Safe Sleep: Strategies for Reducing the Risk of Sudden Infant Death Syndrome*

Introduction

Hi, my name is Eva. In this course, we are going to focus on Sudden Infant Death Syndrome, also known as SIDS, and how to reduce the risk of SIDS by implementing safe sleep practices in your home and anywhere your child sleeps, including child care and relatives’ houses. By becoming educated about SIDS, safe sleep, and talking with others about safe sleep practices, you are taking crucial steps to prevent this deadly occurrence.

[Learning Objectives]

By the end of this course, you will be able to define what Sudden Infant Death Syndrome is. You will also learn things you can do during pregnancy and after your baby is born to reduce the chance of SIDS. We will discuss simple, yet important things you can do to establish safe sleep policies in your home and other places your baby visits, like a child care provider or a grandparent’s home. Finally, we will learn about tummy time and why we need to dedicate daily activities during which infants are on their stomachs.

What is SIDS?

What is SIDS? The Centers for Disease Control and Prevention defines Sudden Infant Death Syndrome, or SIDS as “The sudden death of an infant under one year of age, which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and review of the clinical history.”

All other possible causes of death must be ruled out for a SIDS diagnosis to occur. Many different factors must be considered. This includes autopsy findings, results from an investigation of the place of death, and a review of the baby’s – and possibly even the family’s – medical history.

[What SIDS is Not]

While a lot of research has been done on SIDS, the exact causes remain unknown. We do know there are some commonly held beliefs about SIDS that are not supported by the scientific evidence.
For instance, SIDS is not a hereditary condition. It is not caused from child abuse, choking, vomiting, apnea, or suffocation – those are all causes of death that would be identified in an autopsy – whereas no cause of death is identifiable with SIDS even after an autopsy. Another example is the myth that immunizations, or shots, cause SIDS. This is not true. Even though the number of shots that children receive has increased over the past decade, the SIDS rate has actually decreased.

Thanks to years of research, we know that there are simple and specific actions that you can take to reduce the risk of SIDS. We encourage you to follow the safe sleep guidelines discussed later in this course to reduce the risk of SIDS for infants under the age of 1 year.

**SIDS Facts**

Each year in the U.S., more than 4,500 infants die suddenly of no obvious causes. Approximately 2,200 of these deaths are due to SIDS. That’s about 6 babies every day! Although the overall rate of SIDS in the U.S. has declined since the early 1990s, SIDS remains the leading cause of death among infants 1 to 12 months of age.

SIDS can occur at any time within the first year of life, but most SIDS deaths occur before the age of 6 months. Most of these deaths occur between 2 and 4 months of age.

While SIDS affects all groups of people, some appear to be at a greater risk. African-American infants, for example, are more than twice as likely to die from SIDS as Caucasian, Asian, and Hispanic or Latino infants. Also, male infants tend to be at a slightly higher risk than females.

There has been a major decrease in the incidence of SIDS since the early 1990s. In 1994, the U.S. Public Health Service and the American Academy of Pediatrics launched a “Back to Sleep” campaign to inform the public about the importance of putting children to sleep on their backs. Since this campaign, SIDS cases have decreased by over 50 percent.

Other efforts have also been launched in an attempt to inform parents and child care providers about what they can do to reduce the risk of SIDS. For the purposes of our discussion today, we will focus on the guidelines of the “Safe Sleep” campaign, with contributions from the American Academy of Pediatrics, the Texas Department of State Health Services, or DSHS, and the Texas Department of Family and Protective Services.

**SIDS and Child Care**

Let’s turn our attention to the issue of SIDS in child care settings. The demand for child care in the U.S. has increased dramatically in recent years. Nearly 14.5 million children in the U.S. under the age of 6 needs child care while their parents work. There are over 1.2 million children in this same age range in need of care in the state of Texas.
The demand for quality infant care has also increased. One of the reasons for this is because more mothers are returning to the workforce after giving birth. Currently, two-thirds of infants under the age of 12 months now spend at least some time in non-parental child care. Infants of employed mothers spend an average of 22 hours a week in child care. Over 30 percent of infants are cared for full-time. Half of infants receiving this care are enrolled in child care centers or family child care homes.

The overall decline in SIDS rates since the early 1990s is good news. However, according to a 2008 study by the American Academy of Pediatrics, the actual rate of SIDS deaths in child care settings is more than double the expected rate. In fact, it is widely noted that 20 percent of SIDS deaths occur while the infants are being cared for in non-parental child care settings. From this 20 percent, two-thirds of these deaths occur in family child care, and the remaining deaths happen in child care centers and in the care of relatives.

Infants who die of SIDS in child care tend to be Caucasian, with older, more educated parents. This is contrary to the overall SIDS trends.

The SIDS rate in child care settings has remained about the same in recent years. Many of the deaths that occur in child care settings appear to be associated with children sleeping on their stomachs. The risk of SIDS is especially high for infants who are used to being placed to sleep on their backs at home but get placed to sleep on their tummies in child care. We will discuss unaccustomed tummy sleep in more detail in a few minutes. A study conducted in 1996 found that 43 percent of licensed child care center staff did not know about the link between sleep position and SIDS. Other studies have found that between 20 and 25 percent of child care center employees continue to place infants on their stomachs to sleep even though they are aware of the risk.

**Risk Factors**

We don’t know exactly what causes SIDS. However, we do know there are factors that increase the risk of SIDS. The following risk factors have been consistently linked with SIDS:

- Prone sleep position (sleeping on stomach), including unaccustomed tummy sleeping
- Sleeping on a soft surface
- Maternal smoking during pregnancy (as well as secondhand smoke exposure)
- Overheating
- Late or no prenatal care
- Young maternal age (less than 18 years)
- Preterm birth (less than 37 weeks)
- Low birth weight (less than 5 pounds), and
- Male gender

Some racial or ethnic groups are also at a greater risk. Compared to Caucasian infants, African-American infants are twice as likely and Native American infants are about three times more
likely to die of SIDS. It is important to note, however, that SIDS affects all races, religions, income levels, and it occurs all over the world.

Some of the risk factors in the list can be modified. This means that we can do something about them. For example, sleep position, sleep surface, smoke exposure, overheating, and so forth are factors that you can modify. However, there are other factors that cannot be modified. Gender and ethnicity are two examples. There are also factors that are simply difficult to modify. Two examples include premature birth and low birth weight.

Let’s take a closer look at several of the risk factors that we have just identified. We will discuss some of the others later in the course.

**Prone Sleep Position (Sleeping on Stomach)**

When infants sleep on their stomachs or sides, there is a two to three times higher risk of SIDS. The American Academy of Pediatrics, or AAP, recognized this in 1992 and began recommending that infants be placed on their backs or sides to sleep. That message was later updated by the AAP in the mid-1990s when they stated that infants up to 12 months of age should be placed on their backs to sleep. The side position is not as safe as the back position because infants can accidentally roll onto their stomachs. This increases the risk of SIDS. Recent research suggests that side and stomach sleeping increase the risk of SIDS to about the same degree. Therefore, the side sleeping position should not be used.

What about unaccustomed tummy sleeping? Unaccustomed tummy sleeping refers to infants who are used to sleeping on their backs and are then placed to sleep on their tummies by grandparents, babysitters, or child care providers. Researchers have found that unaccustomed tummy sleeping causes infants in out-of-home settings to be at a very great risk of SIDS. In fact, they are 18 times more likely to die from SIDS!

**Why Do People Put Babies to Sleep on their Tummies?**

Why do some parents and child care providers continue to put infants to sleep on their tummies? Some of the common reasons given for not putting children to sleep on their backs include:

- Lack of awareness
- Fear of choking if the baby vomits or spits up
- Infants sleep better on their tummies
- Infants will develop a flat spot on the back of their heads if they are on their back too much
- Infants will develop a bald spot on their head if they are on their back too much
- Infants startle more easily on their backs
- Infants develop better if they sleep on their stomachs, and
- Parental requests. Some parents request non-parental caregivers to put their babies to sleep on their stomachs.
Let’s take a few minutes to address some of these concerns. Some parents and child care providers simply do not know about the relationship between SIDS and sleep position. This is why we need to make sure that parents and other caregivers (including family and friends) are aware of the recommendation to put children to sleep on their backs.

Another very common concern of parents and caregivers is the fear that the baby will choke if he spits up. However, this fear is unfounded. Healthy babies have mechanisms (like the gag reflex) that prevent them from choking if they are lying on their backs. Healthy babies tend to swallow or cough up fluids. If your infant has a medical condition related to reflux, your pediatrician should be consulted about sleep position. This information should be shared with your child care provider. Unless your pediatrician or other child health professional directs you otherwise, you should put the child to sleep on her back.

What about the idea that infants sleep better on their tummies? Studies do show that infants who sleep on their tummies sleep longer and more deeply, but this isn’t necessarily a good thing. Some researchers believe that there is a connection between SIDS and a lack of arousal. This refers to the ability to wake up when the baby gets into a dangerous situation such as not having enough oxygen. It is important to point out that babies can be taught from a very early age to sleep on their backs. When they do this regularly, they become comfortable with the position.

Parents and other caregivers also express concern with babies developing a flat head or a bald spot. These are valid concerns. Sleeping on the back can lead to flattening of the back of the head. The medical term for this is “plagiocephaly.” Babies are spending more and more time in car seats, strollers, swings, which tend to put more pressure on the back of their heads.

There are some ways you can decrease the possibility that a flat head will occur. The daily practice of “tummy time,” or time during which an infant is awake, supervised, and placed on his tummy to play, encourages the development of neck and shoulder muscles, and helps avoid flat spots on the infant’s head. We will talk more about tummy time in a few minutes.

**Why Do People Put Children to Sleep on Their Tummies, continued**

What about the bald spot that can occur on the back of a baby’s head? This is only temporary and will tend to go away as the baby grows and begins to sit up. Supervised tummy time can also help decrease the friction on the back of the head that leads to the bald spot.

Some caregivers express concern that babies who sleep on their backs startle more easily during sleep causing them to wake up. This startle response is probably a good thing, because it might serve to protect the baby. The baby might need fresh air or a slight arousal from deep sleep.

Another reason that is sometimes given for not putting babies to sleep on their backs is that they will not develop normally. This is why it is important to provide infants with regular supervised
tummy time. Doing so will help facilitate their development by strengthening their muscles so that they can roll over or sit up.

One final reason that is given by child care providers for not putting infants to sleep on their backs is parental request. Some parents insist that their children be put to sleep on their tummies or sides rather than their backs. This is why it is important for you to be informed about SIDS risk factors. You can share this information with parents to help them understand the risks to their children.

**Maternal Smoking & Secondhand Smoke Exposure**

Two other preventable risk factors that have been linked to SIDS are maternal smoking during pregnancy and secondhand smoke exposure. When mothers smoke during pregnancy, it increases the baby’s risk for SIDS three times more than babies born to non-smoking mothers. Maternal smoking increases the chances of a baby being born premature and at a low birth weight. As we discussed earlier in the course, these are two other risk factors for SIDS.

Smoking cigarettes during pregnancy negatively effects the brain development of an unborn child. Exposure to cigarette smoke once born is harmful as well. If a baby breathes secondhand smoke, there is a 2.5 times higher risk for SIDS. We know that cigarette smoke contains ingredients that are harmful to adults and young children. The risk of SIDS from secondhand smoke increases as the amount of smoke increases. This is why creating a smoke-free environments is so important.

**Triple Risk Theory**

Let’s turn our attention briefly to a theory that researchers believe might help explain what is happening with SIDS. This theory is known as the “Triple Risk Theory,” or “Triple Risk Model.”

The Triple Risk Model is built on the idea that that there are three interacting factors:

- the vulnerable infant,
- the critical development period, and
- the external stressors.

SIDS is thought to be most likely occur when all three factors are present.

The first factor is the **vulnerable infant**. This is defined as “one with an intrinsic developmental defect that is undetectable.” The developmental defect could be a dysfunction in the brainstem, a problem related to the baby’s sleep arousal, or something of a different nature. The intrinsic developmental defects may be genetic.
The second factor is the **critical development period**. This refers to “a period of rapid growth and development of the brain during the first 6 months of life.” As we discussed earlier in the course, 90 percent of SIDS-related deaths occur during this six month period.

The third and final factor is **the external stressors**. This refers to the environmental factors that you can modify (sleep position, loose bedding, smoke exposure, etc.).

According to the AAP, the theory predicts that SIDS will be less likely to occur if one of the interacting factors can be removed. The factor that you can have the greatest influence on is the external stressors.

**Action Steps to Reduce Risk of SIDS**

Let’s now focus on some steps that you can take to reduce the risk of SIDS for the children in your care. As was mentioned earlier, we don’t know exactly what causes SIDS. However, we do know that there are simple actions you can take to promote safe sleep practices and lower the chances that an infant in your care will die from SIDS.

**[Safe Sleep]**

The DSHS Safe Sleep recommendations are:

- Always place a baby on his or her back to sleep – even for short naps.
- Place infants on a firm sleep surface, such as a safety-approved crib mattress covered by a fitted sheet. Never place a baby to sleep on pillows, quilts, comforters, sheepskin, or other soft surfaces.
- Keep soft toys, crib bumpers, and other soft items out of a baby’s sleep area.
- If using a blanket, put the baby’s feet at the end of the crib, and tuck the blanket around the baby from the chest down, as well as around and under the crib mattress. The blanket should never be near the baby’s face.
- Do not use monitors as a strategy to reduce the risk of SIDS.
- Do not smoke or allow smoking around an infant.
- For the first six months of life, put the infant’s sleep surface, whether it is a crib, pack-and-play or bassinet, in the same room as the parents. This has been shown to be protective against SIDS.

Let’s talk in more detail about some of these recommendations and the simple ways you can establish safe sleep guidelines in your home and anywhere your child sleeps.

**Place Infants to Sleep on Their Backs**
For the reasons that we discussed, infants should always be placed to sleep on their backs every time they are laid down to sleep. This includes naps and at bedtime.

Consistency is extremely important when it comes to sleep position. All those who are responsible for providing care for your infant need to be aware of this recommendation. It is best that your baby sleeps on his or her back at child care centers and at friends’ and families’ homes. The only exception is if your physician gives you instructions that include a prescribed sleep position and a medical reason for not using the back position.

**[Place Infants to Sleep on Firm Sleep Surfaces]**

The safest place for an infant to sleep is on his or her back in a safety-approved crib with a firm mattress. Cradles and bassinets may be used. However, it is highly recommended that you select them from those that are certified for safety by the Juvenile Products Manufacturers Association. The firm mattress should snugly fit the crib or bassinet, and the sheet should be tightfitting. A different-sized sheet should not be used for the crib or bassinet. It should be designed for that specific mattress. Each infant should sleep in a separate crib or bassinet. This is recommended not only to reduce the risk of SIDS, but also for sanitation purposes. Chairs, sofas, air mattresses, water beds, cushions, and standard or adult beds are not safe sleep surfaces. Babies can fall or become entrapped in crevices in the furniture or between cushions.

**Keep Soft Objects Out of Sleeping Environment**

Babies’ cribs should be kept free of soft objects and loose bedding. This includes pillows, quilts, comforters, stuffed toys, sheepskins, and other soft objects. The AAP recommends that if bumper pads are used in cribs, they should be thin, firm, well-secured, and not “pillow-like.” If a blanket is used, place your infant’s feet at the foot of the crib and tuck the blanket in on both sides and at the bottom. The blanket should not come up higher than the baby’s chest. Alternatives to blankets include sleep clothing, such as infant sleep sacks, sleepers, and wearable blankets. They can keep the baby warm without the risk of covering his face.

Objects used to keep a baby in a particular position during sleep are not recommended. This includes wedges and sleep positioners. There is no evidence that they are effective. Also, they can be dangerous. For example, a baby’s face can become trapped against the wedge.

**[Maintain a Smoke-Free Environment]**

As discussed earlier, maternal smoking during pregnancy is a major risk factor for SIDS. It should be avoided altogether. In addition, you should not expose infants to secondhand smoke. Exposing infants to secondhand smoke increases their risk for SIDS and other health conditions.
One of those conditions is asthma. Maintaining a smoke-free home environment is the best approach to take when caring for infants and young children.

[Make Sure That Infants Do Not Become Overheated]

The AAP recommends that infants be lightly clothed for sleep. The room in which infants sleep should be kept comfortable for a lightly-clothed adult. Finally, you should avoid over-bundling infants while they sleep, and they should not feel hot to the touch.

Provide Regular “Tummy Time” for Infants

It is important for you to provide your infant with regular tummy time. Tummy time should be encouraged when your infant is awake and you are able to closely supervise. It can decrease the risk of head flattening and balding of the back of the head.

Tummy time can also:

- promote healthy physical and brain development,
- strengthen neck, arm, and shoulder muscles, and
- encourage bonding with your child

The AAP recommends that parents and other caregivers play and interact with infants while they are awake and on their tummies two to three times a day. This should be done for short periods of time, approximately 3 to 5 minutes. The amount of time can be slowly increased as infants grow stronger and show enjoyment of the activity. In the AAP’s publication “Back to Sleep All of the Time, Every Time,” the following suggestions are given as ways to play with infants while they are on their tummies:

1. Place yourself or a toy just out of the baby’s reach during playtime to get him to reach for you or the toy.
2. Place toys in a circle around the baby. Reaching to different points in the circle will allow him to develop the appropriate muscles to roll over, scoot on his belly, and crawl.
3. Lie on your back and place the baby on your chest. The baby will lift his head and use his arms to try to see your face.
4. While being watched by an adult or caregiver, have a young child play with the baby while on his tummy. Young children can get down on the floor easily. They generally have energy for playing with babies, may really enjoy their role as the ‘big kid,’ and are likely to have fun themselves.

Avoid Commercial Products Marketed to Reduce the Risk of SIDS

Many commercial devices have been invented to prevent SIDS. However, there is no evidence to confirm that they are effective at lowering the risk. For this reason, they should not be used.
[Do Not Use Home Monitoring Devices to Reduce Risk of SIDS]

Respiratory and cardiac monitors are available to detect breathing and heart irregularities in infants. However, the AAP does not recommend using them as a SIDS risk-reduction strategy. They state that there is no evidence that such home monitoring devices decrease the incidence of SIDS.

Breastfeed Your Infant

Many studies have found a link between breastfeeding and a lowered risk of SIDS. This is especially true when infants were exclusively breastfed during the first four months of life. Breastfed infants tend to be more easily aroused from sleep than formula-fed infants. The AAP suggests that this may explain the protective effect of breastfeeding on SIDS. The AAP and other groups like the Academy of Breastfeeding Medicine and the International Lactation Consultants Association highly recommend that infants be breastfed because of its many benefits.

You can continue to feed breast milk to your baby even if you go back to work or school. There are some ways you can help make this time easier for you, your baby and your baby’s child care provider with some simple preparation. Feeding breast milk to your baby is the best nutrition you can offer.

[Breastfeeding and Work/School]

Let’s talk about some helpful tips on how to continue to feed your baby breast milk when you return to work or school.

- When you are at home, breastfeed your baby as often as your pediatrician recommends; look for signals that your infant is hungry, such as sucking noises.
- If your child care center is close to your work or school, go to the center and breastfeed your baby when you can.
- Express your breast milk during your breaks at work or school with a breast pump. The milk can be used by your child care provider. If using a pump at work or school, determine where to safely store and refrigerate your milk. Talk with your boss about your decision to provide your milk for your baby, and ask if a policy exists about when to pump and where to safely store it. If you are uncomfortable talking about pumping during breaks and storing breast milk, contact your pediatrician or your local health department (including WIC, if applicable) to find someone who can assist you.

Consider Offering a Pacifier during Naps and at Bedtime
There is evidence that pacifier use by infants can reduce the risk of SIDS. The exact reasons for the reduced risk are not known. However, the AAP believes that there is enough evidence to support the recommendation to offer infants a pacifier during nap times and bedtimes. It should be pointed out that the recommendation has been somewhat controversial, with some lactation groups expressing concern that pacifiers have the potential to interfere with the establishment of breastfeeding. If you have questions or concerns about using pacifiers, contact your pediatrician or other health care provider.

If you decide to use a pacifier, the AAP recommends following these guidelines:

- Pacifiers should be avoided for a minimum of four weeks, or until breastfeeding is well-established.
- If the pacifier falls out while an infant is sleeping, it should not be reinserted.
- If an infant refuses a pacifier, you should not force him to take it.
- Pacifiers should never be coated in any sweet solution.
- Pacifiers should be cleaned and replaced often.

**Bed Sharing or Co-Sleeping**

Bed sharing, also known as co-sleeping, is when a baby sleeps with another person or persons on the same sleep surface. Co-sleeping is when a baby sleeps in close proximity to a parent. It is a common practice in many non-Western cultures and is becoming more popular in certain parts of America. Despite the possible pros, the U.S. Consumer Product Safety Commission, or CPSC, warns parents *not* to place their infants to sleep in adult beds, stating that bed sharing puts babies at risk of suffocation and strangulation. The AAP discourages bed sharing as well, but they encourage co-sleeping and recommend that baby shares a room (but not a bed) with his or her parents for at least the first six months of life. This has been shown to be protective against SIDS.

According to the CPSC, at least 515 deaths were linked to infants and toddlers less than 2 years of age sleeping in adult beds from January 1990 to December 1997. Of these deaths, 121 were attributed to a parent, caregiver, or sibling rolling on top of or against a baby while sleeping. More than 75 percent of the deaths involved infants younger than 3 months old.

Those who should never share a bed with an infant include:

- Other children — particularly toddlers — because they might not be aware of the baby's presence,
- Parents who are under the influence of alcohol or any drug that could diminish their awareness of the baby,
- Parents who smoke,
- Parents who are overly tired, sick, or upset,
- Parents who are overweight or obese, and
• Parents who are on any type of medication (prescription or over the counter) that may cause drowsiness or may make it harder to wake up.

**Safe Sleep Policies**

Before we conclude this course, let’s take a few minutes to tie everything together that we have learned about preventing SIDS through safe sleep practices, and talk about how to develop a written safe sleep policy for everyone who cares for your child. Having a written safe sleep policy is beneficial for the following reasons:

• It could potentially save an infant’s life,
• It demonstrates to caregivers that your infant’s health is of utmost importance to you,
• It educates caregivers by making sure that everyone caring for your child is following the same safe sleep policy,
• It provides an opportunity for you to discuss safe sleep practices with other parents who may not know about the importance of safe sleep, and
• It empowers you to make the best decisions possible regarding your baby’s care.

What elements should be included in a written safe sleep policy? The American Academy of Pediatrics lists several elements that should be included. A written safe sleep policy should include the following regulations:

• Your baby should always sleep on her back,
• Your baby should only sleep in safety-approved cribs and on firm mattresses,
• Your baby’s crib should be free of toys, stuffed animals, and extra bedding,
• If a blanket is used, your child’s feet should be placed at the foot of the crib and a light blanket, coming up no higher than her chest, tucked along the sides and foot of the mattress,
• Your baby should not be put to sleep in a crib with other babies,
• The room should be kept at a temperature that is comfortable for a lightly-clothed adult,
• No wedges or infant positioners should be used,
• Smoking should never be allowed in a room where you infant sleeps,
• Your baby should receive supervised “tummy time” while she is awake, and
• Anyone caring for your child, including all staff, substitutes, and volunteers should be taught about safe sleep policies and practices, and be sure that they are reviewed often.

Many child care centers have written safe sleep policies and ask parents to sign these policies during enrollment or orientation. If your child care provider does not talk to you about safe sleep, it is important that you discuss this topic before your child is placed in their care. The handout called “Safe Sleep Policy” is an example of a safe sleep policy that would be appropriate to discuss with anyone caring for your child.
Bringing It All Together

During this presentation, we have talked about specific ways to reduce the risk of SIDS and establishing a consistent safe sleep policy in your home and anywhere your baby sleeps. By taking the time to identify and eliminate potential SIDS hazards, and by discussing the importance of safe sleep practices with your child’s caregivers, you are taking big steps to ensure that your infant is sleeping in the safest environment possible.

Here are the major messages we’d like you to “take home.”

- SIDS cannot be completely prevented, but parents can take many precautions to reduce their babies’ risk,
- Always place your baby to sleep on his back, unless specifically directed otherwise by your pediatrician or health care provider,
- Implementing professional safe sleep recommendations, like removing soft items from cribs, eliminating smoke in your baby’s environment, and breastfeeding, can reduce the risk of SIDS, and
- Use a written policy to discuss safe sleep policies with any of your child’s caregivers, and before leaving your baby with anyone, be sure that person agrees that the safe sleep practices explained will be followed all of the time.

Thank you for your attention, and thank you for your commitment to providing the best possible child care experience for your child.

References


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