brain rules for BABY
How to Raise a Smart and Happy Child from Zero to Five
JOHN MEDINA

www.brainrules.net
practical tips

Throughout *Brain Rules for Baby*, I’ve offered practical ways to apply the research to the real world of parenting. I want to compile them in one place, along with a few examples from my own parenting experience. These are things that worked for my family. I’m happy to share them, but I can’t guarantee that they will work for yours.

**Pregnancy**

*Leave the baby alone at first*

The best advice neuroscience can give a mother-to-be about how to optimize her baby’s brain development in the first half of pregnancy can be summarized by a single sentence: Do *nothing*. You don’t need to speak French to your embryo at this stage, or play Mozart. Your baby’s brain is not yet hooked up to her ears anyway. Neurogenesis, the major preoccupation of a baby’s brain at these early stages, proceeds in a mostly
automatic fashion. Just find a calm place where you can throw up on a regular basis, and take your doctor’s recommended amount of folic acid, which prevents neural tube defects.

**Take in an extra 300 calories a day**

Weight gain is normal, and pregnant women should plan on ballooning up. Malnourished moms tend to produce smaller, malnourished babies, and brain size is roughly associated with brain power. Most women need to add about 300 calories per day during pregnancy. Your physician can tell you how many and at what rate.

**Eat fruits and veggies**

The best advice is still the oldest: a balanced diet of fruits and vegetables. This is simply replicating the nutritional experiences forged over our inescapable evolutionary history. Along with enough folic acid, pediatricians suggest eating foods rich in iron, iodine, vitamin B12, and omega-3.

Remember the flavor programming, where mothers who drank carrot juice had babies who liked carrot juice? This notion requires more research, but it is very possible that helping a child start a lifelong love affair with vegetables (or, more probably, a lifelong “I don’t hate all vegetables” affair) may start with you eating lots of fruits and vegetables in the last trimester of pregnancy.

**Do 30 minutes of aerobic exercise each day**

My wife and I would take long walks together during both pregnancies. We often retrace these routes today, and we still remember how we felt about those pregnancies each time we do. Exercise has provided a lot of nostalgia for us.

Exercise is a known stress-reducer, good for keeping marauding glucocorticoids away from baby’s vulnerable neurons—and mom’s, too. It produces lots of brain-friendly chemicals and reduces the risk of clinical depression and anxiety disorders. Consult your physician first;
only your doctor knows exactly what you should be doing and how long you should be doing it. It changes with the stages of pregnancy.

**Reduce the stress in your life**

Pregnancy is stressful, and the body is equipped to handle that. But excess stress can do damage to you and the baby. An overabundance of cortisol targets a baby’s developing neurons, interfering with proper brain development. Remove as much toxic stress as possible—for you and for baby.

**List the areas where you feel out of control**

Make a “Things that really bother me” list. Now mark the ones where you feel out of control. Toxic stress comes from feelings of helplessness. These are your enemy.

**Take back control**

Exerting control may mean exiting the stressful situations you just marked. If that’s not an option, think about ways to reduce the stress that arises from them. Aerobic exercise is a must; you’ll find more of the best stress-reducing techniques at www.brainrules.net.

**Husbands, cherish your pregnant wives**

Treat your wife like a queen. Do the dishes. Bring her flowers. Find out about her day. Developing those patterns while your wife is pregnant is one of the greatest gifts dads can give to their kids. That’s because one of the four significant sources of stress we discussed comes from a woman’s relationship with her significant other. When the man creates a backstop of unrelenting support, the woman has one less thing to worry about.

**Relationship**

**Reconstitute the tribe**

For evolutionary reasons, human babies were never meant to be born
and raised in isolation from a group. Psychotherapist Ruth Josselson believes it is especially important for young mothers to create and maintain an active social tribe after giving birth. There are two big problems with this suggestion: 1) Most of us don’t live in tribes, and 2) we move around so much that most of us don’t even live near our own families, our natural first tribal experience. The result is that many new parents live on the margins of their social lives. They don’t have a relative or trusted friend who can watch their kids while they take a shower, get some sleep, or make out with their spouses.

The solution is obvious: Reconstitute a vigorous social structure using whatever tools you have at hand.

Start forming one now, before the baby comes. There are many options. At the formal level, there are PEPS groups (Program for Early Parent Support) and churches and synagogues, all possessing built-in notions of community. Informally, you can host social get-togethers with your friends. Go out with other pregnant couples in Tribe Lamaze. Throw cooking parties, where you and your friends make a bunch of freezer meals. Having a 50-day meal supply all ready to eat before baby comes home is one of the best gifts you can give any prospective parent. Doing another 50 after baby arrives is a great way to cement your community.

Work on your marriage

Even if you see no trouble on the marital horizon and you have lots of friends, there is no guarantee that this will remain true after baby comes. A few ideas:

Start morning and afternoon inquiries

Begin regular “check-in” times with each other. Check in twice a day, once in the morning and once in the afternoon, easy as a quick phone call or email. Why twice? The morning will allow you to see how the day is beginning to progress. The afternoon can help you prepare for the evening. New parents have only about one-third the time
alone together they had when they were childless. That’s just another form of social isolation. Starting now, while you have energy, gives you space to develop the habit before baby comes, when you won’t have the energy.

**Schedule sex regularly**

Yes, the great joy in physical intimacy includes a healthy helping of spontaneity. Problem is, you can kiss spontaneity out the window when you bring baby home. Sexual activity usually plummets after the birth of a child, and the loss of associated emotional intimacy can be devastating for couples. Scheduling sex—however often is right for you—can buffer against this tendency. It also gives each partner time to mentally decompress and get into the mood. Try incorporating two types of sex into your lives: spontaneous sex and maintenance sex.

**Develop the empathy reflex with your partner**

A woman in one of our research projects had recently been exposed to training in the empathy reflex. She was shopping at Costco after a long day at work when she discovered at the checkout counter that only stubs were left in the checkbook. She called hubby requesting assistance. She got instead a lecture about personal responsibility: Why didn’t she look in the checkbook before taking it? Where was her reserve of cash? “That’s not what you’re supposed to say,” she reminded him. “You’re supposed to say, ‘You sound tired, honey, and frustrated and mad. And you’re angry because calling me was the last thing on your mind after a hard day at work and you are probably humiliated right now and you just want to go home!’” She faced the phone. “That’s what you’re supposed to say, dummy!” Then she hung up. Well, that last bit isn’t part of the training. But everyone needs practice in the two-step of reading emotions and guessing the cause. The most common source of conflicts is the gap between a person’s unknowable intentions and observable behavior. That gap can be bridged by empathy.
Reconcile deliberately

If you have a fight in front of your children, reconcile in front of your children. This allows your child to model how to fight fair and how to make up.

Balance the housework load

Guys, start helping around the house now. Make a list of what your wife does. Make a list of what you do. If your list displays the toxic inequality typical in the United States—you know, the one predictive of divorce rates—then change the list. Balance it until you both are satisfied with what equality means. Once the list has been renegotiated, get started on these changes immediately. Before you are sleep deprived. Before you are socially isolated. Before you start fighting. There is even empirical support that you will get more sex if you do. No kidding. Somebody actually studied it.

Address your sticking points

No marriage is perfect, for sure, but some marriages will survive parenthood much better than others. Do you know into which category your marriage falls? Marital intervention programs can tell you. Two of the most well-regarded programs in the United States were developed in the laboratories of Philip and Carolyn Cowan, and John and Julie Gottman. Their websites are chock full of diagnostic tools, practice sessions, books they have written on the subject, and sign-up forms for conferences. Links to these programs, their literature, and the peer-reviewed references are at www.brainrules.net.

Find a mental-health professional now

A new parent’s first exposure to child-based medical professionals is usually a pediatrician. I am advocating that you add another to the list: a mental-health professional. Someone affordable with whom you can check in as questions come up, just like
a pediatrician. There are many reasons to get started on this journey, beginning with the fact that most pediatricians do not have advanced training in mental-health issues. Here are three more:

*Mental-health issues will arise for many children.* I am not just talking about the usual behavioral suspects, like autism and ADHD. The average age of onset of ANY mental-health issue, from mood disorders to thought disorders, is 14.

*Delay is your enemy.* The earlier a mental-health issue is detected, the easier it is to treat. It can take a while to find a mental-health professional who fits with your family, so it’s good to get started now. I am aware that for some, this advice will be a waste of time. For others, it will be the most important thing they will ever do for their kids.

*Depression affects as many as 1 in 5 new parents.* Having a mental-health professional can act like an insurance policy for you, too. If there are no issues, there will be no need to visit, but if one crops up, you will already know where to turn.

**Smart baby**

*Breast-feed for one year*

Longer is better. You’ll get a smarter baby, a healthier baby, a happier baby. Breast-feeding is one of the most practical, most brain-boosting behaviors we know; the benefits are extremely well-established.

*Describe everything you see*

Talk to your baby a lot. This is as simple as saying, “It’s a beautiful day” when you look outside and see the sun. Just talk. During infancy, do so in “parentese,” those clusters of exaggerated vowel sounds at high frequencies. A rate of 2,100 words per hour is the gold standard.
Create a Chocolate Factory

There may be as many different types of playrooms as there are families, but every one of them should have the following design element: lots of choices. A place for drawing. A place for painting. Musical instruments. A wardrobe hanging with costumes. Blocks. Picture books. Tubes and gears. Anything where a child can be safely let loose, joyously free to explore whatever catches her fancy. Did you see the movie *Willy Wonka and the Chocolate Factory*? If so, you may have been filled with wonder at the chocolate plant, complete with trees, lawns, and waterfalls—a totally explorable, nonlinear ecology. That’s what I mean. I am focusing on artistic pursuits because kids who are trained in the arts tend to resist distractions better, stay focused better, and have better scores on fluid intelligence tests.

My wife and I devoted nearly 600 square feet in our house to creating such an environment, filled with music stations, reading and drawing and painting and crafting areas, lots of Legos, and lots of cardboard boxes. There was a math and science station, including a toy microscope. We changed the contents of these stations on a regular basis, and we eventually turned the space into our kids’ classroom.

Play ‘opposite day’

After my children turned 3, I employed some fun activities to improve executive function, roughly based on the canonical work of Adele Diamond. I would tell them that today was “opposite day.” When I held up a drawn picture of the night, an inky black background sprinkled with stars, they were supposed to say “day.” When I held up a picture with a big blue sky inhabited by a big yellow sun, they were supposed to say “night.” I would alternate the pictures with increasing rapidity and check for their responses.

They had a blast with this; for some reason we always ended up rolling on the floor laughing.

I did a kinetic form of this exercise with my elder son, who was a natural drummer, when he was 4. We each had a spoon and a pan.
The rule was that when I struck a pan with a spoon once, he had to do it twice. When I hit a pan twice, he had to strike it three times. Or once. (I changed it up quite a bit.)

The idea for both exercises was to a) give the boys a rule and b) help them inhibit what they would do automatically in the face of this rule—a hallmark of executive function. We had a certain place in our Chocolate Factory for these types of play. There are a ton of exercises like these you can do with your kids. For a list of nearly 20 great ones, check out Ellen Galinsky’s *Mind in the Making*.

**Make play plans**

See if elements of the Tools of the Mind program will fit in with your lifestyle. Here’s one way this worked at my house: Our boys might decide that they wanted to make a construction site. (They had a favorite video that featured various construction machines, which we watched ad nauseam. We still take it out for birthdays, as a funny nostalgia piece.) We would sit down together and plan the elements of what would go into the construction site, what might occur there once it was built, and how cleanup should best be handled once finished. Our imaginations ran wild, but a linear list of goals would be created from the exercise. Then the boys would play.

A full description of the Tools program is available here:

http://www.mscd.edu/extendedcampus/toolsofthemind

**Do not hyper-parent**

These playroom designs and games have a non-pressed, open-ended quality to them. That’s no accident. The more strangled children feel emotionally, the more stress hormones swarm their brains, and the less likely they are to succeed intellectually. Teaching your children to focus, then letting them loose inside a Chocolate Factory, allows them to exercise their gifts far better than kids who can’t focus and who aren’t allowed choices. Note that what is missing in these ideas is Mandarin lessons and algebra classes and reading Rousseau by age 3.
Take a critical look at (gulp) your behavior

One of the most familiar forms of parental guidance is direct instruction, which parents deploy in earnest as their child becomes verbal. “Please come with me.” “Stay away from strangers.” “Eat your broccoli.” But direct instruction is not the only way kids learn from their parents, and it may not be the most efficient. They also learn through observation. And your kids are observing you like a hawk. Here’s a three-step suggestion:

Step 1: Make a list of all the behaviors—the actions and words—you regularly broadcast to the world. Do you laugh a lot? Swear on a regular basis? Exercise? Do you cry easily or have a hair-trigger temper? Do you spend hours on the Internet? Make this list. Have your spouse do this, too, and compare.

Step 2: Rate them. There are probably things on this list of which you are justifiably proud. Others, not so much. Whether good or bad, these are the behaviors your children will encounter on a regular basis in your household. And they will imitate them, whether you want them to or not. Decide which behaviors you want your children to emulate and circle them. Decide which behaviors you’d rather have them not imitate at all and put an “X” through them.

Step 3: Do something about this list. Engage regularly in the behaviors you love. It’s as easy as telling your spouse on a regular basis how much you love her. Put on an extinction schedule the ones you don’t want to have around. It’s as easy (and as hard) as turning off the television.

Say, ‘Wow, you really worked hard’

Get into the habit of rewarding the intellectual exertion your child puts into a given task rather than his or her native intellectual resources. Begin by practicing on your spouse and even your friends. If they do something well, say, “You must have put a lot of effort into that” rather than, “Wow, you are really talented.” When children praised for their effort fail, they are much more likely to try harder.
Trade for digital time

Knowing full well the need for our kids to be digitally conversant, yet fully aware of the dangers, we came up with a few rules as our boys became preschoolers. First, my wife and I divided digital experiences into categories. Two of the categories involved things necessary for school work or for learning about computers: word processing and graphics programs, web-based research projects, programming, and so on. The boys were allowed to do these as homework required.

Recreational experiences—digital games, certain types of web surfing, and our Wii gaming system—we called Category I. They were off limits except under one condition. Our sons could “buy” a certain amount of Category I time. The currency? The time spent reading an actual book. Every hour spent reading could purchase a certain amount of Category I time. This was added up and could be “spent” on weekends after homework was done. This worked for us. The kids picked up a reading habit, could do the digital work necessary for their futures, and were not completely locked out of the fun stuff.

Happy baby

Chart your child’s emotional landscape

Most infants have a limit to how much stimulation they can take at any one time. Make a list of your baby’s “can we stop now?” cues, which can be as subtle as head-turning or as obvious as bawling. Then get into a rhythm based on that, interacting in response to your baby’s cues, withdrawing when she’s had enough.

Continue to monitor your child’s emotions as he or she gets older. Jot down a few sentences describing your child’s likes and dislikes. Update it continuously as various emotional responses develop. Making a list gets you in the habit of paying attention, and it provides a baseline, allowing you to notice any changes in behavior.
Help your child make friends of the same age

Learning to make friends takes years of practice. Kids consistently exposed to the delightful rough and tumble of other children get experience with personalities who are as innocent as they are, as selfish as they are, as desirous of peer interactions as they are. That means arranging plenty of play dates. Let your children interact with multiple age groups, too, and a variety of people. But pay attention to how much your child can handle at one time. Social experiences must be tailored to individual temperaments.

Speculate on another’s point of view

In front of your children, verbally speculate about other people’s perspectives in everyday situations. You can wonder why the person behind you in line at a grocery is so impatient or what the joke is when a stranger talking on a cell phone laughs. It’s a natural way to practice seeing other people’s points of view—the basis of empathy.

Read together

My wife and I turned this into a family tradition. At the end of each day just before lights out, we got into our pajamas and prepared for bed, then snuggled down together. My wife got out a book and, for the next half hour, read it aloud. Though the boys are a bit too old for snuggling now, we still do this just-before-sleep public reading. It exposes the boys to a broader vocabulary of words in a different “voice,” it brings all four of us together as a family, and it compels our brains to get out of our own experiences, imagining different worlds populated by people who don’t react as we do.

Develop an empathy reflex with your children

When faced with a strong emotion, turn to empathy first:

1. Describe the emotion you think you see.
2. Make a guess as to where it came from.

Remember, understanding someone’s behavior is not the same thing
as agreeing with it. It is just your opening response to any situation, especially when intense emotions are involved. If you want to have empathic children, they will need to see it modeled on a regular basis. Empathy comes from being empathized with.

**Determine your meta-emotion style**


**Practice verbalizing your feelings**

You can do this by yourself, with your spouse or with close friends. When you experience a feeling, simply state out loud what that feeling is. Verbalizing emotions gives you a better command over your emotional life, allowing for more insightful self-regulation. It is also a great model for children. I remember trying in vain to open a jar of pickles. My 4-year-old walked in, glanced up at me, and said, “Daddy, you look mad. Are you mad?” “Yep,” I replied. “I can’t get the pickle jar open.” Later that day, I noticed he was getting frustrated building a Lego model. “You look angry, son,” I said. “Are you angry?” He looked at me and said, “Yes. I’m mad. This is my jar of pickles!”

If your children are surrounded by people who can talk about feelings, they will be able to verbalize their feelings, too—invaluable to you when they reach puberty.

**Save up for 10 years of music lessons**

Instruments, singing, whatever—make music a consistent part of your child’s experience. Long-term musical exposure has been shown to greatly aid a child’s perception of others’ emotions. This in turn predicts your child’s ability to establish and maintain friendships.
Guide your child toward a $50,000 career

People who earn six- and seven-figure incomes, studies show, are not substantially happier than those who earn five. The cutoff is about $50,000, in 2010 dollars.

Moral baby

CAP your rules.

Rules delivered with certain characteristics have the best shot at instilling moral awareness in children. You can remember them with “CAP.”

“C” stands for Clarity. The rules are clear, reasonable and unambiguous. It often helps to write them down. Chore charts are good examples. Many families simply shout out a rule as a reaction to a frustrating experience: “From now on, you are going to bed by 8!” But what happens to the rule when the emotions die out?

Write down important rules, and post them in a public place for the whole family to see. They can serve as a point of negotiation and a source of humor—as anyone who has read the Harry Potter series and the edicts of Dolores Umbridge can attest.

“A” stands for Accepting. The rules are delivered in a consistently warm and accepting environment.

“P” stands for Praise. Every time a child follows a rule, reinforce the behavior. This includes praising the absence of a behavior, such as when a child learns not to yell in a restaurant.

Explain the rationale behind the rule

Explain verbally to your children the reasons for your rules. This allows kids to generalize the lessons learned to other situations, which leads to moral internalization. If all they have is “Because I said so,” only a primitive form of behavior modification takes place.
Effective punishment FIRST

“F” stands for firm. The punishment must mean something. It has to be firm and aversive to be effective.

“I” stands for immediate. The closer the punishment is delivered at the point of infraction, the more effective it is.

“R” stands for reliable. The punishment must be consistently applied whenever the noxious behavior is displayed. Inconsistently applied rules are confusing and lead to uneven moral development.

“S” stands for safe. The rules must be supplied in an atmosphere of emotional safety. Children have a hard time internalizing moral behavior under conditions of constant threat.

“T” stands for tolerant. Actually, it is a call for patience, something we addressed only obliquely. Children rarely internalize rules on the first try and sometimes not on the 10th.

Videotape yourself parenting

Most parents keep a running documentary about the early lives of their children. Indeed, the generation coming will be the most filmed in history. What if you tape yourself parenting your little one? Especially for the tough spots. You could alternate with your spouse on taping duties and try to analyze what you’re doing right and wrong. It may give you a clearer idea of your effectiveness as parents.

Enjoy the journey

Parenting is so on the right side of worth it!