

INFUSING



BONDED BY BLOOD | SPRING 2023

The Magic of Summer Camp

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How Does Sleep
Affect Health?

The Magic of
Summer Camp

Our Story

BONDED BY BLOOD At an early age, our founders Kevin and Scott, met at hemophilia summer camp. As blood brothers, their friendship has spanned three decades of experiences in the bleeding disorders community and healthcare challenges. Over time, they shared each other's struggles and victories of living with a bleeding disorder. As they became professionals, they resolved to create the healthcare experience they wished they had. In mindful pursuit of this dream, they created **BROTHERS HEALTHCARE**, a unique specialty pharmacy, built around exceptional care, personal experience, and integrity. Kevin and Scott are committed to providing pharmacy care experience that is second to none.

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Sisters

Leading the Charge

With a growing awareness of women's treatment needs, **Brothers Healthcare** is a leader in advocating for women with bleeding disorders. Historically, women's unique needs are often overlooked when compared to their uncles, brothers, or sons. We support women getting the care they need to be their best selves. **We serve women by listening to their stories and finding creative solutions.**



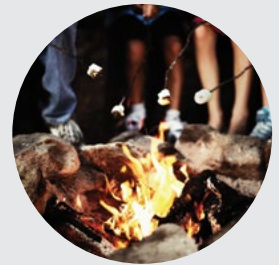
FROM THE EDITOR

Summer is approaching, and I, for one, am SO ready. Being from California, I'm done with all this rain and snow!



Stay healthy and safe,
—Kelle Carthey, RN
Editor

So instead, I'm channeling a warm sunny summer — and because of this, in this issue of Infusing Life, we discuss the benefits of sleep (NO more getting up for school!) and how it helps our bodies grow and heal. We also talk about the magic of summer camp and how our kids can safely learn to build life skills and friendships while away from us. I can tell you from personal experience that bleeding disorders summer camp had a hugely positive impact on both our kids and us! We hope you will take this issue seriously and encourage you to send your kids to camp! 🏕️



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Spring 2023

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Scholarship winners will be announced in our next newsletter.

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HOW DOES

SLEEP

AFFECT HEALING?



“SLEEP PLAYS A CRITICAL ROLE IN YOUR BODY’S HEALING, ESPECIALLY IF YOU EXPERIENCE ACTIVE BLEEDING.”

down during injury or periods of physical inactivity.

Another event occurring during sleep is the production of proteins called cytokines, which also repair tissues, helping those with injuries heal faster. Cytokines trigger the production of collagen, which forms the structure of tendons, ligaments, and skin, and speed up the wound healing process.

Moreover, sleep increases stem cell production, further repairing damaged tissues. Stem cells promote healing throughout the body, including bones, cartilage, and tendons.

IMPROVES THE IMMUNE SYSTEM

When your body produces cytokines during sleep, it has a positive impact on your immune system by reducing infection and inflammation, helping you heal faster. Cytokines achieve this goal by influencing the growth of blood cells that help your body fight back against injury and diseases. These proteins also reduce cancer by sending signals to the body to kill abnormal cells and make normal cells live longer.

Also, during sleep, your body produces T-cells — white blood cells that improve your body’s immune response. These blood cells can help your body battle infectious diseases such as COVID-19. The hormone prolactin is also released when you sleep, which supports T-cell production and regulates inflammation.

As you can see, if you don’t get enough sleep, it can take longer for your body to recover

You might have heard that sleep is the best medicine, but a good night’s rest could do more than simply make you feel better—it can actually help your body heal. Research shows sleep can improve tissue regeneration, brain function, and the immune system, making it an incredibly useful tool if you have a bleeding disorder. Learn more about sleep’s effect on your body below.

HOW SLEEP POSITIVELY INFLUENCES HEALING

Sleep can promote healing the following ways:

TISSUE REGENERATION

A good night of deep sleep regenerates and repairs your tissues by releasing various growth hormones. These hormones include human growth hormone (HGH), which is beneficial for repairing connective and muscle tissue that breaks

from an injury and increase your chances of developing another one.

INCREASES BRAIN FUNCTION

Getting enough sleep is critical for cognitive functions such as memory, problem-solving, and emotional processing. When you sleep, the body restores these functions, allowing you to improve performance and focus on tasks during the day. Quality sleep helps your brain heal by removing toxins that can lead to impairments in judgment, behavior, and other cognitive abilities.

Sleep also assists in the regulation of hormones such as cortisol and adrenaline. When these hormones are too high, they can increase your blood pressure and heart rate, which can be a problem if you have an active bleed (see below).

HOW CAN SLEEP HELP YOU RECOVER FROM AN ACTIVE BLEED?

When someone with a bleeding disorder has high blood pressure and a high heart rate, it can result in more active bleeding. Sleep can improve an active bleed by reducing anxiety and stress. That prevents your body from releasing stress hormones like adrenaline and cortisol that influence blood pressure and heart rate.

Say you have a condition such as hemophilia, where blood

doesn't clot naturally. When anxiety and stress impact your nervous system, you might experience high blood pressure and heart rate, which causes you to bleed more. You can reduce the likelihood of this happening by getting more sleep.

Sleep can improve healing for people with blood disorders in other ways. As previously mentioned, sleep encourages the production of HGH and cytokines. Both repair blood vessels and cause new blood cells to grow. By improving your immune system through sleep, you encourage the formation of new white blood cells and proteins that stop bacteria and viruses from damaging blood vessels, which can lead to bleeding.

Another way sleep helps people with bleeding disorders is by preventing weight gain. Research shows that people who sleep for five hours or fewer a night are nearly a third more likely to put on weight (30 pounds over 16 years) than people who get seven hours of sleep. Weight gain can be a problem for people with a bleeding disorder because excess weight can increase pressure on the joints, especially around the ankles and knees, which might result in more bleeding.

THE DANGER OF TOO MUCH SLEEP

Sleep is critical for your body's healing. However, sleeping too long can hinder the recovery process and could be a sign of another medical condition, such as depression, sleep apnea, or

hypersomnia. Oversleeping can be dangerous if it interferes with physical activity. Lying in bed too long and not getting enough exercise could lead to reduced endurance and physical function, making it harder for your body to heal.

Interrupted sleep is just as bad for healing. If you don't get a full night's rest, it can impact your hormone production. In this scenario, your body won't be able to regenerate tissues, improve brain function, and enhance its immune response. Many experts recommend getting 7–9 hours of sleep a night.

HOW TO GET A GOOD NIGHT'S SLEEP

Getting a good night's sleep can prevent the problems above from occurring. Here are some tips for more successful shut-eye:

AVOID CAFFEINE AND ALCOHOL BEFORE BED

Although alcohol might make you sleepy, it can reduce your quality of sleep and cause you to wake up during the night. Caffeine, on the other hand, is a stimulant that can take the body several hours to metabolize, resulting in disrupted sleep patterns. Avoid both of these substances before bed.

BE WARY OF SLEEPING PILLS

Your doctor might prescribe sleeping pills if you can't sleep. However, overreliance on this medication can result in dependency issues. Melatonin supplements are an alternative to pills that can improve sleep quality, encouraging your body to heal.

TURN OFF DEVICES BEFORE BED

The light from laptops, smartphones, and other devices can




disrupt sleep because it stimulates the brain. Blue lights on devices can confuse the brain into thinking it's time to wake up. Try turning off your gadgets a couple of hours before bedtime.

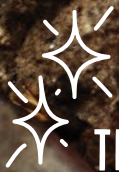
TALK TO YOUR DOCTOR IF YOU CAN'T SLEEP BECAUSE OF PAIN

If you experience pain because of a condition like a bleeding disorder, contact your doctor immediately. Your doctor might prescribe pain medications and anti-inflammatory drugs that alleviate pain and help you get a better night's sleep. You might also want to try a holistic therapy like meditation that can make your brain less sensitive to pain and make falling asleep a lot easier.

FINAL WORD

Sleep plays a critical role in your body's healing, especially if you experience active bleeding. Good-quality sleep results in the production of HGH, prolactin, and cytokines that improve tissue regeneration, the immune system, and brain function. Regular rest can also lower your blood pressure and heart rate, preventing bleeding episodes. Follow the tips listed above for a better night's sleep. 





THE MAGIC OF

SUMMER CAMP!

DON'T LET YOUR FEAR OF LETTING GO HOLD YOUR CHILD BACK!

“IT’S AN OPPORTUNITY TO MEET NEW FRIENDS, EXPLORE NATURE, AND, YES, SPEND TIME AWAY FROM YOU—WHICH CAN IMPROVE YOUR PARENT-CHILD BOND.”

Some milestones in your child’s life trigger so many intense emotions. Their first day at school might be one of them, a giant mixed bag of happy and sad, learning when to let go and when to hold on. Dropping off your child at a sleep-away summer camp is another. If you are like most parents, learning the balance between when to hold on and when to let go is a delicate balance that requires some serious life skills. Especially if your kid has a medical condition.

For most children, summer camp is the start of a new adventure. It could be the first time they’ve slept in another bed or spent a significant amount of time away from home. While that can make any parent worry, it can evoke fear or even dread, especially if your child has a bleeding disorder. Questions might circle your mind like a washing machine: What if they have an injury? Will they receive the care they need? What if they get homesick and want to come home?

It's perfectly normal to feel overprotective and leary about sending your child to go away to summer camp. Overcoming these fears isn't easy, but it's worth a try. Learning more about the incredible benefits of summer camp can help alleviate your concerns. In turn, you'll realize just how much the experience benefits your child — and you, too.

SUMMER CAMP HELPS WITH STEPPING OUT OF THE COMFORT ZONE

It's common to feel anxious when your child goes to summer camp for the first time. Even more so if this is their first experience away from you. That's because you're used to having a certain level of comfort.

Comfort lies in the routine of daily life. For instance, your child sleeps under the same roof as you. You wake them up for school and make sure they brush their teeth every day. You might even have to give them an infusion or injection depending on the severity and treatment of their bleeding disorder. Trusting someone else to help look out for your child can be intimidating and scary. Especially when they have a bleeding disorder. So many questions can come up.

The thing to understand is that your child's time at summer camp isn't your experience; it's theirs. It's an opportunity



to meet new friends, explore nature, and, yes, spend time away from you—which can improve your parent-child bond. Sure, your child will be gone for a week, which might frighten both of you initially, but you will grow and learn that it is okay to move past these fears. As your child steps out of their comfort zone, you'll also step out of yours. It's important to remember that even though letting your child go to summer camp may cause a bit of “first-time” anxiety for you, modeling good coping skills is essential. Talk about being a little nervous with them and how it is okay to feel this way, so they know they are not alone, AND how excited you are for your child to have fun and experience new things! Keep the conversations positive!

SUMMER CAMP AIDS IN SKILL DEVELOPMENT

Summer camp isn't just a week of literal child's play in a forest or a nature reserve. Your kid will master brand new skills they might not develop anywhere else, not

even at school. That's not to say summer camp isn't fun, because, OF COURSE, it is. Your child will likely hunt for objects in nature, compete in relay races, play their fair share of sports, test their bounties on a ropes course, get messy, and stay up late. Oh, but summer camp is so much more than that. Underneath it all, it's a learning experience that can help your child grow and develop.

Here are some of the skills your child will likely start to pick up and master at summer camp:

- Develop Lifelong Skills
- Promotes Independence, Leadership, and Decision Making.
- Makes Time for Play.
- Teaches Teamwork.
- Teaches Resiliency and Compassion
- Provides Fun Screen-Free Activities.
- Encourages a Connection with Nature.
- Fosters Growth.

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Depending on your chosen camp, your kid might learn outdoor survival skills, cooking, or even a foreign language. They may come home after their camp experience with a newfound love for literature or an interest in a particular sport. OR MAYBE even a newfound interest in self-infusion! That's because summer camps provide a social and learning environment that opens up your child to new experiences they might not have been exposed to before.

SUMMER CAMP LEADS TO A NEW STATE OF MIND

Your youngster might feel like the 'odd one out' at school because they have a bleeding disorder. They might be restricted from participating in certain physical education activities, which could put them at risk of an injury that could cause bleeding. They may visit the school nurse more frequently than their classmates. All of these experiences can hurt a child's self-confidence.

Summer camp can be a much more validating environment than regular school. In camp, your child can take up activities they're really interested in and are passionate about because it doesn't require a curriculum to guide them. They might also develop more intense bonding experiences when sharing a sleeping space with other children sharing the same life experiences. Daily interactions with other kids living and sharing in the same bleeding disorders experiences is a powerful way for kids to learn from other kids.



Don't be surprised if you find your child comes home from summer camp as a much more confident person, which is a good thing! There's research to back this up. A Northern Michigan University thesis in 2012 investigated the effects of summer camp on self-concept and self-esteem in children with or who previously had cancer. The study revealed that children gave themselves higher 'physical appearance' and 'self-worth' scores at the end of summer camp than before starting camp.

SUMMER CAMP ENCOURAGES INDEPENDENCE

One of the core skills children learn at summer camp is independence. Without you to guide them, your kid will need to take responsibility for their actions and make their own decisions (within safe reason, parents!)

Summer camp isn't like school, where children learn specific subjects at a particular time. This unique environment gives your child the autonomy to choose the activities and learning experiences they want to partake in. All of that will make them more independent. Children often 'learn who they are' at summer camp, away from their regular lives. They can try new things and take risks at their own pace because their parents aren't around. That also increases their independence, making them less reliant on you as young adults.

SUMMER CAMP PROVIDES CONNECTIONS TO ROLE MODELS AND NEW BESTIES

Summer camp lets your child develop relationships with new kids and older role models. Camp counselors are usually young adults in their late teens and early twenties who volunteer during the summer months. Each counselor is carefully chosen and will bring a unique skill set to the summer camp experience. That can positively impact your child, who's still learning to establish relationships with adults during their developmental years.

Your child might spend time with a camp counselor who is passionate about art and another counselor who knows about different aspects of nature. Often, at bleeding disorders summer camps, the staff are personally affected by a bleeding disorder themselves. This gives an excellent opportunity for these special counselors to provide new and positive perspectives on managing life with a medical condition. In fact, this is how



Brothers Healthcare co-founders met! They first met as campers at a hemophilia summer camp where they shared a cabin and counselor. They were only about 10 years old! As they grew up, they wanted to ensure other kids like them had similar experiences at camp. Hence, they became camp counselors and mentors. Over 30 years later, they are still business partners and friends, creating Brothers Healthcare to make sure kids and families affected by a bleeding disorder have the best care and community around them.

SUMMER CAMPS ARE EQUIPPED TO HANDLE MEDICAL CONDITIONS

One of the biggest concerns about spending time away from your child for a week at camp is probably their bleeding disorder. Will camp counselors understand your child's condition? Will there be a nurse or doctor on site? Will your child receive the medications and treatments they need?

It's important to remember that bleeding disorder summer camps cater to children with various health conditions. Many parents have the same questions as you. It is reassuring to know that the original Hemophilia Camp Program Standards were developed in 1993 by the camp subcommittee of the National Hemophilia Foundation's Nursing Executive Committee. The current standards have incorporated the Association of Camp Nurses (ACN) and American Camping Association (ACA) standards. These standards include a rigorous and extensive list of criteria, including emergency procedures, medical and counselor staffing standards, and many other bleeding disorder-specific requirements. In the case of bleeding disorder summer camps, you can rest assured that there is a staff of medical professionals (often times the team from the local bleeding disorder treatment center) that are well versed in recognizing and treating bleeding episodes in kids. Another bonus about bleeding disorder camp is that your child can become more medically independent with your permission. With the expertise and patience of the trained and specialized medical staff, your child can learn to self-infuse or inject their meds. Pretty cool.


Of course, before enrolling your child, you can always address your medical concerns with your hematologist or even the staff at the camp. Explain what kind of assistance your child requires and if they are treating or healing from a bleeding episode. Take comfort in knowing your child won't be the first to attend summer camp with a bleeding disorder and won't be the last! Overcome your fears and give your child a summer experience they'll likely remember for the rest of their lives. They will be VERY well cared for and looked after!



SEND YOUR CHILD TO A SPECIALIZED CAMP FOR BLEEDING DISORDERS

Once you realize the benefits of summer camp for your child, you might think entirely differently about the entire experience. For example, it's great to know that specialized camps are like regular camps but welcome those with serious illnesses such as bleeding disorders.

One of the most famous is the Hole in the Wall Gang Camp, founded by Paul Newman in 1988, which caters to children with hemophilia and other conditions free of charge. The camp runs seven different camps for kids with serious medical conditions over the summer. They are in various locations nationwide and include activities like boating, fishing, archery, and arts and crafts. But this isn't the only one! Many other bleeding disorder camps take place during summer across the United States (and can be easily found)!

At Brothers Healthcare, we believe in the power of summer camp. We have seen and felt firsthand the magic camp instills in kids (and the adults who help run them). Allowing your kid the chance to go to camp can become one of their most cherished summer memories and give them friends and community for a lifetime. If you want to send your child to summer camp (usually for free), contact your local Bleeding Disorders Chapter foundation. Or you can find a list of camps online at <https://www.hemophilia.org/community-resources/resources-near-you/bleeding-disorders-camps> Find bleeding disorder summer camps in your area now! 





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