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**The Canadian Association of Electroneurophysiology Technologists, Inc  
L'Association Canadienne des Technologues en Electroneurophysiologie, Inc**

**STANDARD TWO:  
MINIMAL TECHNICAL STANDARDS  
CLINICAL ELECTROENCEPHALOGRAPHY:  
ROUTINE PEDIATRIC  
(8 WEEKS POST TERM AND OLDER)**

**INTRODUCTION:**

The recommendations outlined in the “Minimal Technical Standards Clinical Electroencephalography: Routine Adult” are relevant to acquiring pediatric recordings, particularly in the instances of older children and adolescents. Some modifications to routine set-up and recording practices are necessary when testing infants and young children.

The following recommendations represent the minimum standards for routine clinical recording of the adult EEG and are consistent with the Entry-to-Practice Competencies for the Profession of Electroencephalography Technology.

The following guidelines for pediatric recordings are numbered to correspond with the appropriate sections in the adult standards.

**B) TEST PREPARATION**

**1.0 DOCUMENTATION/PATIENT PREPARATION:**

- 1.1 The digital file should also include relevant birth and developmental information.
- 1.2 Infants should be comfortable and if feasible, fed prior to or during recording in order to encourage sleep.
- 1.3 Caregivers should be advised to prevent “napping” prior to the EEG appointment.

**2.0 ELECTRODE PLACEMENT/APPLICATION/REMOVAL:**

- 2.1 When the patient’s head circumference exceeds 36 centimeters (cm), the full electrode array as defined by the International 10-20 System of Electrode Placement is required.
- 2.2 A reduced electrode array may be used when the patient’s head circumference measures less than 36 cm. Either of two systems of head measurement is acceptable:
  - 2.2.1 The International 10-20 System of Electrode Placement using the following sites: F1, F2, C3, C4, T3, T4, O1, O2, Fz, Cz, Pz, A1 and A2 (or mastoids, M1/M2), Ground and Reference.

**2.2.2** The 12.5 – 25 System of Electrode Placement as proposed by the International Federation of Societies for Electroencephalography and Clinical Neurophysiology (IFSECN), which maps 12 equally distributed electrode positions over the scalp.

**2.2.3** Because children tend to move frequently, head wrapping with gauze or a conforming bandage is recommended to further secure well-applied electrodes. Compliance with institutional/laboratory entanglement policy is important.

## **C) RECORDING PROCEDURE**

### **1.0 SENSITIVITY SETTINGS:**

1.1 Sensitivities of 10 uV/mm and 15 uV/mm may be commonly required in pediatric recordings.

## **D) ACTIVATION**

### **2.0 PHOTIC STIMULATION:**

2.2 In the pediatric population, IPS is essential when patients present with neurodevelopmental regression (i.e. ceroid lipofuscinosis)

*\*For References see CAET Standard One*