Claims

1. A system for remote surveillance of an EEG signal of a person having diabetes, said system comprising

- an EEG sensor part having electrodes for measuring one or more EEG signals from said person, said EEG sensor part is provided with an electronic module,
- a processing unit adapted to be removable arranged at the ear of said person, having EEG signal processing means for analyzing the EEG signal, said signal processing means being adapted for, based on the EEG signal, identifying or predicting a hypoglycemic seizure in said person, said processing part comprising decision means for deciding, based on said analyzed EEG signal, when an alarm or information must be provided,
- a first connection between the EEG sensor part and the processing unit, adapted for transmitting an EEG signal from the EEG sensor part to the processing unit,
- an external part adapted to receive wirelessly an alarm from said processing part, said external part being adapted to forward an alarm to a care giver, and
- a second connection between the processing unit and the external part, said second connection being wireless,

characterized in that said EEG sensor part being adapted for subcutaneous implantation in the head, and in that said first connection is wireless and said EEG sensor part comprises a first coil and said processing unit comprises a second coil, wherein said first wireless connection being based on an inductive coupling between said first and said second coils and being adapted for transferring power from the processing unit to the implantable EEG sensor part.

2. A system according to claim 1, comprising alarm means for providing said person with an alarm.

~~3. A system according to claim 1 or 2, wherein said EEG sensor part being adapted for implantation in the head, preferably subcutaneous implantation.~~

~~4. A system according to claim 1, 2 or 3, wherein said first connection is wireless and said EEG sensor part comprises a first coil and said processing unit comprises a second coil, wherein said first wireless connection being based on an inductive coupling between said first and said second coils and being adapted for transferring power from the processing unit to the implantable EEG sensor part.~~

~~5~~3. A system according to ~~any one of the previous claims~~claim 1 or 2, wherein said external part is adapted for sending an alarm or information to a remote part.

~~6~~4. A system according to claim ~~5~~3, wherein said remote part is a mobile phone, and said alarm or information is sent over the standard mobile phone network.

~~7~~5. A system according to claim ~~5~~ 3 or ~~6~~4, wherein said remote part is set up to send instructions to said external part or to said processing unit.

~~8~~6. A system according to any one of the previous claims, wherein said external part is provided with at least one further function selected from the group: remote control, data logger, streaming of data to the processing unit, terminal for entering information about the handling of an alarm.

~~9~~7. A system according to any one of the previous claims, wherein said second wireless connection between the processing unit and the external part is based on an inductive link.

~~10~~8. A method for EEG surveillance, for providing an alarm in the event of a risk of an imminent hypoglycemic seizure in a person, said method comprising the steps of

- measuring EEG signals of said person by an EEG sensor part, said EEG sensor having electrodes for measuring one or more EEG signals, and said EEG sensor part is provided with an electronic module,

- transmitting the measured EEG signal from the EEG sensor part to a processing unit through a first connection between the EEG sensor part and the processing unit, said processing unit being adapted to be removable arranged at the ear of said person,

- processing the EEG signal in said processing unit having EEG signal processing means for analyzing the EEG signal, said signal processing means being adapted for, based on the EEG signal, identifying or predicting a hypoglycemic seizure in said person, said processing unit comprising decision means for deciding, based on said analyzed EEG signal, when an alarm must be provided, and

- transmitting an alarm from said processing unit to an external part through a second connection established wirelessly between the processing unit and the external part.~~,~~

characterized in that

~~11. A method according to claim 10, wherein~~ said first connection being wireless and said EEG sensor part has been implanted subcutaneous on the head of the person~~.~~, and in that

~~12. A method according to claim 10 or 11, wherein~~ said first connection is wireless and said EEG sensor part comprises a first coil and said processing unit comprises a second coil, wherein said first wireless connection being based on an inductive coupling between said first and said second coils and is transferring power from the processing unit to the implantable EEG sensor part.

~~13~~9. A method according to claim ~~10, 11 or 12~~8, further comprising the step of the external part transmitting an alarm to a remote part.