

CHAPTER 8

The Anterior and Midcingulate Cortices and Reward

Edmund T. Rolls

Chapter contents

Goals of This Chapter 192

The ACC and Reward: Effects of Lesions in Animals 192

The ACC and Reward: Functional Neuroimaging Studies 192

Pleasant touch versus pain 192

Oral somatosensory stimuli and taste 194

Pleasant versus unpleasant olfactory stimuli 194

The reward value of food 195

The reward value of water 195

Rewarding visual and auditory stimuli 195

Abstract rewards 196

Effects of cognitive states on reward representations in ACC 197

Reward reversal 200

The ACC and Reward: Effects of Lesions in Humans 200

Anterior Cingulate Cortex and Reward: Synthesis 201

Midcingulate Cortex, the Cingulate Motor Area, and Action-Outcome Learning 202

References 203