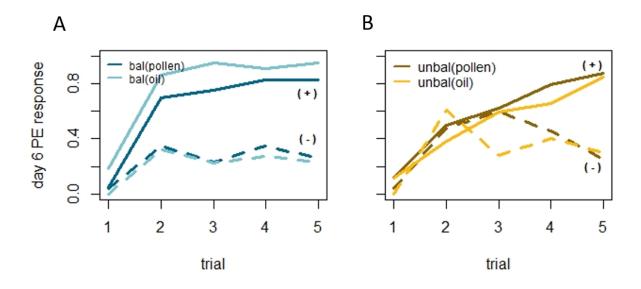
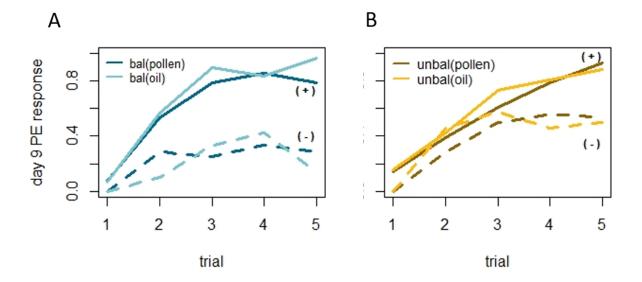


**Fig. S1. A&B** Day 3 learning and discrimination ability of bees on balanced (A) and unbalanced (B) diets. Proportion of proboscis extension (PE) response to odors over five trials. Solid lines represent damaged brood odors rewarded (+) with sucrose, and the dashed lines are healthy brood odors punished with salt (-).



**Fig. S2. A&B** Day 6 learning and discrimination ability of bees on balanced (A) and unbalanced (B) diets. Proportion of proboscis extension (PE) response to odors over five trials. Solid lines represent damaged brood odors rewarded (+) with sucrose, and the dashed lines are healthy brood odors punished with salt (-).



**Fig. S3. A&B** Day 9 learning and discrimination ability of bees on balanced (A) and unbalanced (B) diets. Proportion of proboscis extension (PE) response to odors over five trials. Solid lines represent damaged brood odors rewarded (+) with sucrose, and the dashed lines are healthy brood odors punished with salt (-).