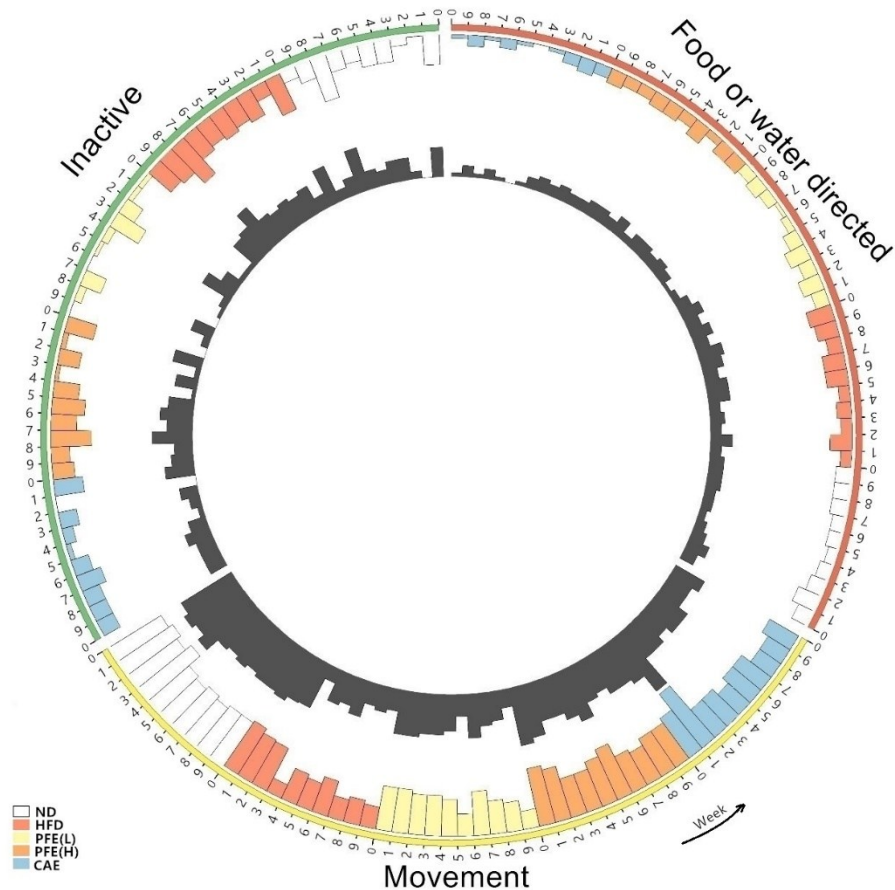


Supplementary Information

Supplementary Fig.1 PFE improved the food- or water-directed behavior, as well as movement, thereby decreasing the inactive state. Different colors were used to represent different groups, and the height of bar indicates the behavior frequency observed at each week. Meanwhile, for each group, the leftmost bar represents frequency of week 0, and the rightmost bar represents the frequency at the end of experiment.



Supplementary Table 1 The sequences of the primers.

| Name | Primer | Sequence |
|-----------------|---------|-----------------------------------|
| Rat GAPDH | Forward | 5'- ACAGCAACAGGGTGGTGGAC -3' |
| | Reverse | 5'- TTTGAGGGTGCAGCGAACTT -3' |
| Rat Glut-2 | Forward | 5'- GGGGACAAACTCGGAAGGAT -3' |
| | Reverse | 5'- CTGATTGCCCAGAATGAAGC -3' |
| Rat Fiaf | Forward | 5'- TCTGGTGGCTGGTGGTTTG -3' |
| | Reverse | 5'- CTGATTGCCCAGAATGAAGC -3' |
| Rat Proglucagon | Forward | 5'- CTCCCGCCGTGCTCAAGATTT -3' |
| | Reverse | 5'- GCCTTTCACCAGCCAAGCAATGA -3' |
| Rat ZO-1 | Forward | 5'- TTTCTCCTCGACCTCCCTAAAG -3' |
| | Reverse | 5'- CTCGCTCTACCTCCTTGTGATT -3' |
| Rat Occludin | Forward | 5'- CCATAGCTTTAATACCATCCGTTTC -3' |
| | Reverse | 5'- AGTG TTCAGCCCAGTCAATTATC -3' |