read any further!

Because sleep-wake cycles are controlled by the Circadian Rhythm and not the clock on the wall, your child will continue to wake and sleep on the "old time", unless you intervene with some environmental changes to cue to the CR you want it to shift. If you want to maintain your current schedule according to the clock, then read on!

Third, what are your options to do this?

Just as with all of my approaches, there are different ways you can achieve this, depending on your family's schedule and lifestyle. As you read the below options, please keep in mind that these are approaches for **babies ages 5 months old to children ages 5 years old.**

A few disclosures/ reminders:

- As always, if there are any medical concerns, please contact your child's pediatrician before starting any type of sleep plan.
- If your baby is younger than 5 months old, these plans are not appropriate for him since the CR is still maturing. You can email me for more guidance for young babies.

- If your baby was born prematurely, you will want to calculate her age from her due date, not her actual birth date, since the CR develops according to due date (example, if your baby is 5 months old, but is 3 months based on due date, then she is too young for these plans).
- The time-change also allows for the opportunity to extend your child's night by keeping one of the times at the "new time" and one of them at the "old time". (Example: your child wakes at 6am and goes to bed at 8pm; but you'd like him to go to bed at 7pm. When we change clocks, 8pm becomes 7pm. You can keep the bedtime at the new 7pm, and only do the shifting as described below for the morning wake-time, therefore getting your child on a new schedule of 7pm-6am and an additional hour of night-time sleep.)

Follow one of these options to shift both bedtime and wake-time to maintain the schedule you have (according to the clock) prior to Fall DST:

(Option 1): Slow and gentle before the time change:

This option will work if you are able to spend extra time in the dark with your little one in the mornings, AND keep them up later at night, during the week of October 26th. If you aren't able to extend darkness in the morning due to work /daycare schedules than this option is probably not for you, and look at options 2 or 3.

For this example, let's say that your daughter wakes up at 6:30am and goes to bed at 7:30pm and you want to keep that schedule.

The overview:

Every night, you'll add 15 more minutes of light, and every morning, 15 more minutes of darkness.

The specific details:

Day 1:

Monday, Oct 26- Your child will wake up at 6:30, but you will want to keep her in the dark until 6:45. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 6:45. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 6:45, turn on the lights, open the curtains, expose your child to as much light as possible.

On this night, instead of aiming for her to be in her crib/bed at 7:30pm, you'll keep the lights on until 7:45pm, and then put her in her crib/bed (you'll want to gradually shift your bedtime routine later each

night as well). If you are doing an intervention already, do the steps of the plan we've created, just at the new time of 7:45pm.

Day 2:

Tuesday, Oct 27- Your daughter may wake at the new time of 6:45, or earlier; but regardless of what time she wakes, keep her in the dark until 7:00am. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 7:00. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 7:00, turn on the lights, open the curtains, expose your child to as much light as possible.

On this night, instead of aiming for her to be in her crib/bed at 7:45pm, you'll keep the lights on until 8:00pm, and then put her in her crib/bed (you'll want to gradually shift your bedtime routine later each night as well). If you are doing an intervention already, do the steps of the plan we've created, just at the new time of 8:00pm.

Day 3:

Wednesday, Oct 28- Your daughter may wake at the new time of 7am, or earlier; but regardless of which time she wakes, keep her in the dark until 7:15 am. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 7:15am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 7:15, turn on the lights, open the curtains, expose your child to as much light as possible.

At night, instead of aiming for her to be in her crib/bed at 8:00pm, you'll keep the lights on until 8:15pm, and then put her in her crib/bed (you'll want to gradually shift your bedtime routine later each night as well). If you are doing an intervention already, do the steps of the plan we've created, just at the new time of 8:15pm.

Day 4:

Thursday, Oct 29- Your daughter may wake at the new time of 7:15, or earlier; but regardless of which time she wakes, keep her in the dark until 7:30am. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 7:30am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning

as well to help align the feeling of hunger with the CR shift. At 7:30, turn on the lights, open the curtains, expose your child to as much light as possible.

At night, instead of aiming for her to be in her crib/bed at 8:15pm, you'll keep the lights on until 8:30pm, and then put her in her crib/bed (you'll want to gradually shift your bedtime routine later each night as well). If you are doing an intervention already, do the steps of the plan we've created, just at the new time of 8:30pm.

Days 5+

On Friday, Oct 30 and Saturday, Oct 31, an early wake-up may still occur, so you'll repeat the steps listed above for day 4, Thursday, Oct 29, reinforcing your wake-time of 7:30am and bed-time of 8:30pm.

Then, when the time change occurs on Nov 1, she is "shifted" to the new 6:30 am for a wake-time and the new 7:30 pm for a bedtime. If she wakes earlier, then just keep in the dark until you reach 6:30am. (Note: some children will need you to reinforce the new time for 3-5 days before it becomes regular.)

If after an additional 3-5 days, an early wake-up continues, bedtime resistance occurs, or wake-ups over night are a challenge, we may want to take a closer look at other factors and develop a more detailed plan via a consultation to behaviorally reinforce the changes you have already biologically implemented.

Note: if you can't start this plan on Monday, as long as you start it 3 days before the time change (by Thursday), then on the 4th day- on November 1st, you will be using light and darkness to reinforce your target times and will likely only have another 15 more minutes to go!

(Option 2): Slow and gentle after the time change:

If you aren't able to extend darkness in the morning due to work /daycare schedules the week before the time change, then this is the plan you'll want to implement the week of November 1st. Note: you will likely be experiencing a few mornings of early-wake ups following the time change. This plan will gradually shift wake-time and bedtime.

Let's use the same example as above and say that your daughter wakes up at 6:30am and goes to bed at 7:30pm and you want to keep that schedule (according to the clock). Once you change clocks, she will likely wake at 5:30am and feel ready for bed at 6:30pm.

The overview:

Every night after the time-change, you'll add 15 more minutes of light, and every morning starting on November 2nd, 15 more minutes of darkness.

The specific details:

Day 1:

On Sunday, Nov 1, she will likely wake at the "new" time of 5:30am. You'll want to keep her in the darkness until 5:45am. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 5:45am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 5:45, you'll start your day (since it will feel like 6:45 to your child and not fair to expect her to feel tired) and expose her to light.

At bedtime, she will feel ready for bed when the clock says 6:30, (since 6:30 is the old 7:30). You'll want to keep her awake and in the light until 6:45. Put her in her crib/bed (you'll want to gradually shift your bedtime routine later each night as well) at 6:45. If you are doing an intervention already, do the steps of the plan we've created, just at the new time of 6:45pm.

Day 2:

On Monday, Nov 2, she will likely wake at the new time of 5:45am or earlier. Regardless of which time she wakes, keep her in the dark until 6:00am. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 6:00am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 6:00am, turn on the lights, open the curtains, expose your child to light.

At bedtime, she will feel ready for bed when the clock says 6:30-6:45pm. You'll want to keep her awake and in the light until 7:00pm. Put her in her crib/bed (you'll want to gradually shift your bedtime routine later each night as well) at 7pm. If you are doing an intervention already, do the steps of the plan we've created, just at the new time of 7pm.

Day 3:

On Tuesday, Nov 3, she will likely wake at the new time of 6am or earlier. Regardless of which time she wakes, keep her in the dark until 6:15am. You can be in the room with your child, soothing her, holding

her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 6:15am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 6:15, turn on the lights, open the curtains, expose your child to light.

At bedtime, she will feel ready for bed when the clock says 6:45-7pm. You'll want to keep her awake and in the light until 7:15pm. Put her in her crib/bed (you'll want to gradually shift your bedtime routine later each night as well) at 7:15pm. If you are doing an intervention already, do the steps of the plan we've created, just at the new time of 7:15pm.

Day 4:

On Wednesday, Nov 4, she will likely wake at the new time of 6:15am or earlier. Regardless of which time she wakes, keep her in the dark until 6:30am. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 6:30am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 6:30, turn on the lights, open the curtains, expose your child to light.

At bedtime, she will feel ready for bed when the clock says 7-7:15pm. You'll want to keep her awake and in the light until 7:30pm. Put her in her crib/bed (you'll want to gradually shift your bedtime routine later each night as well) at 7:30pm. If you are doing an intervention already, do the steps of the plan we've created, just at the new time of 7:30pm.

Days 5-10:

Repeat the steps of day 4, reinforcing your target wake-time of 6:30am and target bedtime of 7:30pm. (Note: some children will need you to reinforce the new time for 3-5 more days before it becomes regular.)

If after an additional 3-5 days, an early wake-up continues, bedtime resistance occurs, or wake-ups over night are a challenge, we may want to take a closer look at other factors and develop a more detailed plan via a consultation to behaviorally reinforce the changes you have already biologically implemented.

***** Note: with options 1 and 2, you'll gradually adjust naps by 15 minutes each day as well.**

(Option 3): A little faster after the time change:

If you aren't able to extend darkness in the morning due to work /daycare schedules the week before the time change, but also can't accommodate an earlier bedtime following the time change, then this is the plan you'll want to implement the week of November 1st. A few notes: you will likely be experiencing a few mornings of early-wake ups following the time change. This faster plan is most likely to be more effective with toddlers and preschoolers, and not as likely with infants. It's important to also assess your child's temperament. If he is usually sensitive to change, options 1 or 2 may be a better fit for your family. It's also important that you/ daycare are able to accommodate the nap timing of this plan. If the nap plan can't be followed, it will be harder for your child to reach their new bedtime.

Let's use the same example as above and say that your daughter wakes up at 6:30am and goes to bed at 7:30pm and you want to keep that schedule (according to the clock):

The overview:

We will automatically aim for the "new" bedtime of 7:30pm (which is going to feel late to your child, since it will feel like 8:30pm). To prevent her from getting overtired and building too much sleep pressure before bed (which isn't good since too much sleep pressure often causes nighttime wake-ups), we'll want to add in or change the timing of her naps.

The specific details:

Naps are going to play a critical role in this transition. For options 1 and 2, you'll gradually shift naps 15 minutes later each day. For option 3, naps are going to happen a little differently, depending on the age and nap pattern of your child:

- (a) If your child takes one nap (this is typically for infants ages 15/18 months old through 3-5 years old):
 - Normally, I recommend the nap starting between 4.5-5.5 hours after wake-up;
 - But because in this scenario, an early wake-up is likely to happen AND we are having bedtime at the "new time" which will feel later to your child, aim for nap 1 to start between 5.5-6.5 hours after wake-up, but make sure your child doesn't sleep too late in the day, or it will impact bedtime.
 - If your child recently transitioned from 2 to 1 naps, she may need to go back to a 2 nap pattern until the CR shifted at night, and then you can return to your normal 1-nap pattern.
- (b) If your child takes two naps (this is typically for infants ages 6/9 months old through 15/18 months old):
 - Normally, I recommend nap 1 start between 2-2.5 hours after wake-up;
 - But because in this scenario, an early wake-up is likely to happen AND we are having bedtime at the "new time" which will feel later to your child, aim for nap 1 to happen between 3-3.5 hours after wake-up.
 - Then nap 2, start about 3.5-4 hours after the wake-up from nap 1.

- Make sure there is about 4-5 hours of your child being awake before bed.
- If your child recently transitioned from 3 to 2 naps, she may need to go back to a 3 nap pattern until the CR shifted at night, and then you can return to your normal 2-naps pattern.

(c) If your child takes three naps (this is typically for infants 5-9 months old):

- Aim for 1st nap to start 2 hours after **actual** wake-up time.
- Aim for nap 2 to start about 2.5- 3 hours after nap 1 ends.
- Aim for the 3rd nap to happen in the late afternoon/ early evening and ending with about 2.5-3 hours before bedtime. So if you target bedtime is 7:30pm, nap 3 should end around 4:30/5pm.
- For 5 month old babies, they may need a short 4th nap for a few days.
- *Note: this plan may be hard for young babies.*

Day 1:

On Sunday, Nov 1, she will likely wake at the “new” time of 5:30am. You’ll want to keep her in the darkness until 5:45am. You can be in the room with your child, soothing her, holding her (or if you’re in the midst of an intervention, doing the steps of the plan we’ve created), but keep the room dark until 5:45am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 5:45, you’ll start your day (since it will feel like 6:45 to your child and not fair to expect her to feel tired) and expose her to light.

For naps: do as recommended above for the age/ nap pattern of your child.

At night: Keep her in the light and awake until the new time of 7:30pm.

Day 2:

On Monday, Nov 2, she will likely wake at the new time of 5:45am or earlier. Regardless of which time she wakes, keep her in the dark until 6:00am. You can be in the room with your child, soothing her, holding her (or if you’re in the midst of an intervention, doing the steps of the plan we’ve created), but keep the room dark until 6:00am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 6:00am, turn on the lights, open the curtains, expose your child to light.

For naps: do as recommended above for the age/ nap pattern of your child.

At night: Keep her in the light and awake until the new time of 7:30pm.

Day 3:

On Tuesday, Nov 3, she will likely wake at the new time of 6am or earlier. Regardless of which time she wakes, keep her in the dark until 6:15am. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 6:15am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 6:15, turn on the lights, open the curtains, expose your child to light.

For naps: do as recommended above for the age/ nap pattern of your child.

At night: Keep her in the light and awake until the new time of 7:30pm.

Day 4:

On Wednesday, Nov 4, she will likely wake at the new time of 6:15am or earlier. Regardless of which time she wakes, keep her in the dark until 6:30am. You can be in the room with your child, soothing her, holding her (or if you're in the midst of an intervention, doing the steps of the plan we've created), but keep the room dark until 6:30am. If your child usually has a feeding right at wake-up, please check with her pediatrician on this to confirm, but you can gradually delay the feeding by 15 minutes each morning as well to help align the feeling of hunger with the CR shift. At 6:30, turn on the lights, open the curtains, expose your child to light.

For naps: do as recommended above for the age/ nap pattern of your child. By day 4-6, you should be back to your normal nap schedule.

At night: Keep her in the light and awake until the new time of 7:30pm.

Days 5-7:

Because we did a quicker shift for bedtime and manipulated naps, you should see a later wake-time by days 5-7. Once the later wake-time is achieved, resume your usual nap schedule.

If after day 7, an early wake-up continues, bedtime resistance occurs, or wake-ups over night are a challenge, we may want to take a closer look at other factors and develop a more detailed plan via a consultation to behaviorally reinforce the changes you have already biologically implemented.

The fall time change doesn't have to be a nightmare! With a little preparation, an understanding of what is going on biologically in your child's body, and patience on your part, you can make the "shift" either the week before, or the week after, and help your entire family achieve the sleep you need.

If I can help further with this process, or if the time change goes well but you are experiencing other sleep challenges, please contact me and we can schedule a consultation.

