

Red Light Cap – Information Sheet

Supporting Brain Function, Neural Energy & Hemisphere Balance

At Children's Therapy Services, we use a variety of evidence-informed functional neurology and sensory tools to support children's neurological development, sensory processing, attention, and regulation. One such tool is the **Red & Near-Infrared Light Therapy Cap**, a non-invasive device designed to deliver gentle light stimulation to the scalp and support brain function and neural balance.

What Is the Red Light Cap?

The Red Light Cap is a wearable device with multiple LEDs that emit:

- **Red light (~660 nm)**
- **Near-infrared light (~850 nm)**

These wavelengths penetrate the scalp to reach brain tissue, providing bio-photomodulation gentle stimulation that may support energy production in brain cells, improve cellular function, and encourage hemispheric activation.

The cap is adjustable, allowing therapists or caregivers to select the light type, duration, and intensity appropriate for the child.

Why We Use the Red Light Cap in Our Clinic

Some children may experience underactive brain regions, difficulties with attention, regulation, or hemisphere balance.

The Red Light Cap may be used to:

- Support brain cell energy and function
- Complement hemisphere balance and functional neurology programs
- Enhance neural activation to support attention, regulation, and readiness for therapy
- Support overall neurological health as part of a holistic therapy program

It is a supportive, non-invasive adjunct to other therapies.

Understanding How the Red Light Cap Supports Therapy

Neural Energy & Cellular Function

- Supports mitochondria in producing cellular energy (ATP)
- May enhance overall neural efficiency and responsiveness

Hemisphere Balance

- Gentle stimulation may help activate under-responsive brain regions
- Supports left/right hemisphere communication during therapy activities

Sensory & Cognitive Support

- Provides a calm, non-invasive sensory input
- May improve attention, arousal regulation, and engagement during therapy

How the Red Light Cap Helps Children

For Attention & Regulation

- May enhance alertness and sustained attention
- Supports readiness for learning and therapy tasks
- Can complement other functional neurology, sensory, or cognitive exercises

For Hemisphere Integration

- Gentle stimulation may support balance between left and right hemispheres
- Supports coordination of brain-body systems for movement, speech, or motor planning

For General Neural Support

- May assist with brain cell energy under stress
- Supports a holistic approach to neurological health

How the Red Light Cap Is Used During a Session

Your therapist will:

1. **Conduct a full assessment** of attention, sensory processing, and neurological function.
2. **Select the appropriate light settings** (red, near-infrared, or both) and duration based on the child's profile.
3. **Guide the child to wear the cap** during calm, seated activities or as part of therapy sessions.
4. **Monitor responses** in attention, arousal, regulation, and engagement.
5. **Adjust duration, intensity, or frequency** based on tolerance and therapeutic goals.

The cap is always used as part of a broader, individualized therapy plan.

What Are the Benefits?

When used under professional guidance, the Red Light Cap may support:

- ✓ Improved neural energy and brain cell function
- ✓ Enhanced attention, focus, and regulation

- ✓ Support for left/right hemisphere balance
- ✓ Complementary sensory input during therapy
- ✓ Increased readiness for learning and engagement in activities
- ✓ Non-invasive, gentle support suitable for many children

Is the Red Light Cap Safe?

Yes. The device is non-invasive and gentle when used appropriately.

Therapists ensure:

- Proper duration and intensity
- Safe use during therapy sessions
- Integration with other therapeutic strategies

Our Approach at Children's Therapy Services

The Red Light Cap is integrated within a whole-child, individualized therapy plan, which may include:

- Functional neurology assessments
- Sensory-motor and hemisphere balance programs
- Cognitive, attention, and regulation support
- Motor planning, posture, and coordination exercises
- Behavioural and emotional regulation strategies

Every plan is tailored to the child's neurological profile, developmental goals, and areas of strength.

Summary

The Red Light Cap is a versatile, non-invasive tool designed to support brain cell energy, neural function, and hemisphere balance.

Used carefully as part of a broader therapy program, it may help improve attention, regulation, and overall neurological readiness, supporting engagement in therapy and daily activities.