Targeted memory reactivation in REM but not SWS selectively reduces arousal responses

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**Supplementary Material**

**Supplementary Table S1:** Reaction times and standard deviations from pre-sleep, post-sleep, and change between these. Outliers >= three standard deviations were removed from the analysis, resulting in removal of one participant from the neutral non-cued category in the REM group, and 1 participant both neutral and negative non-cued categories in the SWS group. Inclusion of these outliers did not change the results.

| REM Group | Neutral | Cued | Un-Cued | Post-Sleep Exposure | Change (Post-Pre) |
|-----------|---------|------|---------|---------------------|------------------|
| Neutral   | 936.9 ± 412.4 | 809.4 ± 195.03 | -127.5 ± 157.9 |
| Un-Cued   | 984.1 ± 254.2 | 766.3 ± 273.7 | -217.9 ± 259.0 |
| Negative  | 1040.7 ± 342.7 | 822.3 ± 245.3 | -218.4 ± 284.0 |
| Un-Cued   | 966.6 ± 160.5 | 839.0 ± 238.2 | -125.7 ± 194.5 |
| SWS Group | Neutral | Cued | Un-Cued | Post-Sleep Exposure | Change (Post-Pre) |
| Neutral   | 767.8 ± 147.6 | 641.2 ± 148.0 | -126.5 ± 92.5 |
| Un-Cued   | 805.0 ± 182.3 | 669.3 ± 110.4 | -149.2 ± 109.0 |
| Negative  | 906.2 ± 197.7 | 695.7 ± 152.6 | -210.6 ± 93.2 |
| Un-Cued   | 943.8 ± 177.7 | 782.3 ± 175.4 | -151.3 ± 192.0 |
Supplementary Table S2  Neutral and negative IAPS images

30 neutral and 30 negative images from the International Affective Picture System (IAPS) were selected for this study. Pictures were converted to grey scale and matched in luminance and resolution to minimize light-specific variation in respect to pupil dilation. A description of the content of each of the stimuli is listed separately for negative and neutral images.

| Negative IAPS           | Neutral IAPS              |
|-------------------------|---------------------------|
| Pitbull                 | Tropical bird             |
| Shark                   | Farmer                    |
| Toddler with flies on face | Neutral male face         |
| Grieving female with corpse | Female secretary on phone |
| Crying child            | Couple walking down stairs |
| Car accident corpse     | Sleeping males on train   |
| Male corpse on train    | Two females chatting      |
| Battered female         | Female binge eating        |
| Crying male in hospital | Female tourist             |
| Unconscious male on ventilator | Male blow-drying hair   |
| Disabled child          | Towel                     |
| Bandaged child          | Spoon                     |
| Distressed female       | Porcelain bowl            |
| Military ground attack  | Mug                       |
| Female toddler crying at male | Fan            |
| Roach on Pizza          | Beer glass                |
| Cemetery                | Glass candle stick        |
| Rotting cow carcass     | Lightbulb                 |
| Power plant             | Dice                      |
| Toilet soiled with feces | Fork                     |
| Toilet filled with vomit | Book                     |
Sliced Hand
Crying soldier
Male threatened at gun point
Crime scene with body
Human skulls
Dead soaked cat
Burning jet
Filled ashtray
Car Accident

Truck
Bus
Bedside lamp
Carpet
Clothes rack
Plate with duck pattern
House
Traffic jam
Box of tissues