

**Figure S1:** Comparison of different dALFF values between DR group and HC group [a window size of 30 TRs (60s), and window shifted by 10 TRs(20s)] .

**Note:**Significant dALFF values differences were observed in the R-BS, L-CER\_10,R-CER\_10,L-PHG,R-CER\_8, L-ITG, L-MOG and R-MOG.The blue areas indicate lower dALFF values.(voxel-level P<0.01, GRF correction, cluster-level P<0.05)(**A**) The mean values **of altered d**ALFF **values between the** DR **and HC groups.**(**B**)

**Abbreviations:** dALFF, dynamic amplitude of low-frequency fluctuation; DR, Diabetic Retinopathy; HC, Health Controls; GRF, Gaussian random field; BS, Brainstem; CER,Cerebelum; PHG, ParaHippocampal; MOG, middle occipital gyrus; ITG, inferior temporal gyrus; L, left; R, right;

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**Figure S2:** Comparison of different dALFF values between DR group and HC group [a window size of 100 TRs (200s), and window shifted by 10 TRs(20s)] .

**Note:** Significant dALFF values differences were observed in the L-BS, R-BS,L-CER\_8,L-CER\_4\_5,Vermis\_6, L-ITG and R-IOG. The blue areas indicate lower dALFF values.(voxel-level P<0.01, GRF correction, cluster-level P<0.05)(**A**) The mean values **of altered d**ALFF **values between the** DR **and HC groups.**(**B**)

**Abbreviations:** dALFF, dynamic amplitude of low-frequency fluctuation; DR, Diabetic Retinopathy; HC, Health Controls; GRF, Gaussian random field; BS, Brainstem; CER,Cerebelum; IOG, Inferior Occipital Gyrus; ITG, inferior temporal gyrus; L, left; R, right;

**Table S1.** Significant differences in the dALFF between two groups

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Condition/Brain regions | BA | Peak T-scores | MNI coordinates | Cluster size (voxels) |
| x | y | z |
| [a window size of 30TRs (60s), and window shifted by 10 TRs(20s)] |
| DR>HC | R-BS | - |  3.9476 | 3  |  -33  |  -54 | 149 |
| DR>HC | L-CER\_10 | - |  4.837 | -18  | -36  | -48 | 414 |
| DR>HC | R-CER\_10 | - | 3.8456 | 24  | -36  | -45 | 42 |
| DR>HC | L-PHG, | 28 | 4.0373 | -27  |  -3  | -33 | 56 |
| DR>HC | R-CER\_8,  | - | 3.8992 |  15  | -66  | -39 | 128 |
| DR>HC | L-ITG,  | - |  4.2308 | -48  | -30  | -33 | 149 |
| DR<HC | L-MOG  | 18 | -4.7133 |  -24  |  -99  |  3 | 258 |
| DR<HC | R-MOG | 18 | -4.2013 |  18  | -99  |  0 | 200 |
| [a window size of 100TRs (200s), and window shifted by 10 TRs(20s)] |
| DR>HC | L-BS | - |  4.4355 |  -9  |  -24  | -48 | 43 |
| DR>HC | R-BS | - | 4.1575 | 9 |  -21  |  -42 | 94 |
| DR>HC | L-CER\_8 | - | 4.6836 | -12  | -63  |  -36 | 76 |
| DR>HC | L-CER\_4\_5 | - | 4.008 |  -18  | -39  | -30 | 33 |
| DR>HC | Vermis\_6 | - | 3.7761 | 3  |  -66  | -27 | 35 |
| DR>HC | L-ITG | 20 |  4.2329 | -54  | -33  |  -21 | 30 |
| DR<HC |  R-IOG | 17 |  -4.1807 | 18  |  -96  |  -3 | 93 |

**Note:**The statistical threshold was set at the voxel level with p<0.01 for multiple comparisons using Gaussian random-field theory.(voxel-level P<0.01, GRF correction, cluster-level P<0.05).

**Abbreviations:** dALFF, dynamic amplitude of low-frequency fluctuation; DR, Diabetic Retinopathy; HC, Health Controls; GRF, Gaussian random field; BS, Brainstem; CER,Cerebelum; PHG, ParaHippocampal; MOG, middle occipital gyrus; ITG, inferior temporal gyrus; IOG, Inferior Occipital Gyrus; L, left; R, right; B,bilateral;