OPIOID POTENCY:
Pharmacological and Non-pharmacological Factors

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Pharmacology of the Drug

MOR-selective agonists can vary substantially in analgesic efficacy

Schwienteck et al 2019
Intensity of the Pain

Analgesic efficacy can differ depending on the intensity (or type) of pain

Abram et al 1997
Route of Administration

- **Subcutaneous**

- **Intrathecal**

Abram et al 1997
Level of Physical Dependence

Relative analgesic potency decreases with increasing maintenance doses

Paronis and Holtzman 1992
Level of Physical Dependence

...but this varies depending on the agonist
Other Variables

Sex Differences in Analgesic, Reinforcing, Discriminative, and Motoric Effects of Opioids

Rebecca M. Craft
Washington State University

Genetic variance in nociception and its relationship to the potency of morphine-induced analgesia in thermal and chemical tests

Gregory I. Elmera,*, Jeanne O. Piepera, S. Stevens Negusb, James H. Woods
Methods of Assessing the Endpoints

Observational – clinical
Experimental – rank order of potency (ED50)
Finney Assay – statistical

Which method is best?
Thank you!