Objective and Subjective Measures of Listening Effort and Fatigue in Adult Cochlear Implant Recipients

The purpose of this study is to examine whether individuals with severe-to-profound hearing loss with cochlear implants expend greater listening effort and/or experience more fatigue than individuals with normal hearing.

The following exclusionary criteria will be screened for to assure the quality of data:

Substances that stimulate the HPA axis including antidepressants [i.e. Citalopram (Celexa), Eldepryl (Selegiline), Escitalopram (Lexapro), Fluoxetine (Prozac), Paroxetine (Paxil), Sertraline (Zoloft)], antifungals [i.e. Ketoconazole (Nizoral)] or antidiarrheals [i.e. Loperamide (Lopex)] will be recruited.

No one taking medications that influence subjective experience of stress, novelty, threat or pain including the following anti-anxiety medications: Alprazolam (Xanax), Lorazepam (Ativan) or pain medications including codeine, hydrocodone (Lorcet), Lortab, Vicodin (Vicoprofen), morphine (Avinza, Kadian), Meperidine (Demerol), Oxycodone, (Oxycontin, Percocet) Acetaminophen (Tylenol), Ibuprofen (Advil, Motrin, Pamprin), Naproxen (Aleve, Anaprox) will be recruited.

No one taking medications with potential to influence salivary composition including the following medications that may be used as muscle relaxants, in opioid detoxification or for ADHD: Tizanidine (Zanaflex), Clonidine (Catapres), Lofexidine, Guanfacine (Tenex) will be recruited.

No one taking oral, nasal, topical and ophthalmic corticosteroids be recruited. Oral corticosteroid include: Betamethasone (Diprosone, Diprolene), Budesonide (Entocort), Cortisone (Cortone), Dexamethasone (Decadron), Hydrocortisone (Hydrocortone, Cortef), Methylprednisolone (Medrol), Prednisolone (Pediapred), Prednisone (Deltasone), Triamcinolone (Acetocort, Aristocort, Aristopak, Aristospan Injection, Clinacort, Clinalog, Cort-K, Kenject-40, Kenalog-10, Kenalog-40, TAC 3, Tramacort-D, Triam-A, Triam-Forte, Triamcort); nasal corticosteroids include: Beclomethasone (Beconase AQ), Budesonide (Rhinocort Aqua), Flunisolide (AeroBid, Nasalide, Nasarel), Fluticasone (Flonase), Mometasone (Nasonex), Triamcinolone (Nasacort HFA), Triamcinolone (Nasacort AQ), Flunisolide (AeroBid, Nasalide, Nasarel); topical steroids include: Alclometasone (Aclovate, Modrasone), Betamethasone (Diprosalic), Diproscal, Diprosone, Diprosone, Betacap, Betnovate, Betnovate-C, Betnovate-N, Betnovate RD, Betnovate, Betamousse, Fucibet, Lotiderm, Clobetaone (Dermovate, Eumovate), Diflucortolone (Nerison), Flucinonide (Metosyn, Synalar, Ultralanum), Hydrocortisone (Calmurid, Canesten, Dioderm, Daktacort, Dermacort, Fucidin H, Eurax, Locoid); and ophthalmic corticosteroids include: Medrysone (HMS), Dexamethasone (AK-Dex, Baldex, Decadron, Maxidex), Rimexolone (Vexol), Fluorometholone (Flor-op, FML, Flarex, Efline), Prednisolone (Pred Forte, Econopred Plus, Ak-Pred, Inflamase Forte, Ak-Pred, Inflamase), Loteprednol (Alrex, Lotemax).

No one with a learning disability will be recruited.

No one with chronic medical conditions will be recruited (i.e. depression, multiple sclerosis, linear metabolic or endocrine disorders (e.g., diabetes or hypothyroidism) or psychotic disorders).
You will be asked to complete seven saliva samples and two online questionnaires. The questionnaires include questions about your mood and the effort required for hearing in your everyday life. The saliva samples and questionnaires will be completed over a 2-week period. Six of the seven saliva samples will be collected over a 2-day period. These two days must be spaced no greater than 13 days apart. For each sampling day, you will obtain three saliva samples which will each take approximately 1 minute to complete. The 3 samples will be timed as follows:

- upon wakening
- 30 to 45 minutes after waking
- 12 hours after waking

The seventh saliva sample, which will also take approximately 1 minute, will be taken on one of the two days following one of your classes. This sample will be taken within 10 minutes following the completion of a 60+ minute lecture for a graduate-level program in which you are currently enrolled for credit.

On days that you are collecting a sample, you will be asked to wake at a typical hour and refrain from taking a nap during the day.

The approximate time to complete all study procedures is less than 10 minutes.

You will be paid $40 for your participation in the study.

If you would like more information or are interested in participation, please contact Bob Dwyer at robert.dwyer@Vanderbilt.Edu.