Neonatal Abstinence Syndrome
What you need to know
Congratulations on your pregnancy or the birth of your new baby! Your baby may be at risk for having some problems after birth due to the drugs or medicines you are on. We hope that the information in this booklet will help you care for your baby in the first few days and weeks of life.

Withdrawal refers to a group of symptoms that develop after a baby is born and is no longer getting a certain drug or medicine from its mother in the womb. When a newborn baby has withdrawal from opiates or narcotics it is called Neonatal Abstinence Syndrome (NAS). Examples of opiates and narcotics include methadone, subutex or suboxone, heroin, Vicodin and Percocet.

We can’t predict which babies will have NAS. Some babies will have NAS with exposure to small amounts of drugs or medicines, and other babies may only have symptoms with high exposures to the drugs or medicines.

Most babies with NAS show signs of withdrawal within 24 to 96 hours after birth. Your baby will need to be monitored in the hospital for at least 2 to 4 days. If your baby has signs of withdrawal, he or she will need to stay in the hospital longer. If needed, your baby will start a medication to treat the symptoms of withdrawal.

When will my baby show signs of NAS?
The time it takes to show symptoms can depend on the following:
- How long the medication or drug is active in the mother
- The dose of the medicine
- Whether other drugs or substances were used at the same time, such as nicotine, opiates or narcotics that were not prescribed to the mother

What are the signs of NAS?
- High-pitched cry / crankiness
- Shaking / jitters
- Trouble sleeping
- Stuffy nose / sneezing
- Yawning
- Difficulty feeding due to problems sucking
- Stiff arms, legs and back
- Vomiting / diarrhea
- Poor weight gain after the 4th day of life
- Fast breathing
- Skin breakdown, particularly in the diaper area or on the face

Your nurse will be collecting your baby’s first bowel movement (called meconium) for testing in the lab. A sample of the baby’s urine may also be collected.
What is NAS Scoring?

NAS scoring can help tell us how much the baby is withdrawing. There is an example of the NAS scoring chart at the end of this information booklet (see page 12). Your baby’s nurse will score your baby every 2 to 4 hours. Your baby receives points if he or she is showing signs of NAS. The nurse will use the chart to keep a record of the points. A score of 8 points or higher may mean your baby is having problems with withdrawal. The nurse will continue to check your baby closely to see if it is NAS or some other problem. Your nurse will teach you how to check your baby for signs of withdrawal.

Where will my baby and I be while he or she is being monitored?

If your baby only needs to be monitored for 2 days, you and your baby will be cared for in the Birthing Pavilion. If your baby needs to be monitored for 3 to 4 days, we will try our best to have you and your baby stay in the Birthing Pavilion. In some cases, when the Birthing Pavilion is very busy, you and your baby may need to move to the Pediatric Unit after 2 or 3 days. On the Birthing Pavilion and the Pediatric Unit, you will stay with your baby. If your baby is not having signs of withdrawal, you will be discharged home together.

If your baby has signs of withdrawal, and needs treatment with medication, he or she will be cared for in the Intensive Care Nursery (ICN). If your baby is in the ICN, you will not be able to stay with your baby, but we will encourage you to stay as close to your baby as possible. This will help you care for your baby during his or her withdrawal. We will help you find a place to stay nearby if this happens.

What can I do to help my baby?

One of the best things you can do for your baby is to keep him or her with you at all times. This is called “rooming in.” Being close to your baby helps you respond quickly to your baby’s needs (such as hunger or needing to be held when fussy). Your baby will feel most comfortable by being close to you. This will help you offer reassurance, love and safety. For comfort, hold your baby “skin to skin” (naked in a diaper against your skin) or gently swaddled (wrapped) in a blanket. Pay careful attention to how you position your baby during feeding and settling down. During your time in the hospital, the nurses will show you how to do this. A baby’s nervous system is sensitive, so keep your baby’s environment quiet and calm. It is helpful to limit visitors in the first few days of life.

What will happen if my baby has problems with withdrawal?

How will I know if my baby needs treatment for NAS?

- If your baby’s NAS score is 8 or higher, the nurse will ask the doctor to evaluate your baby.
- If your baby’s NAS score is 8 or higher on 3 occasions or 12 or higher on 2 occasions, your baby is likely having problems with NAS or withdrawal. If the doctor feels that your baby is having withdrawal from your medicine, the doctor will transfer your baby to the ICN to receive a special medicine called morphine.

What happens when my baby is given morphine?

- Morphine will be given to your baby to reduce the symptoms of NAS.
- Morphine will also reduce your baby’s risk for having seizures (convulsions).
- Morphine will make your baby more calm and comfortable, but should not make your baby sleepy.
- Each baby is different in how they respond to morphine.
- The dose of morphine needed will depend on your baby’s NAS scores and birth weight.
- When your baby’s withdrawal is better, we will start to wean (lower) the dose of morphine.
- If we are not able to control your baby’s withdrawal with the morphine alone, we may start another medicine called Phenobarbital.

How can I help my baby if he is having problems with NAS?

- You can help your baby with withdrawal by staying nearby and holding your baby close.
- You can also help by feeding your baby whenever he shows signs of hunger (licking his lips, opening mouth to something that touches his lips or mouth), and by keeping the environment calm and quiet.
- Many parents find their baby settles best when handled gently and held close to their body. This is because you and your baby know each other best.

How long will my baby be in the hospital?

- Your baby will need to stay in the hospital until he or she is able to come off the morphine.
- If your baby needs Phenobarbital, it is possible to go home on this medicine.
- Your baby will require close follow-up if he or she goes home on Phenobarbital.
- Even if your baby does not go home on this medicine, we will recommend that your baby be seen in the first few days after bringing your baby home.

Babies are sometimes transferred from the ICN to the Pediatric Unit if the weaning process is taking a while. Mothers can stay in their baby’s room while in the Pediatric Unit and are strongly encouraged to do so. A baby needs close contact with his or her mother during this difficult time. A mother can offer some of the best medicine available: love and comfort.
How long will my baby have problems?

NAS can last from one week to a few months. It is difficult to know how long it will last. The length of the withdrawal depends on what medicines or drugs the baby was exposed to. It also depends on how much of these the baby got while you were pregnant. It is important to let your baby’s health care provider know what drugs and medicines your baby was exposed to during the pregnancy.

Can I breastfeed my baby?

Breastfeeding is best for your baby. If you are on a medication that your doctor has prescribed for you, the baby will get small amounts of your medication through the breastmilk. This is generally considered safe and may help reduce withdrawal symptoms, depending on the medicine you are on. Breastfeeding is beneficial for all babies, but for babies with special needs, it is even more important. The closeness of breastfeeding offers a baby comfort and reassurance. However, there are some times when breastfeeding would not be recommended.

It is very important that you not take any other medications while breastfeeding, unless your baby’s doctor says the medicines are safe. If you are or will be using any drugs or illegal medicines (medicines prescribed to someone else), it is best that you do not breastfeed. This is because the dangers are too great for your baby. If you are on a medicine called methadone or buprenorphine (subutex or suboxone), it is important that you do not stop breastfeeding suddenly. When you are ready to wean (stop or decrease breastfeeding), talk to your baby’s doctor as it is best to do this slowly. Your doctor can teach you ways to do this safely.

What do I do if my baby experiences NAS?

Your baby will need a lot of attention in the beginning. He or she may be fussy and hard to calm, but don’t give up on comforting your baby. You have everything your baby needs.

It can be stressful for parents to have a baby who cries a lot. Many parents describe the time their baby spends in withdrawal as an emotional roller coaster. We understand that this is a very stressful and emotional time for you. Take comfort in knowing that we all have the same goal: to help you and your baby through the withdrawal so you can go home as soon as possible. Ask friends and family for help so that you get the breaks and the support you need.

When can I take my baby home?

Your baby’s medical team will help decide when it is safe for your baby to go home and will help you learn about caring for your baby.

Your baby is ready to go home when he or she:

- Has had monitoring completed depending on the medicine you were on during the pregnancy.
- Is no longer needing medicine, if it was started.
- Is feeding without difficulty.
- Is able to maintain a stable heart rate, breathing rate, and temperature.
- Has referrals in place for community support such as a home visiting nurse.
- Has a primary care provider (PCP) and a follow-up appointment.
- Has completed all the newborn health care (hearing screen, hepatitis B shot, newborn blood screening).

If your baby needed to stay in the NICU, it will be especially important for you to spend a full day or two taking care of your baby on your own before you go home. This will help you feel comfortable and confident in caring for your baby at home.

Will my baby have problems after we go home?

The symptoms of NAS may continue for more than a week and possibly up to several months. Over this time, the symptoms will start to fade. Your baby will be discharged when there is little risk for serious problems at home.

Once at home, your baby may continue to experience the following:

- Problems feeding.
- Slow weight gain.
- Poor sleeping patterns.
- Sneezing, stuffy nose or trouble breathing.

Your baby’s doctor and nurse will help teach you ways to take care of your baby. They will also teach you how to help your baby if he or she is having any of the problems listed above. Practice different ways of caring for your baby while in the hospital. You will learn what works best for your baby. Ask your baby’s doctor or nurse if you have any questions. We feel that any question you have is an important one. We want you to feel comfortable taking care of your baby in the hospital and when going home.
Going home with my baby

Before discharge, you will be given appointments with your baby's doctor and visiting nurse. If you are concerned or worried about your baby's health at any time, contact your baby's doctor and ask for an appointment. We will help you identify support systems in your community to help you during this busy, and sometimes difficult, time in your baby's life.

What should I do if my baby cries a lot?
It will be helpful to feed and settle your baby in a room that is very quiet. Gentle rocking and swaying are also ways to soothe your baby, but be careful never to shake your baby. It is important to know that your baby's cries may be hard to take at times. This is normal. Never hold anything over your baby's mouth or nose in hopes that it will stop the crying. If your baby is making you feel stressed, put your baby down in a safe place such as the bassinet or crib, and go take a break somewhere else in your home. It is best to get some space from your baby if you are feeling stressed. You can also call a friend, family member or your baby's health care provider if you feel like you need a break from your baby. You can also call one of these people if you would like extra help caring for your baby.

Where can I find more tips on how to help my baby?
Some resources are listed at the end of this information packet. During your hospital stay, talk with your baby's social worker or resource coordinator if you need resources closer to home. Before you go home from the hospital, you will be given a special booklet called "Going Home with Your Newborn." This booklet teaches you how to take care of your new baby. The part on "Ten Tips for Great Beginnings with Your New Baby" has nice tips for getting the best start with your newborn. If your baby is being discharged home from the ICN, you will be given special ICN Discharge Instructions to help you further.

Ways to support and care for your baby

Control your baby's environment:
- Keep your baby's room quiet with the lights down low.
- Maintain a routine.
- Limit visitors so your baby does not get over-stimulated.

Learn your baby's "I'm upset" cues:
- Your baby will tell you "I'm upset" by yawning, sneezing, having tremors (shaking), showing color changes (pale or blue skin color), frowning, looking away or closing eyes.
- If you see the above cues, stop what you are doing as your baby is trying to tell you 'I'm upset'.

Special ways to help your baby if he or she is crying or showing "I'm upset" cues:
- If you see the above cues, stop what you are doing.
- Hold your baby skin-to-skin or gently swaddled in a blanket.
- Hold your baby on your chest, or on your arm laying on his or her side.
- Let your baby calm down before trying anything new.
- Gently rock or sway your baby side to side (back and forth).
- If your baby is still crying, place your baby's swaddled back against your chest.
  Hold your baby in a curled C-position facing away from you. Place your hand on your baby's chest and sway your baby gently side to side. Facing a blank wall may also help calm down your baby.

Gently introduce new things to your baby one at a time:
- Introduce new stimuli (things that cause your baby to be alert) to your baby one at a time.
- Watch your baby's cues and allow a "time out," if needed. A "time out" is a quiet time without stimulation.
- Swaddle your baby and try a pacifier to help your baby maintain an alert and calm state.
- Limit visitors so your baby does not get over-stimulated.
- Talk to your baby when he or she is calm and alert.

Gently increase the number of stimuli:
- Add visual sight, auditory (sound), and touch stimuli when your baby is calm.
- Look for cues as to how well he or she can tolerate the new stimuli.
- Know that your baby’s ability to handle new stimuli may vary from minute to minute and day to day.

As your baby's calm periods increase, unwrap your baby for short periods of time:
- This allows your baby to become used to controlling his or her own body.
- Re-swaddle your baby if he or she shows signs of distress.
### Extra ways to calm and help your baby

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<tr>
<th>Behavior</th>
<th>Calming Suggestions</th>
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<tbody>
<tr>
<td><strong>Prolonged or high-pitched crying</strong>&lt;br&gt;(crying that lasts a long time or is louder than normal)</td>
<td>- Hold your baby close to your body, skin-to-skin or swaddled in a blanket.  &lt;br&gt;- Decrease loud noises, bright lights, and any excessive handling.  &lt;br&gt;- Gently rock or sway your baby while humming or singing.</td>
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<td><strong>Sleeplessness (problems sleeping)</strong></td>
<td>- Reduce noise, bright lights, patting, or touching your baby too much.  &lt;br&gt;- Play soft, gentle music.  &lt;br&gt;- Gently rock or sway your baby while humming or singing.  &lt;br&gt;- Change your baby's diaper if dirty.  &lt;br&gt;- Check for and treat diaper rash with a lotion or ointment, such as Vaseline®, A&amp;D®, or Desitin®.</td>
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<td><strong>Excessive sucking of fists</strong>&lt;br&gt;(sucking on fists a lot)</td>
<td>- Feed your baby when hungry and until content.  &lt;br&gt;- Offer a pacifier or finger if your baby wants to suck but isn't hungry.  &lt;br&gt;- Cover hands with mittens or sleeves if skin becomes raw.  &lt;br&gt;- Keep areas of damaged skin clean.  &lt;br&gt;- Avoid lotions or creams on the hands as the baby may suck on them and swallow these products.</td>
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<tr>
<td><strong>Difficult or poor feeding</strong>&lt;br&gt;(problems feeding)</td>
<td>- Feed your baby when hungry and until content.  &lt;br&gt;- If your baby is having problems with spitting up, feed smaller amounts and more often.  &lt;br&gt;- Feed in a calm and quiet area.  &lt;br&gt;- Limit visitors so that your baby does not get handled too much.  &lt;br&gt;- Feed your baby slowly.  &lt;br&gt;- Allow your baby to rest a little during and after the feedings.  &lt;br&gt;- Help your baby feed by supporting his or her cheeks and lower jaw (if needed).</td>
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## Behavior Calming Suggestions

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<td>Sneezing, stuffy nose</td>
<td>- Keep baby's nose and mouth clean with a soft washcloth.</td>
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<tr>
<td>Breathing troubles</td>
<td>- Avoid over dressing or wrapping your baby too tightly.  &lt;br&gt;- Always have your baby sleep on his or her back, never on the tummy.  &lt;br&gt;- Call your baby's provider if your baby is having trouble breathing (breathing is fast, labored, noisy, and/or there is a bluish tinge to the skin).</td>
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<tr>
<td>Spitting up</td>
<td>- Burp your baby each time he or she stops sucking.  &lt;br&gt;- Hold your baby upright for a period of time after feeding.  &lt;br&gt;- Keep your baby's bedding and clothes free of spit up.</td>
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<tr>
<td>Hyperactivity (too much activity)</td>
<td>- Use a soft thin blanket to snuggly wrap your baby.  &lt;br&gt;- Swaddle and carry your baby, offering gentle words, humming or singing.  &lt;br&gt;- Gently sway or rock your baby.</td>
</tr>
<tr>
<td>Trembling</td>
<td>- Keep your baby in a warm quiet room.  &lt;br&gt;- Avoid excessive handling of your baby during care routines or when people come to visit.</td>
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<tr>
<td>Fever</td>
<td>- Do not over dress or over bundle your baby.  &lt;br&gt;- Report a temperature greater than 100°F to your baby's doctor.</td>
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Infants at risk of narcotic withdrawal:
- Should be assessed for signs of withdrawal every 3 to 4 hours.
- Should have all symptoms scored within the preceding 3 to 4 hour interval, not just symptoms that occur during assessment.
- Should not be awakened unless they have been asleep for more than 3 hours.
- Should be fed before they are scored, and calmed prior to assessing muscle tone and respiratory rate.

The scoring chart, adapted from L.P. Finnegan (1986), is designed for term infants who are fed every 2 to 3 hours. Allowances must be made for infants who are preterm or beyond the initial newborn period.
Instructions for NAS Scoring

High-pitched Cry
Score 2 if cry is excessive, score 3 if cry is continuous. Note in progress note if cry is alleviated by picking up infant or with feeding.

Sleep
Do not awaken infant to score unless infant has been asleep for more than 3 hours. If infant is awakened for scoring sooner, do not score for diminished sleep.

Moro Reflex
Hyperactive Moro reflex
- Extension of arms/legs that lasts a few seconds, with pronounced jitteriness in the hands during or at the end of Moro reflex.
Markedly hyperactive Moro reflex
- Marked and persistent extension of the arms/legs, accompanied by hyper-alert state and/or continued arm/leg tremors.

Tremors
Assign only one score from one of the 4 categories. Score for increasing severity. "Undisturbed" refers to baby's tremors occurring during sleep or when at rest in bassinette.

Muscle Tone
Note degree of resistance when attempting to straighten baby's arms and legs. Baby should resist slightly but examiner should be able to move baby's arms and legs against resistance; inability to do so indicates increased muscle tone. Lack of head lag and/or baby's ability to stand in ventral suspension indicates increased tone.

Excoriation
Note location of excoriation. Score 1 when excoriation first presents. Rescore only if excoriation site worsens or excoriation appears in another area. Buttocks should not be scored for excoriation unless stools are normal.

Myoclonic Jerks
Myoclonus refers to a short quick contraction of a muscle or extremity (not jitteriness or quivering). Note location / muscle group.

Generalized Convulsions
Score for any seizure (tonic / clonic) activity during the period. Immediate evaluation should be requested by infant's covering medical provider.

Sweating
Observe for beads of sweat or moist skin, do not score for environmental factors.

Fever
Temperature parameters refer to axillary temperature readings. Follow unit guidelines for confirming elevated axillary temperatures with rectal temperatures.

Instructions for NAS Scoring

Yawning
Score for 3 or more yawns that occur during scoring interval.

Mottling
Observe for skin mottling on the chest, trunk and extremities.

Nasal Stuffiness
Score for nasal congestion. Rhinorrhea may or may not be present.

Sneezing
Score for 3 or more sneezes that occur during scoring interval.

Nasal Flaring
Score if nasal flaring is present in absence of other evidence of airway disease.

Respiratory Rate
Count respirations over a full minute and observe for retractions.

Excessive Sucking
Score for frantic rooting or sucking behaviors (e.g., sucking on fists, hands, pacifier or clothing), and/or if evidence of sucking blisters on fingertips or knuckles present.

Poor Feeding
Score if baby is slow to feed or feeds inadequate amounts unrelated to prematurity. Score if baby demonstrates uncoordinated and ineffectual suck/swallow in presence of rooting and/or sucking behaviors.

Regurgitation
Regurgitation = effortless return of gastric/esophageal contents from infant's mouth. Score only if regurgitation occurs more frequently than is usual for a newborn.

Projectile Vomiting
Forceful ejection of stomach contents.

Loose Stools
Score if stools are loose but lack surrounding water ring.

Watery Stool
Score if stools are loose and have water ring present.

For any score ≥ 8
Initiate Q2 hr scoring for 24 hours and continue until scores are < 8 for 24 hours

Pharmacologic therapy and transfer to the ICN should be considered for:
- Three consecutive scores ≥ 8
- Average of any three consecutive scores ≥ 8
- Two consecutive scores ≥ 12
- Average of any two consecutive scores ≥ 12
- Severe symptoms (e.g., apnea, seizures)
**Upper Valley Community Resources**

### CHILD PROTECTIVE SERVICES
- Department of Children and Families (VT) 802-295-8840
- Department of Children, Youth and Families (NH) 603-894-5533
- Prevent Child Abuse America 800-244-5373

### DOMESTIC/FAMILY VIOLENCE
- Safeline/Randolph VT 800-639-7233
- Wise/Upper Valley 603-448-5922

### EMERGENCY FINANCIAL ASSISTANCE
- Claremont Soup Kitchen 603-543-3290
- Listen Community Services 603-448-4553
- Newport Food Pantry 603-863-3411
- NH Health and Human Services 603-543-3111
- PATH/VVT 802-295-8855
- Tri County CAPP/NH 603-752-7001
- Town Welfare Offices

### GENERAL INFORMATION AND REFERRAL
- NH Resource 211 802-652-4636
- VT Resource 211 866-444-4211

### HEALTH AND MENTAL HEALTH
- Clara Martin (Bradford, Randolph area, VT) 802-222-4477
- Counseling Center of Newport 603-542-5128
- DHMC Psychiatry 24 Hour 800-556-6249
- Health Care and Rehabilitation Services of Southeastern VT (White River Junction, VT area) 800-888-5144
- VT Dental Clinic at the VA (White River Junction, VT area) 800-827-1000
- West Central Behavioral Health (Lebanon, NH area) 603-542-5128

### HOUSING
- 10 Bricks Homeless Programs 603-443-6150
- Hartford Housing Authority 802-295-5047
- Hodges Corporation 603-298-5610
- Lebanon Housing Authority 603-298-5733
- Listen Community Services 603-448-4353
- Upper Valley Haven 802-295-6500

### LEGAL ASSISTANCE
- Have Justice Will Travel/VT 802-685-7809
- NH Legal Assistance Program 800-562-3994
- Pro Bono Referral/NH 603-224-3333
- Reduced Fee Referral Program/NH 603-229-0002
- South Royalton Legal Clinic/VT 802-831-1500

### TRANSPORTATION
- NH Medicaid Transportation 603-852-3345 x3770
- VT Medicaid Transportation 802-885-5165

### TREATMENT PROGRAMS
- 2nd Wind Foundation; Turning Point 802-295-5206
- Alcoholics Anonymous 802-295-7611
- DHMC/Subutex 603-650-5805
- Habit Opco/Methadone West Lebanon, NH 603-298-2146
- Habit Opco/Methadone Brattleboro, VT 802-258-4623
- Habit Opco/Methadone Manchester, NH 603-258-4623
- Headrest 603-448-4400
- Narcotics Anonymous 603-645-4777
- Recovery Center of Lebanon 603-448-5610
- Valley Vista 802-222-5201

### LEGAL ASSISTANCE (CONT'D)
- VT Legal Aid 800-889-2047
- VT Protection and Advocacy 802-834-7890
- Wise/Upper Valley, Lebanon, NH 603-448-5992

### PREGNANCY/HEALTH REPRODUCTIVE SERVICES
- Dartmouth-Hitchcock Medical Center:
  - Breastfeeding Support/Birthing Pavilion 603-650-6159
  - Continuing Care Center and Lactation Clinic 603-653-9306
  - Women’s Health Resource Center 603-650-2600
- Community Resources:
  - Care Net Pregnancy Center of the Upper Valley 603-298-6123
  - Planned Parenthood 603-298-7766

### SUPPORT/HOME BASED PROGRAMS
- Bradford VT Parent Child Center 802-222-5787
- Central VT Parent Child Center 802-485-8430
- Family Infant Toddler (VT) 800-649-2642
- Good Beginnings (VT/NH) 603-298-9524
- Hannah House 603-448-5339
- Healthy Babies 800-649-4357
- Orange County Parent Child Center 802-685-2264
- Parent to Parent of NH 603-448-6393
- Springfield Area Parent Child Center 802-885-5424
- Support Group: Circle of Parents , White River Junction, VT Wed. 6:30 pm-8:00 pm (Noreen Lake) 802-498-0060
- The Family Place (Hartford area, VT) 802-649-3268

### HEALTH AND MENTAL HEALTH (CONT’D)
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Ideas for spending time with me:

How I tell you when I am happy:

How I tell you when I am unhappy:

Ways I like to relax:

Things I can do for myself:

How you can help me:

Things I’m good at:

Special things I need: