

This sounds like a potentially serious symptom. Please contact your neurologist or neurosurgeon immediately.

Here are the most common medical reasons why this sensation occurs, which you should discuss with your doctor:

## 1. Infection (Erosion)

This is the most critical possibility to rule out. Infections can occur even months or years after surgery.<sup>1</sup>

- **What it feels like:** The skin over the hardware (the "burr hole" on top of your head or the wire path behind your ear) feels hot, tender, or burns.
- **Check for:** Is the area red, swollen, or hot to the touch? Is there any fluid or "boggy" feeling under the skin?
- **Urgency:** High. If the hardware erodes through the skin, the entire system may need to be removed.

## 2. Nerve Irritation (Neuralgia)

The extension wires that run from the top of your head down to the battery (usually in the chest) pass under the scalp.

- **The Cause:** Sometimes scar tissue forms around the wire (called "bowstringing"), or the wire presses against a cutaneous nerve (like the supraorbital nerve in the forehead).
- **What it feels like:** A burning, stinging, or "electric" sensation in the forehead or scalp. It might get worse when you turn your head or stretch your neck.

## 3. Stimulation "Current Spread"

If your device settings are too high or the electrical field has shifted, the electricity might be stimulating nearby sensory pathways instead of just the target motor area.

- **The Cause:** The electrical current spreads to the trigeminal nerve fibers or other sensory areas.
- **What it feels like:** A burning sensation, tightness, or pulling in the face, forehead, or head.
- **Solution:** This can often be fixed by your doctor adjusting the programming (lowering voltage or changing the active contact).

## 4. Hardware Heating (Rare)

While extremely rare, hardware malfunctions or external interference can cause leads to heat up.

- **Context:** This is most often associated with getting an MRI scan (which is why strict MRI

safety protocols exist for DBS patients) or, in rare cases, issues with the recharging process if you have a rechargeable battery.

- **Urgency:** If you feel intense physical heat (not just a nerve sensation), this is an emergency.

## **Summary of Action Steps**

1. **Check a mirror:** Look at your forehead and the top of your head. Is there redness, swelling, or an open sore?
2. **Take your temperature:** Do you have a fever?
3. **Call your team:** Tell them, "I have a burning sensation in the front of my head near my DBS leads."

**Would you like me to help you find the emergency support number for your specific device manufacturer (Medtronic, Abbott/St. Jude, or Boston Scientific)?**