

Supplementary Information

Supplementary Figure 1. Grip strength of each study subject during the study. A) Right hand B) Left hand.

Supplementary Figure 2. C-peptide data from each study subject over the course of the study. Blue represents baseline (fasting) C-peptide. Orange represents 30-minute (stimulated) C-peptide. C-peptide is in ng/mL.

Supplementary Figure 3. Additional markers of β -cell function. A) Proinsulin collected during a mixed meal tolerance test. B) Insulinogenic Index. C) Area Under the Curve (AUC) C-peptide /AUC Glucose. D) C-peptide to Glucose Ratio All study subjects are broken down into adult and pediatric subgroups. Light boxes represent fasting results, while dark boxes represent 30-minute (stimulated) values. Responders are differentiated from non-responders by having a change in Δ C-peptide ($\Delta\Delta$ C-peptide) ≥ 0.1 ng/mL over the course of the study.

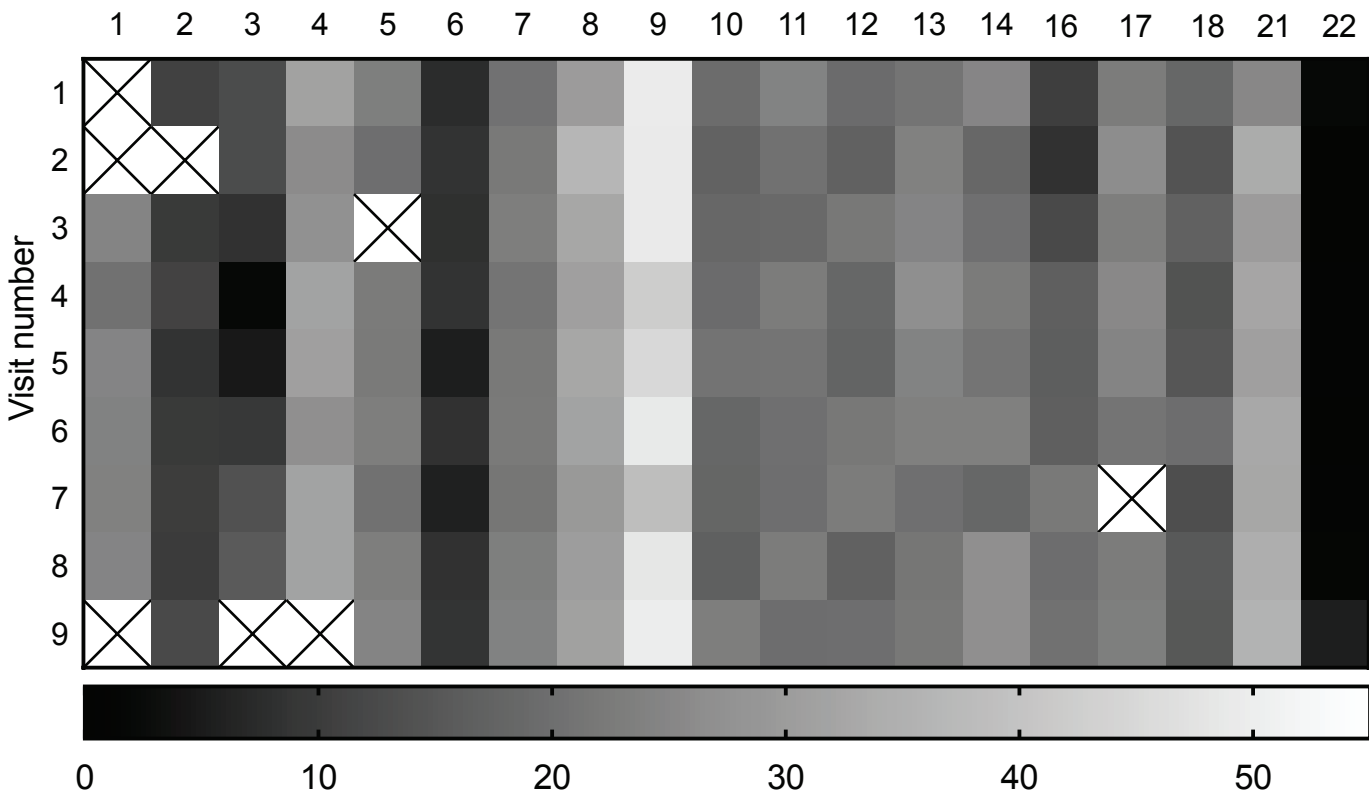
Supplementary Figure 4. LogMAR visual acuity plot including subject 12. Subject 12 was excluded from the analysis as they are blind with a LogMar = 3.

Supplementary Figure 5. Linear regression analysis. Linear regression analysis comparing $\Delta\Delta$ C-peptide to (A) LogMAR visual acuity, (B) total WURS, and (C) physician rated WURS. R² and p-values are demonstrated in the top right corner of each panel.

A

Right hand

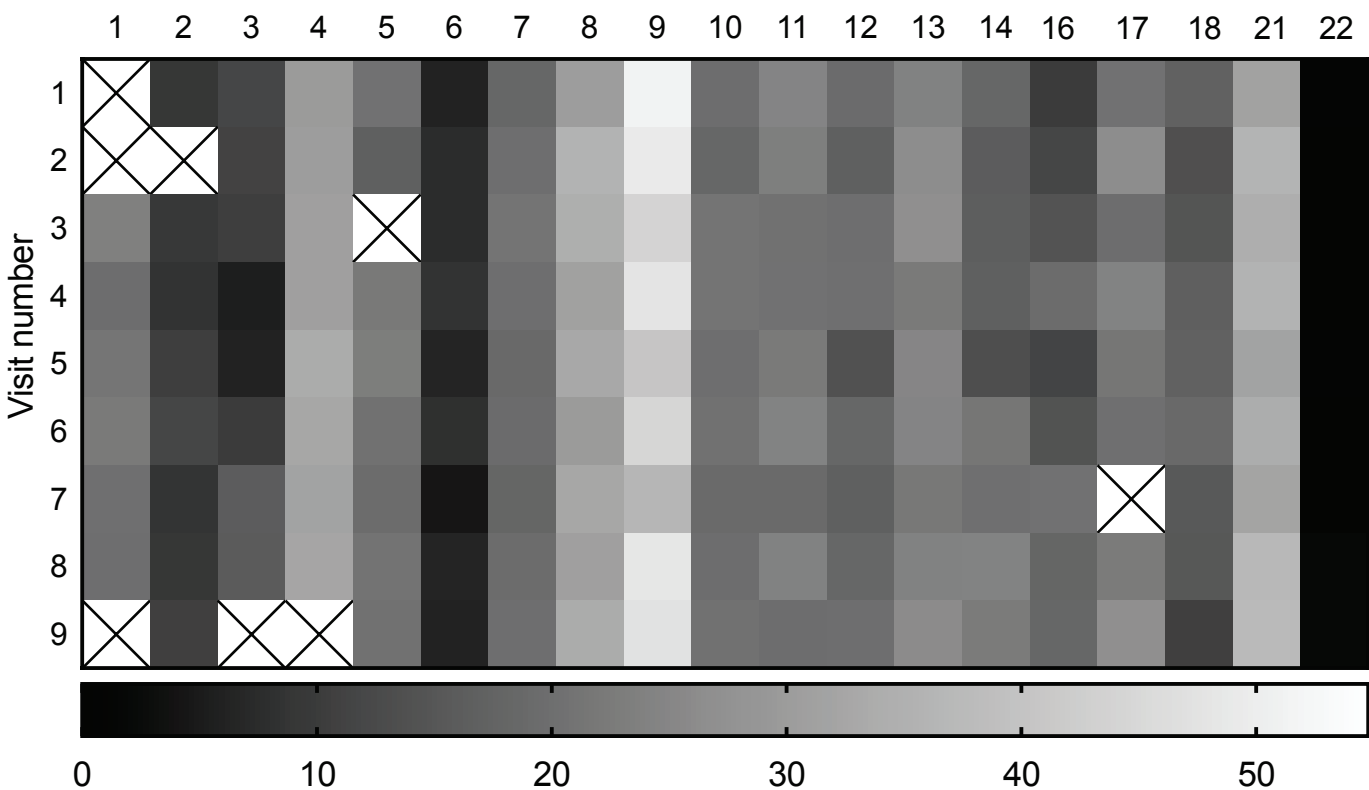
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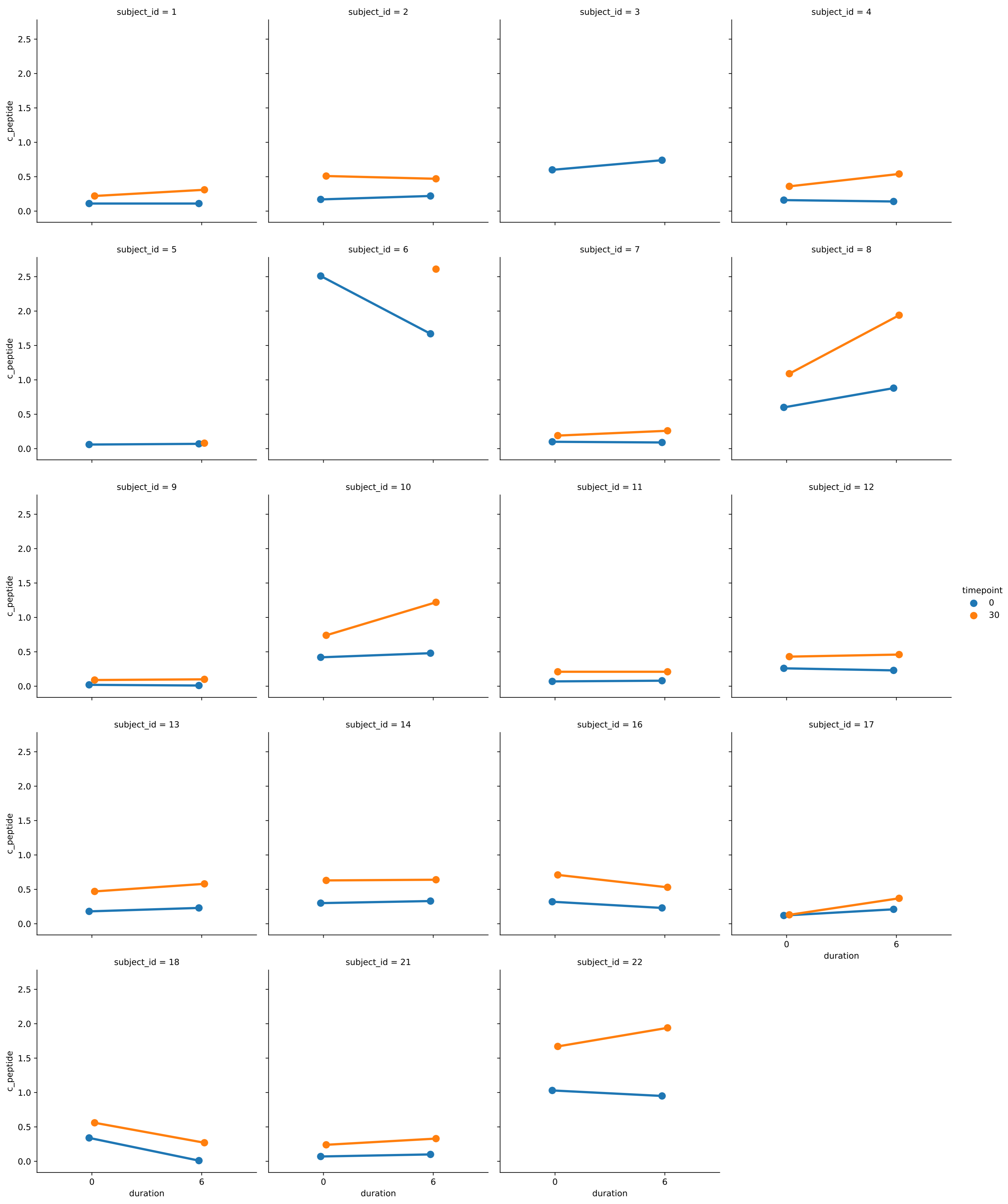
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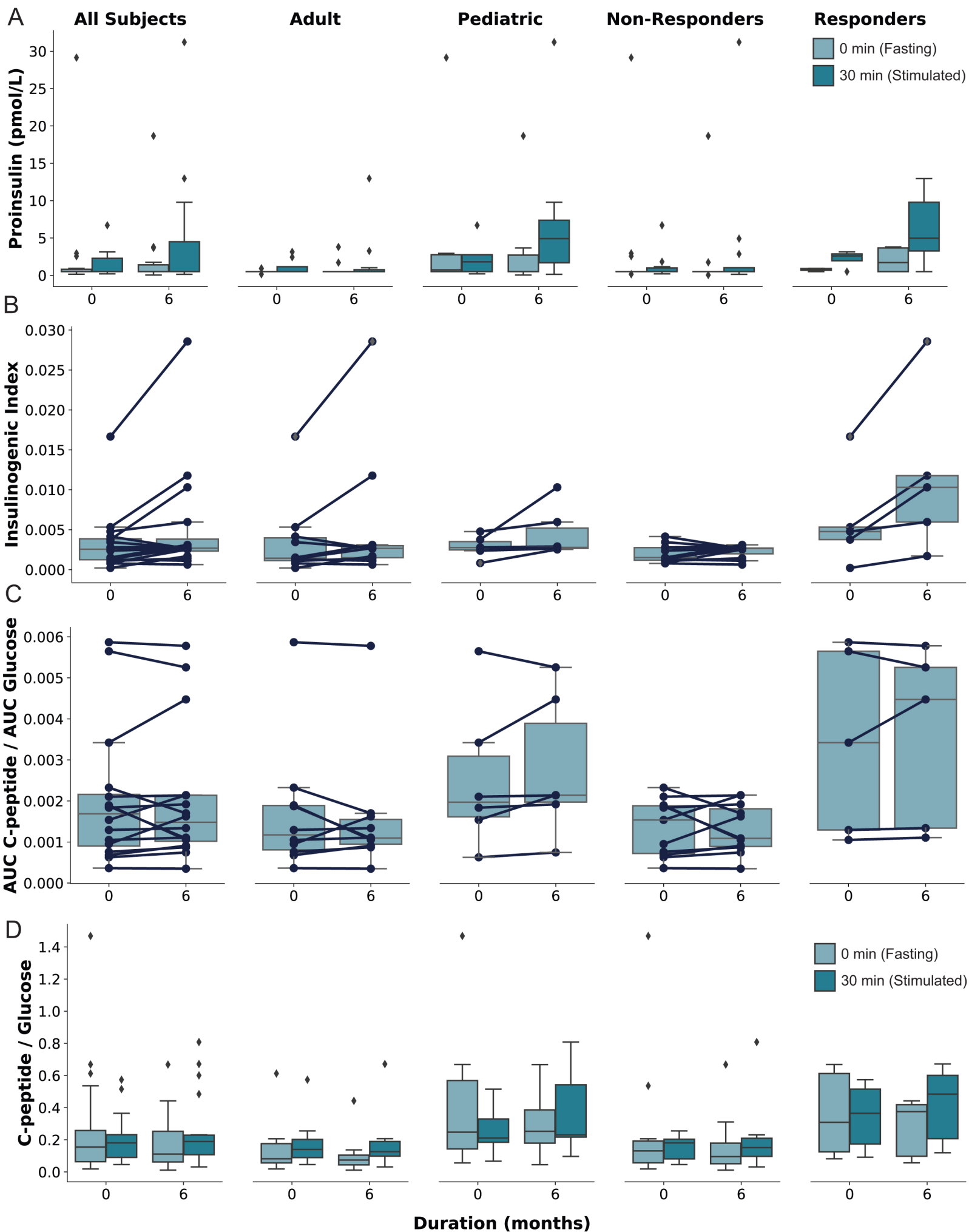
Left hand

Subject ID

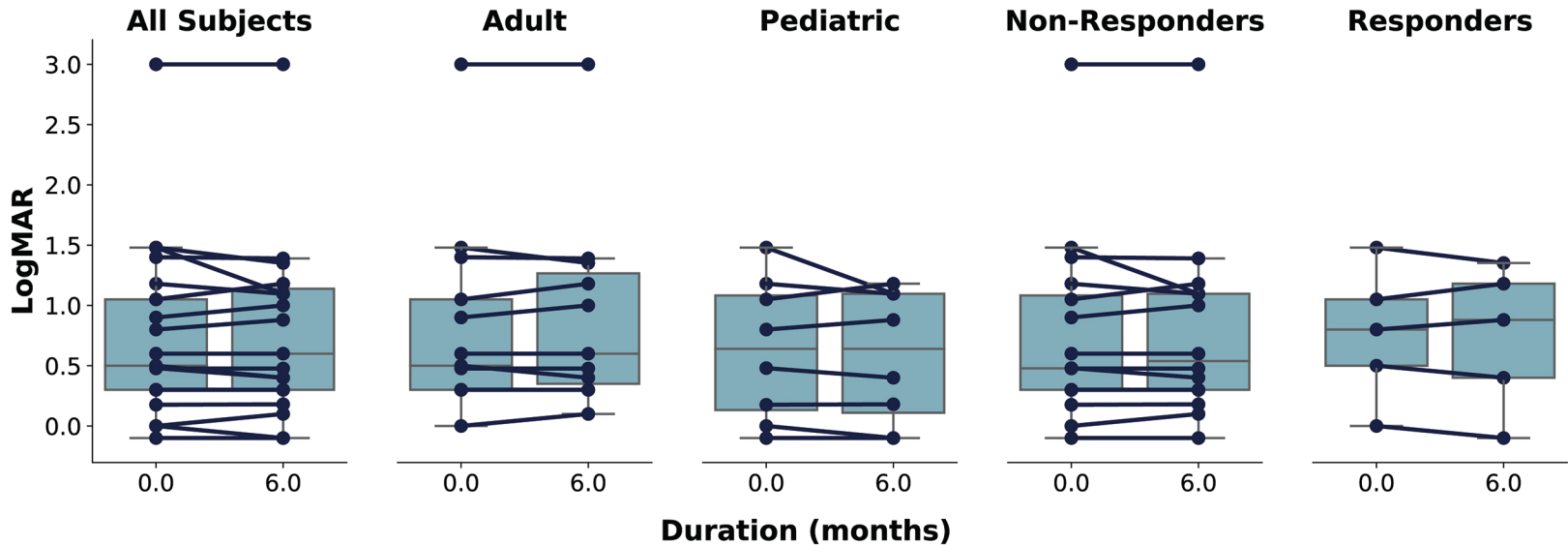


Supplementary Figure 2

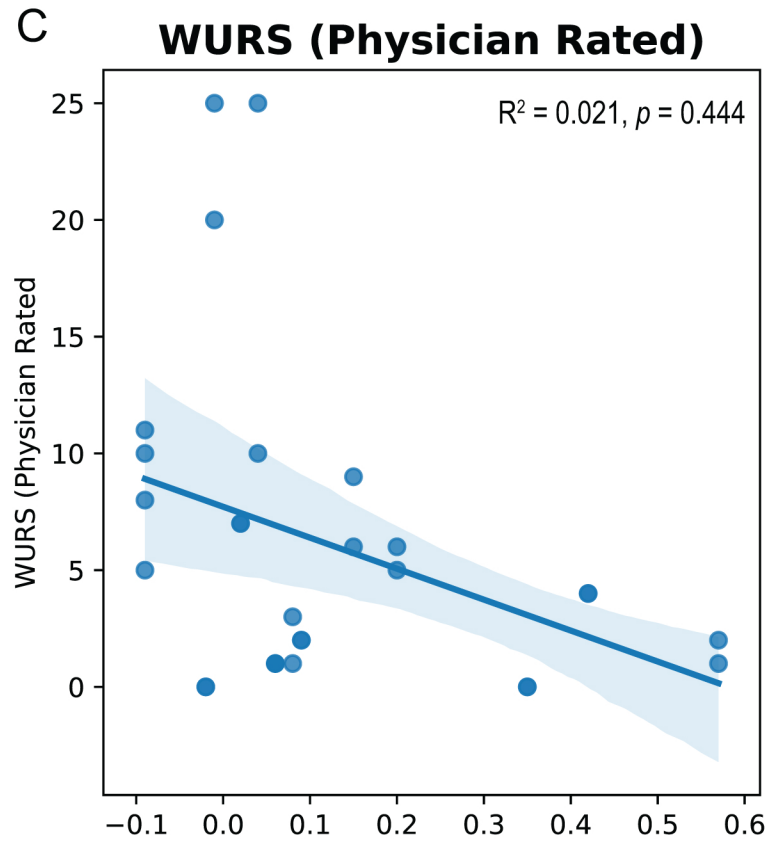
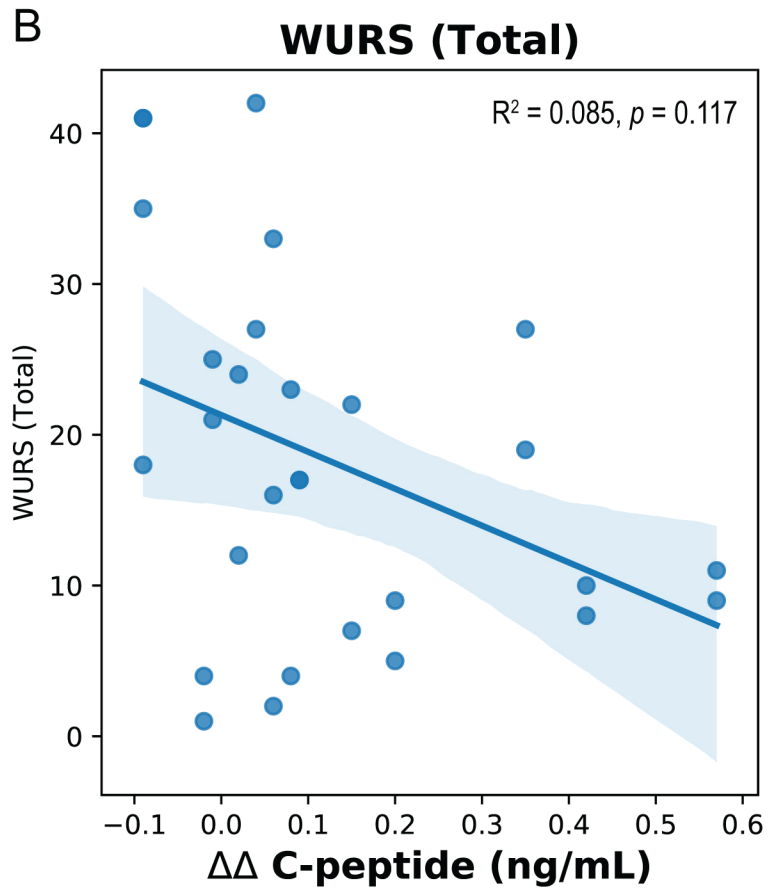
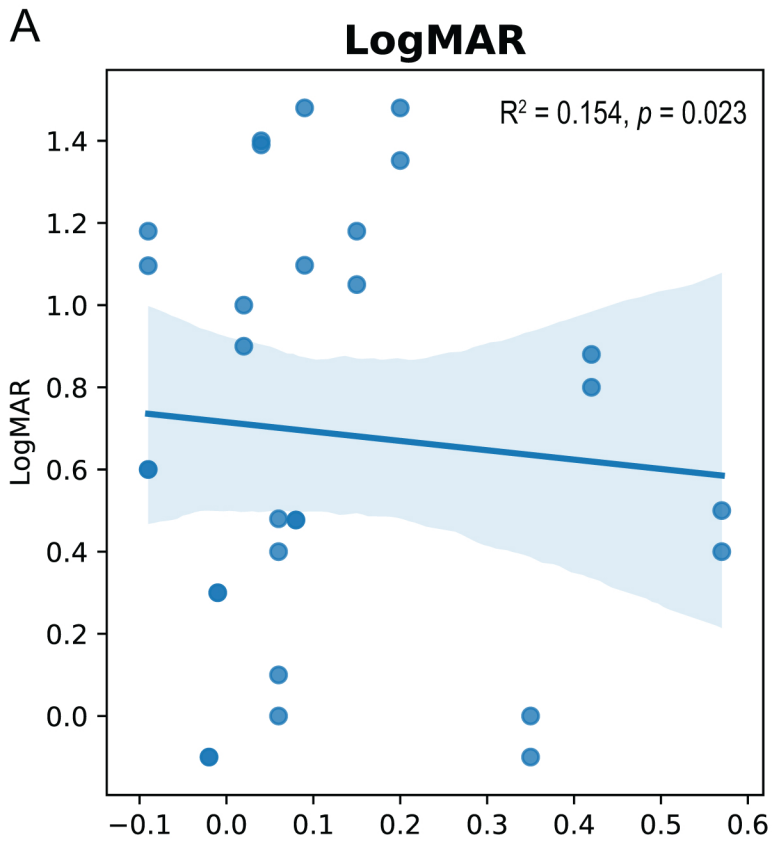




Supplementary Figure 4



Supplementary Figure 5



| Subject ID | WFS1 | | Age at Diagnosis | | | | Duration (yrs) |
|------------|------------------|------------------|-------------------|---------------|--------------------|--------------|-------------------|
| | Allele 1 | Allele 2 | Diabetes Mellitus | Optic Atrophy | Diabetes Insipidus | Hearing Loss | Diabetes Mellitus |
| 1 | p.(R147Gfs*17) | p.(W540*) | 3 | 7 | 12 | 9 | 13 |
| 2 | p.(L200Rfs*87) | p.(E752*) | 5 | 5 | 7 | 7 | 7 |
| 3 | p.(E169K) | p.(E169K) | 5 | 6 | 6 | 6 | 4 |
| 4 | p.(V412Sfs*29) | p.(V415del) | 5 | 6 | 6 | 6 | 20 |
| 5 | p.(L200P) | p.(R232P) | 5 | 15 | -- | 16 | 18 |
| 6 | p.(L200P) | p.(R232P) | 7 | -- | -- | 3 | 1 |
| 7 | p.(K253*) | p.(F883Sfs*68) | 7 | 20 | 22 | -- | 19 |
| 8 | p.(E202G) | p.(D211N) | 14 | 13 | -- | -- | 6 |
| 9 | p.(G107E) | p.(R629W) | 6 | 17 | 17 | 7 | 23 |
| 10 | p.(F883Sfs*68) | -- | 6 | 9 | 10 | 16 | 11 |
| 11 | p.(H313Y) | -- | 4 | 13 | -- | 2 | 16 |
| 12 | p.(E273*) | p.(W613*) | 6 | 8 | 11 | 9 | 12 |
| 13 | p.(E202G) | p.(F350del) | 7 | 14 | -- | -- | 8 |
| 14 | p.(E202G) | p.(F350del) | 5 | -- | -- | -- | 7 |
| 16 | p.(L282P) | p.(W613*) | 6 | 18 | 17 | 16 | 17 |
| 17 | p.(S790*) | p.(L567_F568del) | 7 | 12 | -- | -- | 26 |
| 18 | p.(E169K) | p.(V415del) | 9 | 15 | ? | 8 | 18 |
| 21 | p.(F413_V415del) | p.(F883Sfs*68) | 5 | 14 | 16 | -- | 17 |
| 22 | p.(R42Efs*101) | p.(F883Sfs*68) | 4 | -- | -- | -- | 2 |

Supplementary Table S1. Genetic and Clinical Characteristics of the Study Subjects

| Indication | Medication Names | | No. (%) of Patients | |
|----------------------|--|--|---------------------|--------------|
| | Pediatric | Adult | Pediatric (n=8) | Adult (n=11) |
| Diabetes | Humalog, Insulin, Lantus, Levemir, Novolog | Calcium, Desmopressin, Humalog, Insulin, Iron, Lantus, Metformin, Novolog, Victoza | 8 (100.0) | 11 (100.0) |
| Supplement | CoQ10, Fiber-Con, Fiber Gummies, Fish Oil, Idebenone, Iron, Jucie Plus, Multivitamin, NAC, Nicotinamide, Omega 369, TUDCA, Vitamin B12 | Calcitriol, Cholecalciferol, CoQ10, Cranberry Extract, DHA 500, Iron, Minrex, Multivitamin, Navitol, Sodium Chloride, Vitamin B-Complex, Vitamin C, Vitamin D, Vitamin D3, Vitamin E | 6 (75.0) | 9 (81.8) |
| Behavior/Mood | Ambilify, Citalopram, Risperidone, Vistal, Wellbutrin, Zoloft | Ativan, Bupropion ER, Focalin, Guanfacine, Hydroxyzine Pamoate, Lamotrigine, Paxil, Setraline, Vyvanse | 3 (37.5) | 6 (54.5) |
| Pain | Acetaminophen, Ketorolac, Magnesium Citrate, Prochlorperazine, Topiramate | Acetaminophen, Ibuprofen, Keppra, Lamotrigene, Mefenamic Acid | 1 (12.5) | 5 (45.5) |
| GI Problems | Dicyclomin, Pepcid Complete, Pentasa, Zantac | Metocloperamide, Nexium, Nizatidine, Omeprazole, Probiotic | 2 (25.0) | 4 (36.4) |
| Antibiotic | Amoxicillin, Azithromycin, Azo, Cefepime | Ciprofloxacin, Doxycycline Hyclate, Macrobid | 3 (37.5) | 2 (18.2) |
| Constipation | Miralax, Senna | Docusate, Linzess, Polyethylene Glycol | 2 (25.0) | 3 (27.3) |
| Birth Control | - | Camrese, Glidess, JunetFe, Levonorgestrel, Ortho Tri-Cyclen, Tri-Estarylla, Trisprintec | - | 5 (45.5) |
| Nocturnal Enuresis | Desmopressin | Desmopressin | 3 (37.5) | 1 (9.1) |
| Antiviral | Tamiflu | Tamiflu, Oseltamivir, Valaciclovir | 1 (12.5) | 2 (18.2) |
| Allergies | Allegra, Claritin | Zyrtec | 2 (25.0) | 1 (9.1) |
| Bladder Problems | Azo | Vesicare | 1 (12.5) | 1 (9.1) |
| Nausea/Vomiting | Prochlorperazine | Ondansetron | 1 (12.5) | 1 (9.1) |
| Diarrhea | Immodium | Linzess | 1 (12.5) | 1 (9.1) |
| Low Testosterone | - | Androgel | - | 2 (18.2) |
| Sleep Aid | - | Melatonin, Modafinil | - | 2 (18.2) |
| Tinea | - | Ketoconazole | - | 1 (9.1) |
| Hypothyroid | - | Levothyroxine | - | 1 (9.1) |
| Hypertension | - | Guanfacine, Lisinopril, Losarten | - | 1 (9.1) |
| High Cholesterol | - | Rosuvastatin | - | 1 (9.1) |
| Appetite Stimulant | - | Cyproheptadine | - | 1 (9.1) |
| Nasal Drainage | - | Ipravent | - | 1 (9.1) |
| Cough Suppressant | - | Promethazine DM Syrup | - | 1 (9.1) |
| Hyponatremia | Sodium Chloride | - | 1 (12.5) | - |
| Hypoglycemia | Glucagon | - | 1 (12.5) | - |
| Molluscum | Cetirizine, Zyrtec | - | 1 (12.5) | - |
| Rash | Benadryl, Cetirizine, Diphenhydramine, Triamcinolone, Zyrtec | - | 1 (12.5) | - |
| Anemia | Iron | - | 1 (12.5) | - |
| Trigeminal Neuralgia | Carbamazepine, Naproxen | - | 1 (12.5) | - |

Table S2. Concomitant Medications Used Throughout Trial

| Duration (Months) | 0 | | | | | 6 | | | | | 0 | | | | | 6 | | | | |
|--------------------------------|-------|--------|--------|------------|-------|---------|--------|--------|------------|-------|---------|----------------|-------|------------|-------|---------|----------------|-------|------------|-------|
| | Class | Adults | SEM | Pediatrics | SEM | p-value | Adults | SEM | Pediatrics | SEM | p-value | Non-Responders | SEM | Responders | SEM | p-value | Non-Responders | SEM | Responders | SEM |
| BMI (kg/m ²) | 27.1 | 2.3 | 20.3 | 1.5 | 0.05 | 27.0 | 2.7 | 20.3 | 1.6 | 0.07 | 25.4 | 2.0 | 21.5 | 2.3 | 0.32 | 25.2 | 2.4 | 21.3 | 2.4 | 0.37 |
| HbA1c (%) | 7.4 | 0.2 | 7.4 | 0.4 | 0.97 | 7.4 | 0.3 | 7.6 | 0.4 | 0.70 | 7.5 | 0.2 | 7.1 | 0.2 | 0.49 | 7.6 | 0.3 | 7.1 | 0.3 | 0.42 |
| Fasting Glucose (mg/dL) | 140.4 | 13.6 | 154.0 | 11.1 | 0.50 | 161.5 | 23.4 | 171.5 | 21.2 | 0.78 | 149.9 | 11.1 | 135.8 | 18.5 | 0.51 | 148.0 | 20.1 | 203.2 | 20.4 | 0.12 |
| Stimulated Glucose (mg/dL) | 223.6 | 12.9 | 276.2 | 20.0 | 0.04 | 255.9 | 18.4 | 277.0 | 18.3 | 0.46 | 257.0 | 10.8 | 213.2 | 30.0 | 0.11 | 253.4 | 17.8 | 286.8 | 13.6 | 0.26 |
| Δ Glucose (mg/dL) | 83.20 | 11.29 | 122.17 | 13.46 | 0.05 | 94.40 | 10.86 | 105.50 | 8.81 | 0.49 | 107.09 | 7.01 | 77.40 | 26.61 | 0.16 | 105.36 | 6.74 | 83.60 | 18.41 | 0.19 |
| Fasting C-peptide (ng/dL) | 0.21 | 0.06 | 0.37 | 0.14 | 0.23 | 0.20 | 0.08 | 0.39 | 0.12 | 0.20 | 0.18 | 0.03 | 0.47 | 0.17 | 0.03 | 0.15 | 0.03 | 0.53 | 0.17 | 0.01 |
| Stimulated C-peptide (ng/dL) | 0.40 | 0.10 | 0.71 | 0.21 | 0.15 | 0.50 | 0.17 | 0.86 | 0.25 | 0.23 | 0.39 | 0.06 | 0.80 | 0.27 | 0.06 | 0.38 | 0.05 | 1.20 | 0.33 | 0.00 |
| Δ C-peptide (ng/dL) | 0.2 | 0.0 | 0.3 | 0.1 | 0.10 | 0.3 | 0.1 | 0.5 | 0.1 | 0.28 | 0.2 | 0.0 | 0.3 | 0.1 | 0.19 | 0.2 | 0.0 | 0.7 | 0.2 | 0.00 |
| Fasting Proinsulin (pmol/L) | 0.6 | 0.1 | 1.0 | 0.5 | 0.24 | 1.0 | 0.3 | 1.2 | 0.6 | 0.73 | 0.7 | 0.2 | 0.8 | 0.1 | 0.95 | 0.6 | 0.1 | 2.0 | 0.7 | 0.01 |
| Stimulated Proinsulin (pmol/L) | 1.1 | 0.3 | 2.4 | 1.2 | 0.19 | 2.1 | 1.2 | 3.9 | 1.5 | 0.38 | 1.3 | 0.6 | 2.2 | 0.6 | 0.40 | 1.1 | 0.4 | 6.3 | 2.2 | 0.01 |
| Δ Proinsulin (pmol/L) | 0.5 | 0.3 | 1.4 | 0.7 | 0.20 | 1.1 | 0.9 | 2.7 | 1.1 | 0.29 | 0.5 | 0.4 | 1.4 | 0.5 | 0.22 | 0.6 | 0.4 | 4.3 | 1.6 | 0.01 |
| Insulinogenic Index | 0.004 | 0.002 | 0.003 | 0.001 | 0.737 | 0.006 | 0.003 | 0.005 | 0.001 | 0.765 | 0.002 | 0.000 | 0.006 | 0.003 | 0.044 | 0.002 | 0.000 | 0.012 | 0.005 | 0.007 |
| AUC C-peptide / AUC Glucose | 0.002 | 0.001 | 0.003 | 0.001 | 0.352 | 0.002 | 0.000 | 0.003 | 0.001 | 0.168 | 0.001 | 0.000 | 0.003 | 0.001 | 0.013 | 0.001 | 0.000 | 0.004 | 0.001 | 0.006 |
| Logmar Score | 0.63 | 0.14 | 0.63 | 0.21 | 1.00 | 0.14 | 0.71 | 0.58 | 0.19 | 0.60 | 0.59 | 0.13 | 0.77 | 0.25 | 0.51 | 0.62 | 0.13 | 0.74 | 0.27 | 0.65 |
| WURS | 20.50 | 2.82 | 21.25 | 6.38 | 0.91 | 18.59 | 4.51 | 18.38 | 5.71 | 0.98 | 23.13 | 3.68 | 13.80 | 2.82 | 0.18 | 20.96 | 4.34 | 11.60 | 3.94 | 0.24 |
| WURS (Physician Rated) | 7.6 | 1.8 | 3.1 | 1.3 | 0.09 | 8.8 | 2.7 | 3.1 | 1.2 | 0.11 | 6.3 | 1.6 | 4.2 | 1.6 | 0.48 | 7.5 | 2.3 | 3.2 | 1.2 | 0.28 |

Supplementary Table S3. Table comparing subgroup analyses at each timepoint

| | Duration of Dantrolene Treatment (months) | |
|----------------------|--|-------------------|
| | 0 | 6 |
| VFQ-25 Domain | (n=19) | (n=19) |
| General health | 60.5 (4.4) | 56.6 (4.6) |
| General vision | 61.1 (6.4) | 56.8 (5.4) |
| Ocular pain | 81.6 (4.4) | 82.2 (4.2) |
| Near activities | 59.2 (4.7) | 57.0 (4.9) |
| Distance Activities | 65.9 (4.3) | 59.6 (4.5) |
| Vision specific | | |
| Social functioning | 77.6 (5.0) | 77.0 (5.1) |
| Mental health | 67.8 (3.9) | 68.8 (4.1) |
| Role difficulties | 66.4 (5.8) | 73.7 (4.9) |
| Dependency | 63.2 (4.8) | 62.3 (4.7) |
| Driving | 45.5 (13.8) | 52.8 (14.7) |
| Color vision | 68.1 (7.8) | 59.2 (8.6) |
| Peripheral vision | 73.7 (6.8) | 63.2 (7.7) |
| Composite | 68.8 (3.1) | 70.4 (3.2) |

Supplementary Table S4. Vision-related quality of life by the NEIVFQ-25.

| | Duration of Dantrolene Treatment (months) | |
|---------------------------|--|-------------------|
| | 0 | 6 |
| Scale - Mean (SEM) | (n=8) | (n=8) |
| Physical health | 77.7 (6.8) | 80.4 (4.9) |
| Psychosocial health | 65.6 (9.7) | 63.3 (8.1) |
| Total score | 69.8 (8.6) | 69.3 (6.6) |

Supplementary Table S5. Pediatric Quality of Life (PedsQL) questionnaire

SF-36v Score

| Duration (months) | 0 | 6 | <i>p</i>-value |
|--------------------------|-------------|-------------|-----------------------|
| Count | 11 | 12 | |
| Mean (SEM) | 115.4 (2.5) | 108.8 (2.7) | 0.3 |

Supplementary Table S6. Physical and mental health metrics as assessed by the SF-36v.

| Duration (months) | Cytokine | Norml range | 0 | | | 6 | | | 0 | | | 6 | | | 0 | | | 6 | | |
|-------------------|---------------------|---------------|--------------------------|--------------------------|---------|--------------------------|--------------------------|---------|---------------------------|---------------------------|---------|---------------------------|--------------------------|---------|--------------------------|--------------------------|---------|---|--|--|
| | | | Median (IQR) | Median (IQR) | p-value | Median (IQR) | Median (IQR) | p-value | Median (IQR) | Median (IQR) | p-value | Median (IQR) | Median (IQR) | p-value | Median (IQR) | Median (IQR) | p-value | | | |
| | Fractalkine (pg/mL) | 330 ± 77.6 | 164.91 (147.00 - 209.69) | 162.03 (134.90 - 212.95) | 0.136 | 180.48 (146.33 - 178.50) | 153.92 (133.70 - 166.06) | 0.091 | 229.47 (175.91 - 267.22) | 207.965 (172.94 - 234.26) | 0.753 | 164.225 (146.67 - 209.09) | 160 (134.30 - 198.24) | 0.239 | 169.5 (160.48 - 250.05) | 170.09 (141.45 - 222.60) | 0.345 | | | |
| | GM-CSF (pg/mL) | 16.8 ± 5.1 | 12.68 (7.79 - 30.11) | 11.81 (6.82 - 26.48) | 0.124 | 12.25 (6.59 - 15.20) | 11.32 (6.04 - 12.14) | 0.004 | 33.64 (23.17 - 45.43) | 28.53 (25.42 - 39.24) | 0.917 | 15.2 (6.31 - 24.94) | 12.135 (5.35 - 25.42) | 0.099 | 12.59 (12.25 - 30.11) | 11.78 (11.32 - 30.38) | 0.686 | | | |
| | IFN-γ (pg/mL) | 10.9 ± 3.5 | 48.44 (38.94 - 61.60) | 45.61 (39.97 - 53.94) | 0.124 | 48 (37.25 - 51.69) | 40.58 (34.93 - 46.97) | 0.021 | 88.915 (47.29 - 83.28) | 91.35 (49.42 - 71.10) | 0.917 | 49.495 (38.34 - 58.06) | 40.8 (36.09 - 52.21) | 0.136 | 51.69 (48.00 - 61.60) | 47.24 (46.70 - 53.94) | 0.550 | | | |
| | Isoprostane (pg/mL) | 0.035 ± 0.006 | 0.151 (0.16 - 0.23) | 0.189 (0.14 - 0.28) | 0.118 | 0.158 (0.18 - 0.31) | 0.189 (0.15 - 0.31) | 0.043 | 0.167 (0.14 - 0.19) | 0.1915 (0.14 - 0.26) | 0.917 | 0.185 (0.15 - 0.21) | 0.153 (0.13 - 0.26) | 0.221 | 0.213 (0.19 - 0.27) | 0.2055 (0.20 - 0.29) | 0.273 | | | |
| | ITAC (pg/mL) | 30.8 ± 8.5 | 29.82 (23.30 - 38.20) | 33.79 (28.23 - 46.26) | 0.296 | 24.49 (21.32 - 32.14) | 33.5 (20.19 - 43.05) | 0.155 | 40.145 (31.92 - 58.93) | 38.82 (31.36 - 51.36) | 0.917 | 32.135 (27.59 - 39.17) | 36.815 (30.12 - 47.17) | 0.480 | 22.1 (20.53 - 23.99) | 30.55 (18.24 - 35.94) | 0.345 | | | |
| | MIP-1α (pg/mL) | 29.4 ± 3.9 | 8.9 (0.73 - 14.90) | 9.03 (0.06 - 13.14) | 0.975 | 9.2 (3.57 - 14.77) | 10.7 (2.34 - 13.21) | 0.859 | 5.755 (0.71 - 13.40) | 3.86 (0.08 - 8.68) | 0.893 | 8.745 (0.57 - 15.34) | 8.395 (0.08 - 11.34) | 0.799 | 8.9 (8.40 - 12.88) | 12.14 (0.06 - 13.14) | 0.716 | | | |
| | MIP-1β (pg/mL) | 8.4 ± 3.3 | 14.13 (9.56 - 17.90) | 20.75 (17.02 - 27.89) | 0.017 | 14.84 (10.39 - 18.21) | 23.61 (20.35 - 28.41) | 0.013 | 10.74 (6.37 - 14.79) | 10.955 (5.73 - 16.05) | 0.753 | 11.72 (9.43 - 15.53) | 20.35 (15.68 - 28.11) | 0.034 | 18.72 (15.57 - 19.25) | 21.85 (17.51 - 23.87) | 0.345 | | | |
| | MIP-3α (pg/mL) | 15.2 ± 9.1 | 19.88 (16.73 - 25.33) | 19.96 (16.23 - 24.01) | 0.076 | 19.26 (16.89 - 21.09) | 17.7 (15.80 - 19.89) | 0.091 | 24.315 (21.55 - 30.88) | 23.075 (21.17 - 25.14) | 0.463 | 20.495 (18.91 - 25.40) | 19.38 (16.86 - 22.89) | 0.136 | 19.26 (18.73 - 22.89) | 17.7 (16.21 - 28.01) | 0.225 | | | |
| | TNFr (pg/mL) | 5.9 ± 2.3 | 8.3 (5.55 - 7.89) | 6.81 (5.92 - 7.89) | 0.463 | 5.67 (5.13 - 9.90) | 6.81 (6.01 - 8.81) | 0.374 | 7.025 (6.44 - 7.52) | 6.275 (5.54 - 7.52) | 0.917 | 7.255 (6.03 - 9.74) | 7.62 (6.06 - 10.43) | 0.837 | 4.8 (4.72 - 5.00) | 5.33 (5.15 - 6.81) | 0.158 | | | |
| | IL-1 (pg/mL) | 1.1 ± 0.4 | 1.59 (1.12 - 2.06) | 1.34 (1.12 - 1.73) | 0.019 | 1.55 (1.01 - 2.02) | 1.34 (0.88 - 1.87) | 0.010 | 1.71 (1.27 - 3.33) | 1.43 (1.15 - 2.58) | 0.463 | 1.445 (1.11 - 2.04) | 1.36 (1.07 - 1.88) | 0.117 | 1.72 (1.55 - 2.06) | 1.2 (1.13 - 1.99) | 0.043 | | | |
| | IL-2 (pg/mL) | 4.7 ± 2.0 | 2.92 (2.14 - 3.68) | 2.81 (1.76 - 3.25) | 0.038 | 2.63 (1.67 - 3.55) | 2.17 (1.58 - 2.86) | 0.013 | 3.405 (2.79 - 4.97) | 3.03 (2.53 - 4.83) | 0.917 | 2.655 (2.06 - 3.69) | 2.49 (1.74 - 2.96) | 0.099 | 3.54 (2.92 - 3.69) | 2.85 (2.43 - 3.32) | 0.225 | | | |
| | IL-4 (pg/mL) | 61.7 ± 16.2 | 38.83 (20.75 - 331.40) | 29.82 (14.10 - 190.49) | 0.163 | 61.11 (19.24 - 313.87) | 42.66 (13.70 - 270.50) | 0.594 | 32.715 (28.95 - 257.51) | 26.455 (22.34 - 33.66) | 0.116 | 32.715 (28.16 - 120.62) | 26.41 (20.09 - 96.52) | 0.388 | 33.14 (20.75 - 1038.08) | 29.82 (13.76 - 1068.54) | 0.225 | | | |
| | IL-6 (pg/mL) | 5.2 ± 1.6 | 3.77 (2.33 - 7.61) | 3.1 (1.82 - 5.32) | 0.163 | 2.63 (1.67 - 8.93) | 2.39 (1.36 - 7.77) | 0.534 | 4.465 (3.80 - 6.90) | 4.09 (3.33 - 4.41) | 0.173 | 3.59 (2.55 - 5.50) | 3.07 (2.20 - 4.71) | 0.530 | 7.61 (2.13 - 16.08) | 4.63 (0.93 - 17.02) | 0.158 | | | |
| | IL-6 (pg/mL) | 7.9 ± 2.6 | 3.67 (2.35 - 28.36) | 3.01 (1.89 - 19.67) | 0.296 | 8.72 (2.50 - 28.53) | 10.18 (2.44 - 28.44) | 0.859 | 2.565 (2.16 - 22.01) | 1.865 (1.38 - 2.37) | 0.116 | 3.4 (2.31 - 18.66) | 3.15 (1.87 - 13.46) | 0.530 | 28.38 (2.66 - 107.27) | 1.97 (1.81 - 113.14) | 0.225 | | | |
| | IL-7 (pg/mL) | 18.0 ± 5.5 | 17.86 (15.17 - 21.61) | 17.42 (15.98 - 20.41) | 0.723 | 16.68 (14.08 - 19.21) | 17.39 (15.83 - 18.51) | 0.929 | 20.495 (19.31 - 27.59) | 20.08 (16.81 - 23.79) | 0.463 | 16.995 (14.96 - 21.67) | 17.48 (15.91 - 19.92) | 0.875 | 19.29 (17.86 - 20.56) | 17.39 (16.98 - 20.41) | 0.345 | | | |
| | IL-8 (pg/mL) | 10.4 ± 5.6 | 8.82 (5.52 - 56.49) | 8.91 (7.13 - 52.88) | 0.435 | 11.24 (6.13 - 60.59) | 12.16 (7.46 - 56.59) | 0.929 | 6.71 (4.94 - 28.44) | 7.03 (5.38 - 8.54) | 0.945 | 8.36 (5.89 - 28.67) | 9.55 (7.18 - 23.78) | 0.837 | 35.28 (5.49 - 221.21) | 7.44 (7.13 - 200.53) | 0.225 | | | |
| | IL-10 (pg/mL) | 20.4 ± 10.8 | 13.54 (9.71 - 24.43) | 12.45 (8.20 - 21.53) | 0.177 | 18.04 (12.05 - 28.43) | 12.53 (8.45 - 21.80) | 0.075 | 10.13 (7.38 - 15.72) | 9.145 (7.40 - 15.53) | 0.917 | 15.435 (9.21 - 25.43) | 14.91 (8.58 - 21.67) | 0.347 | 13.54 (11.27 - 17.45) | 8.28 (8.15 - 12.53) | 0.345 | | | |
| | IL-12P70 (pg/mL) | 4.1 ± 1.8 | 3.95 (3.23 - 4.33) | 3.83 (3.06 - 4.29) | 0.435 | 3.97 (2.73 - 4.23) | 3.19 (2.70 - 4.04) | 0.246 | 4.18 (4.01 - 4.49) | 4.159 (3.91 - 4.32) | 0.753 | 3.825 (3.25 - 4.40) | 3.52 (2.99 - 4.40) | 0.530 | 4.17 (3.23 - 4.19) | 3.83 (3.65 - 4.21) | 0.886 | | | |
| | IL-13 (pg/mL) | 10.1 ± 5.3 | 8.3 (6.70 - 30.21) | 7.44 (4.90 - 17.33) | 0.019 | 8.69 (6.37 - 32.57) | 7.57 (4.98 - 27.09) | 0.050 | 7.62 (6.90 - 24.79) | 6.22 (4.52 - 7.59) | 0.116 | 8.225 (6.81 - 15.13) | 7.45 (6.11 - 10.33) | 0.117 | 30.21 (6.03 - 70.99) | 4.3 (3.46 - 59.29) | 0.043 | | | |
| | IL-17c (pg/mL) | 12.1 ± 3.3 | 10.16 (7.08 - 12.53) | 8.2 (5.83 - 9.39) | 0.076 | 8.9 (5.40 - 10.27) | 8.2 (5.10 - 8.87) | 0.021 | 11.589 (8.73 - 12.41) | 8.695 (6.98 - 11.71) | 0.753 | 9.54 (6.61 - 11.21) | 8.11 (5.48 - 9.18) | 0.084 | 10.16 (8.05 - 12.44) | 9.07 (6.21 - 9.36) | 0.500 | | | |
| | IL-21 (pg/mL) | 4.9 ± 2.9 | 5.4 (3.67 - 7.35) | 4.76 (2.67 - 6.99) | 0.038 | 5.82 (2.85 - 6.68) | 4.67 (2.50 - 5.57) | 0.008 | 4.855 (4.18 - 8.37) | 4.205 (3.22 - 6.11) | 0.753 | 5.065 (3.42 - 7.85) | 4.615 (2.58 - 6.21) | 0.050 | 5.4 (4.04 - 6.00) | 3.08 (3.08 - 5.06) | 0.500 | | | |
| | IL-23 (pg/mL) | 399 ± 290 | 301.49 (188.62 - 548.89) | 195.95 (139.38 - 432.42) | 0.084 | 301.49 (125.60 - 525.79) | 195.95 (115.20 - 371.68) | 0.131 | 408.225 (247.06 - 596.50) | 276.86 (144.92 - 557.31) | 0.345 | 270.86 (160.13 - 699.13) | 198.54 (147.87 - 469.44) | 0.308 | 512.19 (267.56 - 539.36) | 195.95 (134.18 - 432.42) | 0.043 | | | |

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Supplemental Table 7. Levels of inflammatory cytokines and isoprostane