Central Autonomic Network Alterations in Male Endurance Athletes

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| Functional Connectivity to: | Left/Right | Brodmann’s Area | Cluster Size | Peak (MNI) | Z-value |
|-----------------------------|------------|-----------------|--------------|------------|---------|
| seed: left Anterior Insula  |            |                 |              |            |         |
| Angular Gyrus               | L          | 39              | 189          | -37 -57 54 | 4.27    |
| dorsolateral Prefrontal Cortex | R        | 9               | 79           | 50 21 23  | 4.39    |
| ventral Anterior Cingulate Cortex | L/R     | 24              | 77           | -8 -2 43  | 3.94    |
| posterior Insula            | R          | 13              | 67           | 40 -17 15 | 3.93    |
| Premotor Cortex             | L          | 6               | 60           | -45 8 30  | 4.26    |
| posterior Insula            | L          | 13              | 59           | -38 -2 13 | 4.44    |
| seed: right Anterior Insula |            |                 |              |            |         |
| ventral Anterior Cingulate Cortex | L/R     | 24              | 129          | -8 6 35    | 4.55    |
| posterior Insula            | L          | 13              | 68           | -38 -2 13  | 4.46    |
| Supramarginal Gyrus         | L          | 40              | 67           | -65 -31 33 | 3.60    |
| seed: dorsal Anterior Cingulate Cortex |       |                 |              |            |         |
| Primary Sensorimotor Cortex | L          | 1/4             | 591          | -43 -32 50 | 4.46    |
| Primary Sensorimotor Cortex | R          | 1/4             | 396          | 42 -29 53  | 4.47    |
| Angular Gyrus               | L          | 39              | 145          | -50 -57 5   | 4.41    |
| Premotor Cortex             | R          | 6               | 81           | -36 -18 67 | 3.92    |
| ventral Anterior Cingulate Cortex | L/R     | 24              | 66           | 5 -24 50   | 4.11    |

**Table S1.** Brain regions showing functional connectivity differences between endurance athletes and non-athletes groups. In all regions, endurance athletes showed increased functional connectivity. The significance criterion for detecting clusters was set at $\alpha < 0.05$ determined using AFNI' 3dClustSim (cluster size > 59 voxels, thresholded at voxel level $p < 0.001$).
# Options passed to afni_script.py to set up our preprocessing pipeline.

afni_proc.py -scr_overwrite

- subj_id $subj_id
- blocks despike ricor align tlrc volreg blur mask scale regress
- copy_anat $subj_indir/warp/anatSS.WP.nii.gz
- anat_has_skull no
- anat_follower anat_w_skull anat $subj_indir/warp/anatU.WP.nii.gz
- anat_follower_ROI FSvent epi $subj_indir/fs_ap_latvent.nii.gz
- anat_follower_ROI FSWe epi $subj_indir/fs_ap_wm.nii.gz
- anat_follower_erode FSvent FSWe
- dsets $subj_indir/bold.nii.gz
- tcat_remove_first_trs 20
- ricor_regs $subj_indir/oba.slibase.1D
- ricor_regs_nfirst 20
- align_opts_aea -cost lpa
- tlrc_base MNI152_2009_template_SSW.niix
- tlrc_NL_warp
- tlrc_NL_warped_dsets $subj_indir/warp/anatQQ.WP.nii.gz
  $subj_indir/warp/anatQQ.WP_WARP.nii.gz
  $subj_indir/warp/anatQQ.WP.aff12.1D
- volreg_align_to MIN_OUTLIER
- volreg_align_e2a
- volreg_tlrc_warp
- blur_size 6.0
- mask_epi_anat yes
- regress_ROI_PC FSvent 3
- regress_anaticor_fast
- regress_anaticor_label FSWe
- regress_bandpass 0.01 0.1
- regress_apply_mot_types demean deriv
- regress_run_clustsim no
- remove_preproc_files
- html_review_style pythonic
- execute