

Revised January 2014

# Self-Regulation: Information for Families



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2006

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## About This Handout

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This handout is about self-regulation in general, and can be applied for all children, youth and adults.

## What is Self-Regulation?

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*"..And so Goldilocks first tried the porridge of the Papa Bear, and it was too hot for her. And then she tasted the porridge of the Mama Bear, and that was too cold for her. And then she went to the porridge of the Little Bear, and it was neither too hot nor too cold, but "Just Right" and she liked it so much that she ate it all up."*

--- Goldilocks and the Three Bears



### Self-regulation is:

- The ability to attain, maintain and change our alertness appropriately for a task or situation
- It involves many neurological connections in the brain, including all the sensory systems

As Goldilocks showed, we don't want too much, nor too little stimulation. We want 'just enough' stimulation, so we can be 'just right'.

Self-regulation can also apply to getting just enough internal or emotional stimuli as well, and hence, in the psychotherapy literature, it has also been defined as:

*The process of consciously managing different internal states by:*

1. *experiencing them as they come up,*
2. *expressing what you are experiencing,*
3. *consciously postponing dealing with traumatic material or overwhelming aspects of feelings, and*
4. *retrieving part of what you have contained when you are better able to manage it.*



## **Most of us self-regulate without even knowing it**

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Most people regularly employ self-regulation strategies without being aware of it. The following examples demonstrate common situations and self-regulation strategies that people might do in those situations.

### **Examples of being underwhelmed or under-stimulated**

#### **Bored in the Car**

For example, you are driving in a car (or being driven in a car!) and starting to get drowsy and sleepy while driving. What would you do to stay awake?

Usual strategies include:

- turning up the car stereo, or having background music (i.e. increasing auditory stimulation)
- stopping the car and walking around (i.e. increasing vestibular movement stimulation)
- chewing on gum, or stopping at a gas station or restaurant to get something to eat/drink (i.e. increasing oral stimulation)



#### **Bored in a Classroom or Meeting**

For example, imagine you are in a boring class, or meeting, and starting to get drowsy and sleepy. What would you do to stay awake?

Usual strategies include:

- Daydreaming (i.e. increasing your mental stimulation)
- Moving or shuffling around, shaking your legs (movement)
- Fidgeting or playing with whatever objects you have available -- your hair, your jewelry, pens/pencils, doodling, take notes
- Talk to people beside you (oral, visual, auditory)
- Getting distracted and looking anywhere but the person talking at the front of the room - i.e. looking out the window, the hallway, at other people (visual)
- Chewing things (like gum), drinking things (like water, or a drink) (oral)



### **Examples of being overwhelmed or over-stimulated**

#### **Overwhelmed**

For example, imagine you are sitting in a loud, noisy place, and starting to get a headache and have a difficult time thinking.

What would you do?



Usual things people do to self regulate:

- remove themselves from the noise
- cover ears (control auditory stimulation)
- start humming to self (create white noise)
- turn on a personal music player, e.g. I-Pod or MP3 player, to drown out the background noise



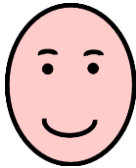
The fact that you were probably aware of these strategies shows how intuitive and obvious many of these strategies are.

### ***Self-regulation***

People can be in three main modes: 1) Under-aroused, 2) Just right, or 3) overwhelmed.

In more detail:

1. Optimal arousal: this is the best zone to be in, and is what happens when people get just the right amount of stimulation. When optimally aroused, a person is able to learn, work or play at their best.



2. Under-aroused, under-stimulated or underwhelmed:



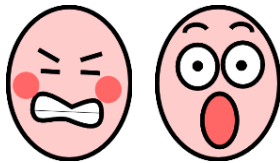
If under-aroused, common signs/symptoms include:

- The person just doesn't feel right
- Feels bored
- Feeling sleepy
- Difficulties concentrating
- Daydreaming
- If they have enough self-awareness, then ideally that person will know that s/he is under-aroused, and that what s/he needs to do is to increase his/her stimulation

If under-aroused, people (if they have an ability to self regulate) will do what they can to do to increase their arousal, by increasing their stimulation, for example:

- Visual, e.g. bright, colourful, moving objects and a variety of visual stimulation are generally alerting.
- Touch, e.g. touching or fiddling with things, light touch/tickling, walking barefoot
- Auditory, e.g. listening to music, turning on a radio or television, making noise, in general loud sudden sounds are stimulating
- Oral, e.g. eating or chewing on something (such as pens, gum!), eating or drinking certain types/textures of food (for example, for some people crunchy foods are stimulating)
- Movement, e.g. moving around, fidgeting, rocking, spinning, flapping arms, in general fast sudden movements with lots of starts, stops and direction changes is stimulating (i.e. Playing tag, sprinting, playing basketball)
- Proprioception, e.g. lifting weights, stretching, 'heavy work'

### 3. Over-aroused, over-stimulated or overwhelmed



If over-aroused, common signs/symptoms include:

- Feeling overwhelmed, which leads one's nervous system to feel in 'fight', 'flight' or 'fright'
  - Fight: angry/frustrated, which prepares an individual to fight and confront the stress
  - Flight: scared, fearful, anxious, which tends to prepare an individual to run away or avoid the stress
  - Fright: has a startled reaction, may feel anxious or afraid


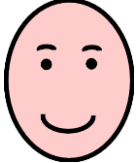
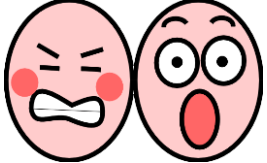
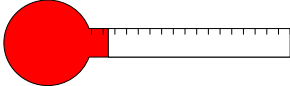


If over-aroused, people (if they have an ability to self regulate) can try to reduce their arousal, and strategies include:

- Removing themselves from the stress or stressful situation, and taking a break or a time out
  - Using soothing, or modulating strategies such as:
    - Deep pressure, e.g. a parent giving soothing backrub to a stressed out child
    - Gentle, soothing rocking, e.g. in a rocking chair
    - Music, e.g. soothing background or relaxation music
    - Deep breathing
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## In Summary

The following are general strategies:

	Calming or Soothing Interventions tend to be:	Stimulating (or Over-stimulating) Interventions tend to be:
Touch	<ul style="list-style-type: none"> <li>• Firm touch, pressure</li> <li>• Slow, continuous touch</li> </ul>	<ul style="list-style-type: none"> <li>• Light touch, tickling</li> <li>• Unexpected touch</li> </ul>
Movement	<ul style="list-style-type: none"> <li>• Slow, rhythmical movement</li> </ul>	<ul style="list-style-type: none"> <li>• Fast, sudden movements with starts and stops, direction changes</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>• Warmth</li> </ul>	<ul style="list-style-type: none"> <li>• Cold</li> </ul>
Sounds	<ul style="list-style-type: none"> <li>• Quiet, soft sounds</li> </ul>	<ul style="list-style-type: none"> <li>• Loud, sudden sounds</li> </ul>
Deep pressure	<ul style="list-style-type: none"> <li>• Joint compression, weight bearing</li> <li>• Resistive activities</li> </ul>	<ul style="list-style-type: none"> <li>• Being barefoot</li> </ul>
Visual	<ul style="list-style-type: none"> <li>• Low lighting, little visual stimuli</li> </ul>	<ul style="list-style-type: none"> <li>• Bright lights, visual stimuli</li> </ul>
Oral	<ul style="list-style-type: none"> <li>• Sucking movement</li> <li>• Sweet flavors</li> <li>• Warm temperatures (i.e hot tea)</li> </ul>	<ul style="list-style-type: none"> <li>• Crunching</li> <li>• Sour/bitter flavors</li> <li>• Cold temperature (i.e. ice water)</li> </ul>

		
		
Too little stimulation	Just enough stimulation (just right)	Too much stimulation
<ul style="list-style-type: none"> <li>• Under-aroused, bored, under-stimulated</li> <li>• Occurs when expectations or input is too low</li> </ul>	<ul style="list-style-type: none"> <li>• Optimal level of arousal or stimulation</li> <li>• Calm, alert, focused</li> <li>• Able to work, focus, concentration</li> <li>• Being just right</li> <li>• Having your engine running just right</li> <li>• Feeling 'in the zone'</li> </ul>	<ul style="list-style-type: none"> <li>• Over-aroused, over-stimulated, or overwhelmed</li> <li>• Occurs when expectations and demands exceed the person's ability to cope</li> </ul>
<ul style="list-style-type: none"> <li>• What to do</li> <li>• Use activating strategies, e.g. Increase stimulation or input</li> </ul>	<ul style="list-style-type: none"> <li>• What to do</li> <li>• Use 'stabilizing' routines to keep in this zone i.e. continue to use the alerting/calming stimulation activities that work for you.</li> </ul>	<ul style="list-style-type: none"> <li>• What to do</li> <li>• Use soothing strategies, e.g. Reduce stimulation, expectations or demands; reduce sensory input</li> </ul>

## How To Self-Regulate

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Figure out where you are - either 1) under-aroused, 2) “optimal” or just right, or 3) over-aroused.

If over-aroused, reduce stimulation or use calming, “wind down” or soothing strategies.

If under-aroused, increase their stimulation, or use activating, “wind up” or energizing strategies.

It should be noted that we usually want to be in the optimal zone because this is where we are able to learn best and react to our environment most efficiently. However, there are times when it can be functional for us to be “running on low” (before we go to sleep) and “running on high” (pump ourselves up before a long run).

## Modulating Activities

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Modulating activities are sensory interventions that appear helpful whether one is under- or over-aroused, by helping the nervous system repair or sense of harmony/balance.

Examples include:

- Deep pressure or muscle work, e.g. massage, stretching, or moving (reasonably) heavy objects. Most people note that when over-aroused (stressed or anxious), stretching is calming, yet when under-aroused (bored and sleepy), stretching helps in alerting.

A note on deep pressure: Muscle work sends a message to our over-stimulated brain that says “chill out, calm down...we are not in danger. We can relax and focus.”

Muscle work can also send a message to the under-stimulated brain that says “be alert! Wake up! We need to get going and focus!”

## Body Break

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The Body Break program is designed to facilitate muscle tone and to help the student re-focus and stay on task. The activities are done for 3-5 minutes daily as needed. Activities which involve co-contracting muscles so that they all work together (deep pressure) is what is desired.

- Push on a wall with both hands, feet firmly planted on the ground. Hold for the count of five. For encouragement, tell the student he/she is trying to make the room bigger, or, to move the wall!
- Place hands on the student’s shoulders. Ask him/her to push up against your hands. While he/she is pushing up, you push down. Hold to the count of five. Repeat.
- Sitting in a chair, ask the student to place his/her hands together, elbows extended. Tell him/her to push hands together as hard as he/she can. Try to pull them apart.
- A tennis ball, or, ‘stress ball’ can be used. Have student squeeze the ball 5-10 times with each hand, then, repeat. This will build up hand strength.

Commented [k1]: Body break suggestions courtesy of Hamsig Adjeleian, Occupational Therapist, Children’s Hospital of Eastern Ontario, Ottawa, Ontario, Canada.

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## **Self-regulation throughout the day**

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A person needs to properly self-regulate themselves throughout the day.

### **Every part of the day affects the next.**

Each part of the day is interdependent: each part of the day depends on the previous part of the day. A good “start up” routine sets the stage for the rest of the day, and a good “wind down” or bedtime routine sets the stage for the next morning. For example, if you have a poor wake up routine, e.g. forget breakfast, forget to bring important things to school or work, then it makes it harder to get through your day. If you then have a poor bedtime routine, and don't get to bed on time, or forget to prepare things for the next morning, then you will have a rough time the next morning.

The three parts of the day are like the three legs of a stool - if there are problems with one part of the day, it can affect everything else - i.e. it can make the stool fall down!



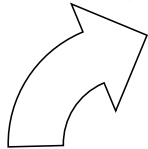
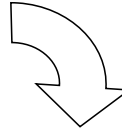




### Daytime, Work and School Routines

Need stabilizing routines to keep one in an optimal state of arousal during daytime

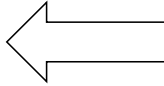
- Use various the various sensory and modulating strategies mentioned in this article
- Increase stimulation when underwhelmed
- Decrease stimulation when overwhelmed
- Use modulating strategies
- Lunchtime!



### Morning Routines

Need activating routines to increase one's arousal, since one tends to be understimulated in the mornings

- Wakeup!
- Loud alarm clocks, consider having more than one!
- Taking a shower
- Breakfast!
  - Note many adults drink coffee to help with waking up



### Evening/bedtime routines

Dinnertime, ideally together as family

Finishing the day's responsibilities

- E.g. Set aside a consistent, regular study time just for homework, reading and quiet activities
- Make sure its early enough in the evening so they are not cramming the homework in before bedtime

Preparing for the next day

- Prepare as much the night before, e.g. have lunches, backpacks, diaper bags ready
- Ensure all permission slips, report cards and homework are loaded into knapsacks the night before
- Consider setting the breakfast table the night before with dishes, or non-perishables such as cereal, bread
- Whenever you get home, put your briefcases, backpacks and keys in the same spot
- Consider having clothes, outfits picked out the night before

Need winding down, or soothing routines in order to be able to sleep



## Examples of After School Routines

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- Activities for children
- Cadets
- Scouts, Guides, Brownies
- Art classes
- Music classes
- Dance classes
- Sports
- Drama classes
- Community centre activities
- Yoga
- School activities
- Volunteer activities, e.g. with hospitals, old age homes, social service agencies, or other community agencies
- Spiritual activities
- Church groups, e.g. youth groups

## Examples of Evening Routines

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- Prepare as much in the night before (school)
- Prepare lunches, backpacks, diaper bags
- Make sure all permission slips, report cards and homework are loaded into schoolbags at night to avoid squabbles
- When you get home from work, get your briefcase/workbag ready for the next day
- Fill it with your gas money, public transport tickets/passes or anything else you will need
- Consider setting the breakfast table the night before with dishes, or non-perishables such as cereal or bread
- Put your briefcases, backpacks, and keys at the same, designated spot
- Consider having clothes, outfits picked out from the night before
- When kids are old enough, help them develop their own independence by letting them choose
  - Choosing clothing
    - They might not have perfect fashion sense, but the most important thing is developing their independence, and they'll eventually figure it out
    - If you do not entirely trust their independence, then consider a compromise; hang a few days' worth of clothing in a designated section of your children's closet, and let them choose from that more limited selection
  - Choosing meals
    - Let kids choose their breakfast or lunch meal
- Family scheduling
  - Consider a big calendar that you can put on the fridge or on the wall
  - List events, appointments
  - Consider color-coding by person, e.g. red ink for one person, blue ink for another, etc.

## Example of Relaxing Before Bedtime Routines

A good night's sleep makes a world of difference to everyone. With a poor sleep pattern, children may not get enough sleep, may not get enough deep sleep and may have difficulty waking in the morning. Remember that pressure touch and neutral warmth are calming to the nervous system.

- Set up a structured routine before bedtime.
- Set up a visual schedule for the bedtime routine.
- Decrease visual stimulation in the bedroom. This includes only keeping a few toys in the bedroom. These toys should be relaxing toys such as stuffed animals or toys that play quiet music. Avoid loud toys or toys that stimulate your child.
- Avoid snacks that include refined sugars, artificial colouring and sweeteners. Encourage snacks that involve sucking, as this is a relaxing activity.
- Play quiet, relaxing music. This can include classical, environmental sounds, a tape of lullabies etc.
- Have a warm bath before bedtime. When drying in the child, do it in a quiet, rhythmic way. Avoid quick rubbing as this can be alerting.
- Slow stroking on the back. Try to keep the rubbing rhythm constant, start at the top of the back and rub down to the hips, begin again so there is continuous stroking.
- Instead of a back rub, rub lotion over body after a warm bath. Rub with a slow, downward, continuous stroking motion. Use a lotion that is scented with a relaxing scent: strawberry, vanilla, lavender etc. Avoid alerting scents such as peppermint or any very strong scent.
- Do slow, rhythmic joint compressions before bed.
- Use "natural lighting" fixtures when possible. Dim the lights during story time and when you are tucking the child in.
- Rocking rhythmically in a rocking chair with the lights dimmed and listening to quiet music.
- Tuck the child in tightly using heavy blankets and tucking pillows around the body. Large body pillows can be used and children tend to really like them! This give deep pressure input, which can be very calming.
- Experiment with different types of pajamas; try tight and loose to determine which type your child prefers (also think of textures, fleecy, flannel, silky etc.)
- Avoid rough and tumble play before bed as this can be alerting.
- If the child has a favorite, quiet videotape. Play it in a dimmed light room with the child wrapped in blankets on the couch.

## **Examples of “Activating” Morning Routines to help one Wake Up**

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### Vision:

- Turn on the lights
- Open blinds/curtains
- Paint kitchen/bathroom in bright colours

### Auditory

- Play music with changing rhythms (baroque, rock)
- Chimes
- Make a special wakeup tape or CD with songs that pace out the routine.

### Smell:

- Strong smells such as coffee, a zesty-smelling soap.

### Taste or oral stimulation:

- Crunchy food such as cereals, nuts, apples.
- Tangy and/or chewy foods such as dried fruit, orange juice.
- Cold foods
- Drink from a straw
- Whistle, play a harmonica, recorder.

### Touch:

- Taking a cooler shower, brisk towelng off, brush therapy
- Walk barefoot
- Tickling (if enjoyed by child), back scratching
- Squeeze your legs, squeeze your arms, push your hands together

### Movement:

- Pet or play with your pet.
- Calisthenics, yoga, tai chi, jumping on a trampoline, brisk walking, skipping rope.

## **Summary**

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The overall goal of understanding your child’s or your own sensory preferences is to help them learn how to self-regulate in order to be functional in whatever setting you are in. Understanding that you are overwhelmed or under-aroused can help one to determine what kind of activity needs to be done in order to be calm, alert and focused. When we are overwhelmed, calming strategies are helpful. When we are under-stimulated, alerting strategies are helpful. Remember, what works for one person may not work for another and our personal preferences can change daily.

## **When should one seek professional help?**

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- When problems are causing serious distress or problems functioning
- When solving things without outside help, or solving things with self-help techniques alone have not been successful

## For further information

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Speak with any Occupational Therapist (OT) or Physical Therapist (PT) trained in sensory integration, processing or modulation issues

## Manufacturers of Sensory Related Products

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Although many of the sensory products can be home made (there are various websites which describe how to do this), there are various companies which sell these products as well.

Some manufacturers include:

- <http://www.premier.ca> for a wide variety of products
- <http://www.schoolspecialty.com/abilitations>
- <http://fdmt.ca/index.php/en/catalog>
- <http://www.southpawenterprises.com> for weighted vests

## Readings

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- The ALERT Program, by Williams and Shellenberger, which is a program that "... promotes awareness of how individuals regulate their arousal states and encourages the use of sensory-motor strategies."
- The Zones of Regulation, by Leah Kuypers, is a teaching program that teaches students self-regulation.
- Out-Of-Sync Child, by Carol Kranowitz (she also has a website as well, at [www.out-of-sync-child.com/](http://www.out-of-sync-child.com/))
- Out-Of-Sync Student, by Carol Kranowitz (she also has a website as well, at [www.out-of-sync-student.com/](http://www.out-of-sync-student.com/))
- Sense Abilities: Understanding Sensory Integration, by Maryann Colby Trott
- Building Bridges, Ellen Yack
- The Sensory-Sensitive Child: Practical Solutions for Out-of-Bounds Behaviour, Karen A. Smith
- Kathleen Chara et al. (2004). Sensory Smarts: A Book For Kids With Adhd Or Autism Spectrum Disorders Struggling With Sensory Integration Problems.
- Sense Abilities: Understanding Sensory Integration, by Maryann Colby Trott

## Where can we get help?

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Treatment is normally provided by those who have specific knowledge in this area, who are generally Occupational Therapists (OT).

Other treatment resources found to be anecdotally helpful may include Braingym, yoga, and martial arts.

Most anger management programs may have techniques which somewhat address arousal

## Weblinks

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- <http://www.alertprogram.com> (How Does Your Engine Run)
- <http://www.zonesofregulation.com> (Zones of Regulation)
- [www.self-regulation.ca/](http://www.self-regulation.ca/) (Self Regulation project)
- <http://www.spdfoundation.net> (Sensory Processing Disorder)

