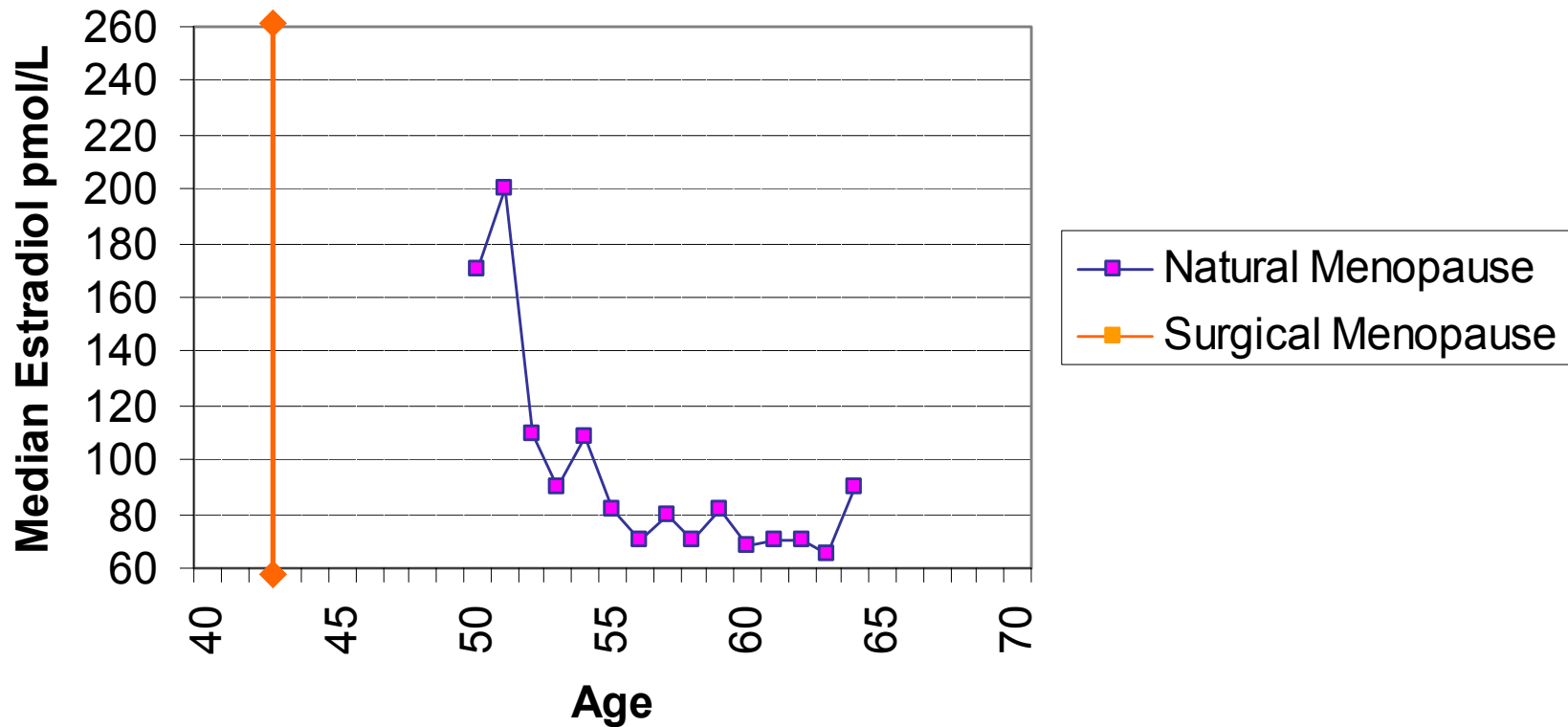


Consequences of Surgical Menopause on Cognition and Mood

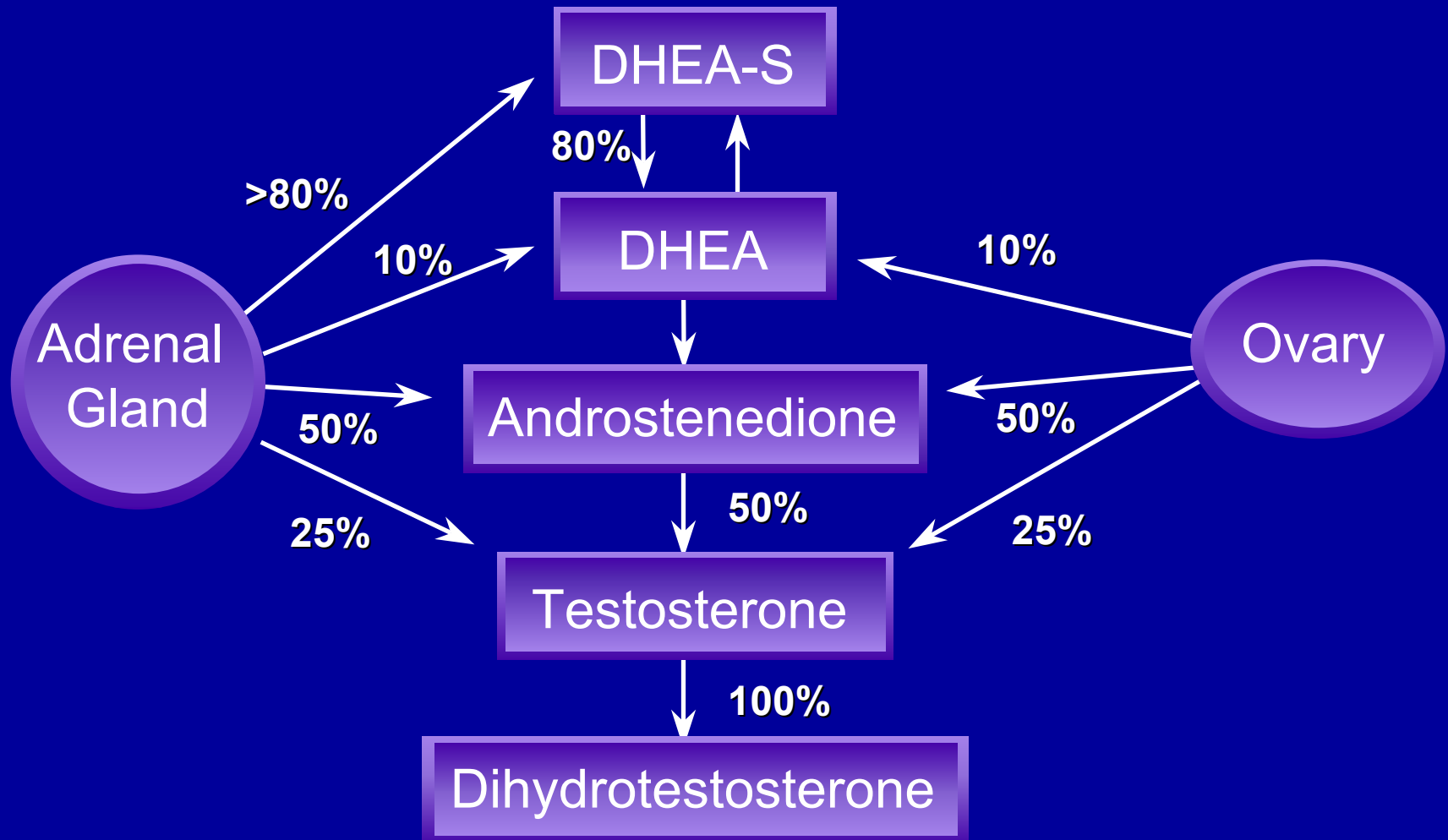
Barbara B Sherwin, Ph.D.
James McGill Professor
McGill University
Montreal, Canada

Estradiol Levels in Natural and Surgical Menopause

Age vs. Estradiol in Women

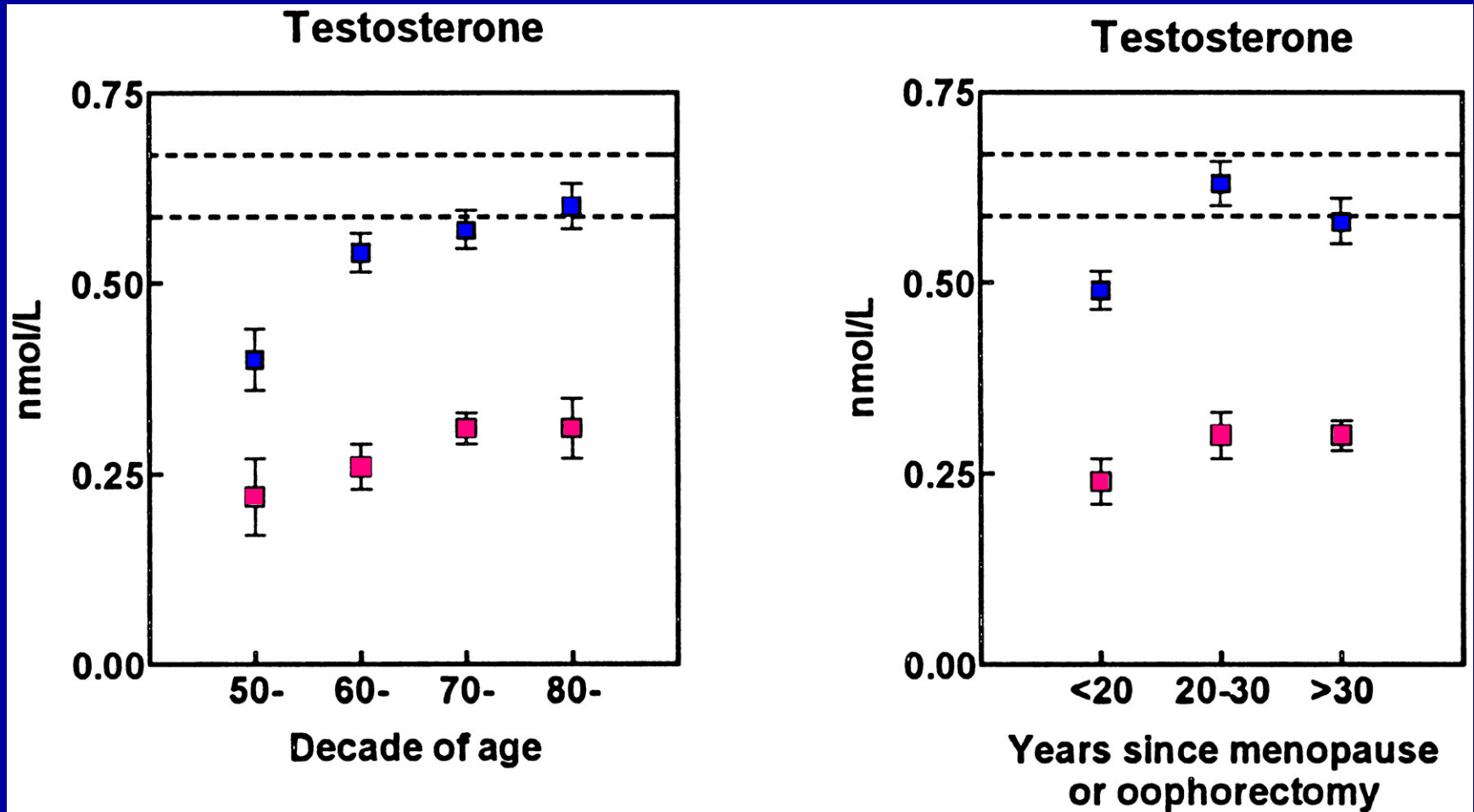


Source of Androgens in Premenopausal Women



Buster and Casson, Treatment of the Postmenopausal Woman, 1999

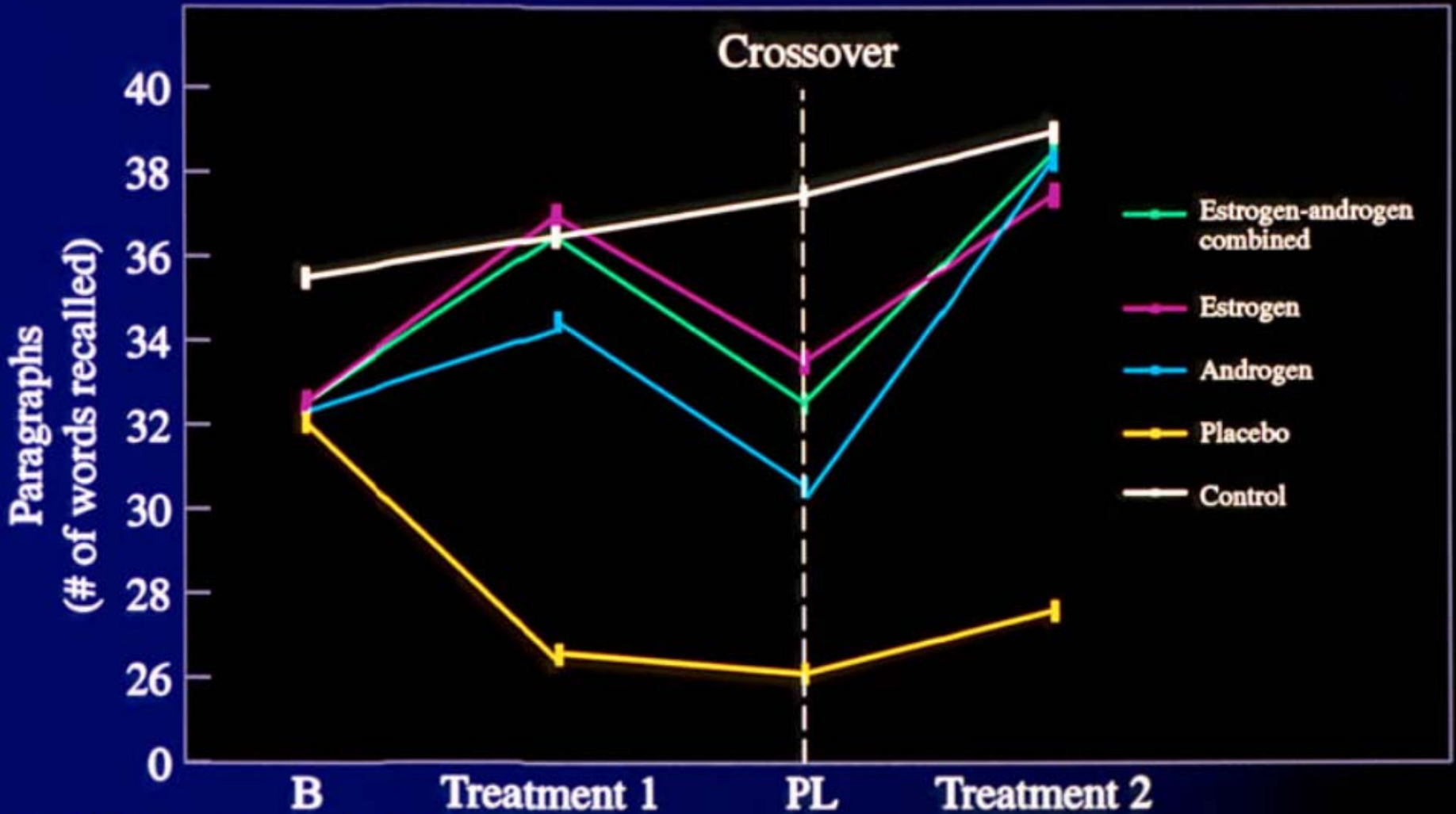
Testosterone Levels in Naturally and Surgically Menopausal Women



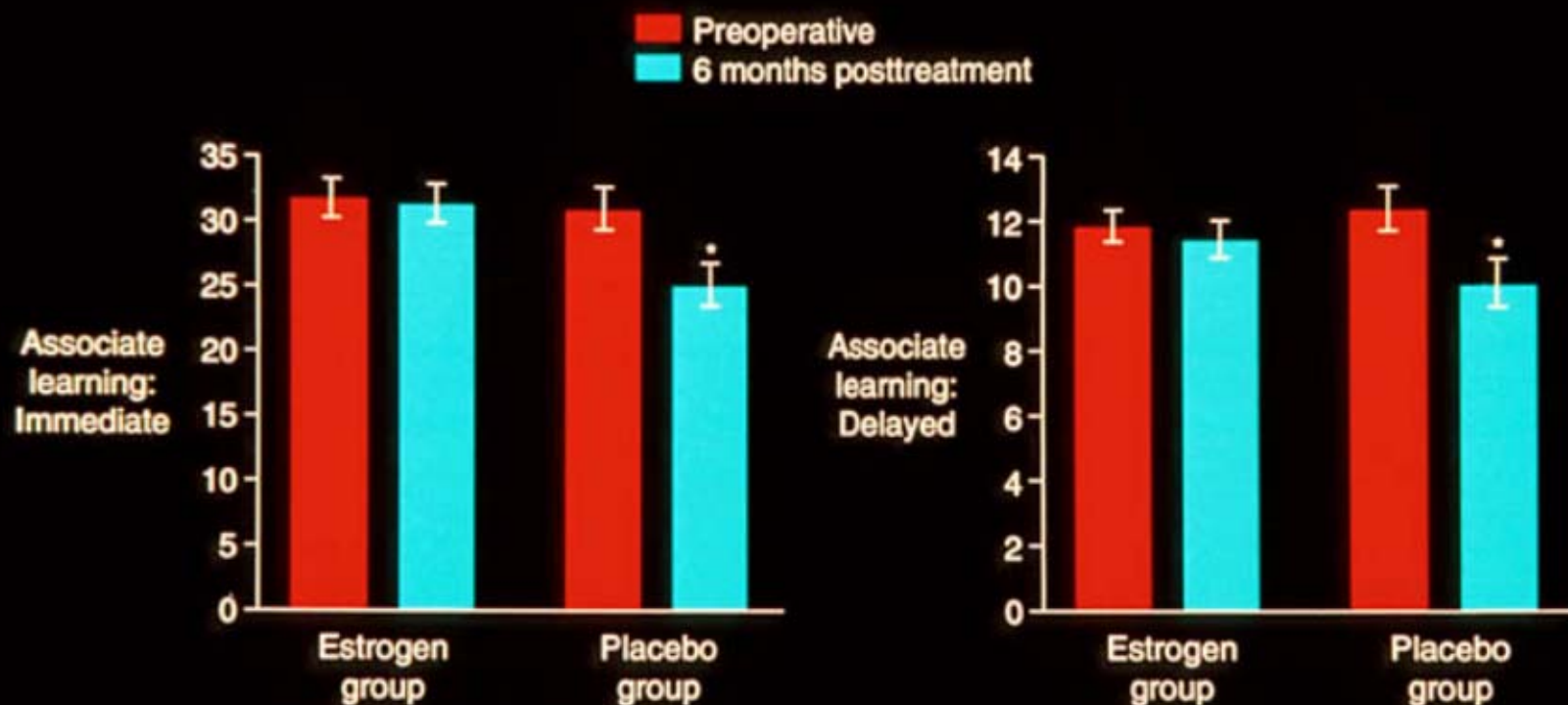
■ = Intact women

■ = Bilateral OVX

Verbal Memory in Surgically Menopausal Women



Estrogen effects on learning



* $P < .05$

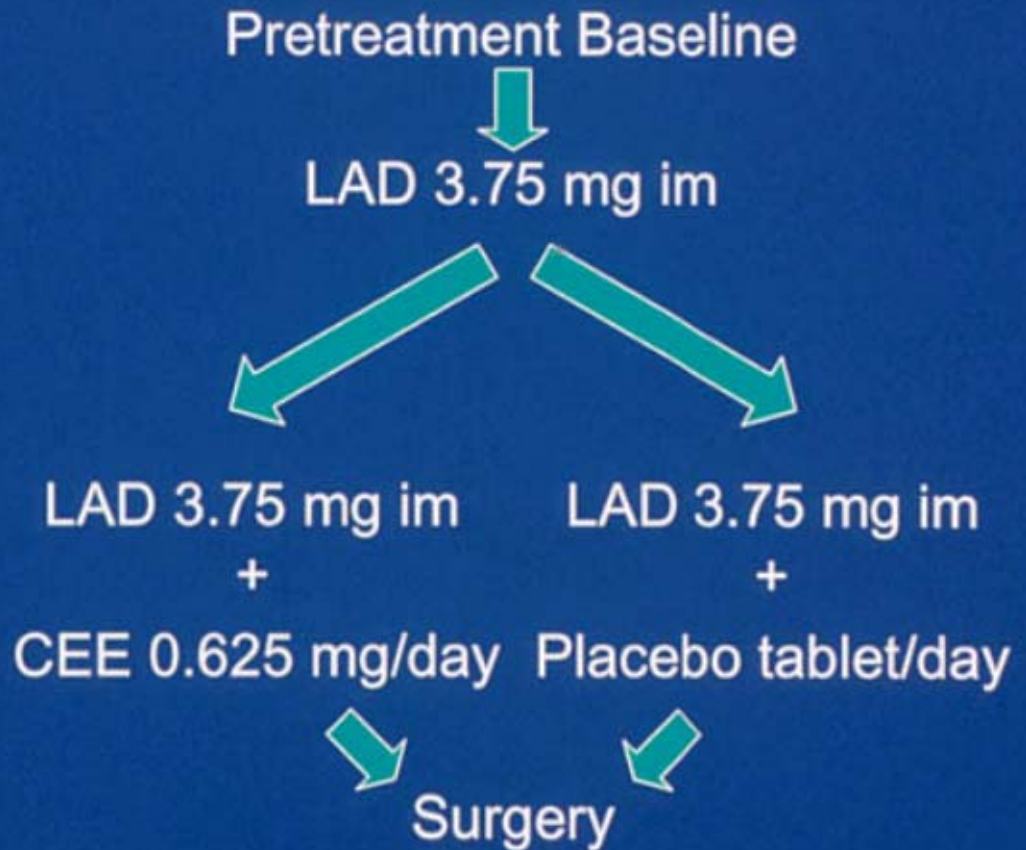
From Phillips and Sherwin, *Psychoneuroendocrinology* 17:485-495, 1992.

Experimental Design

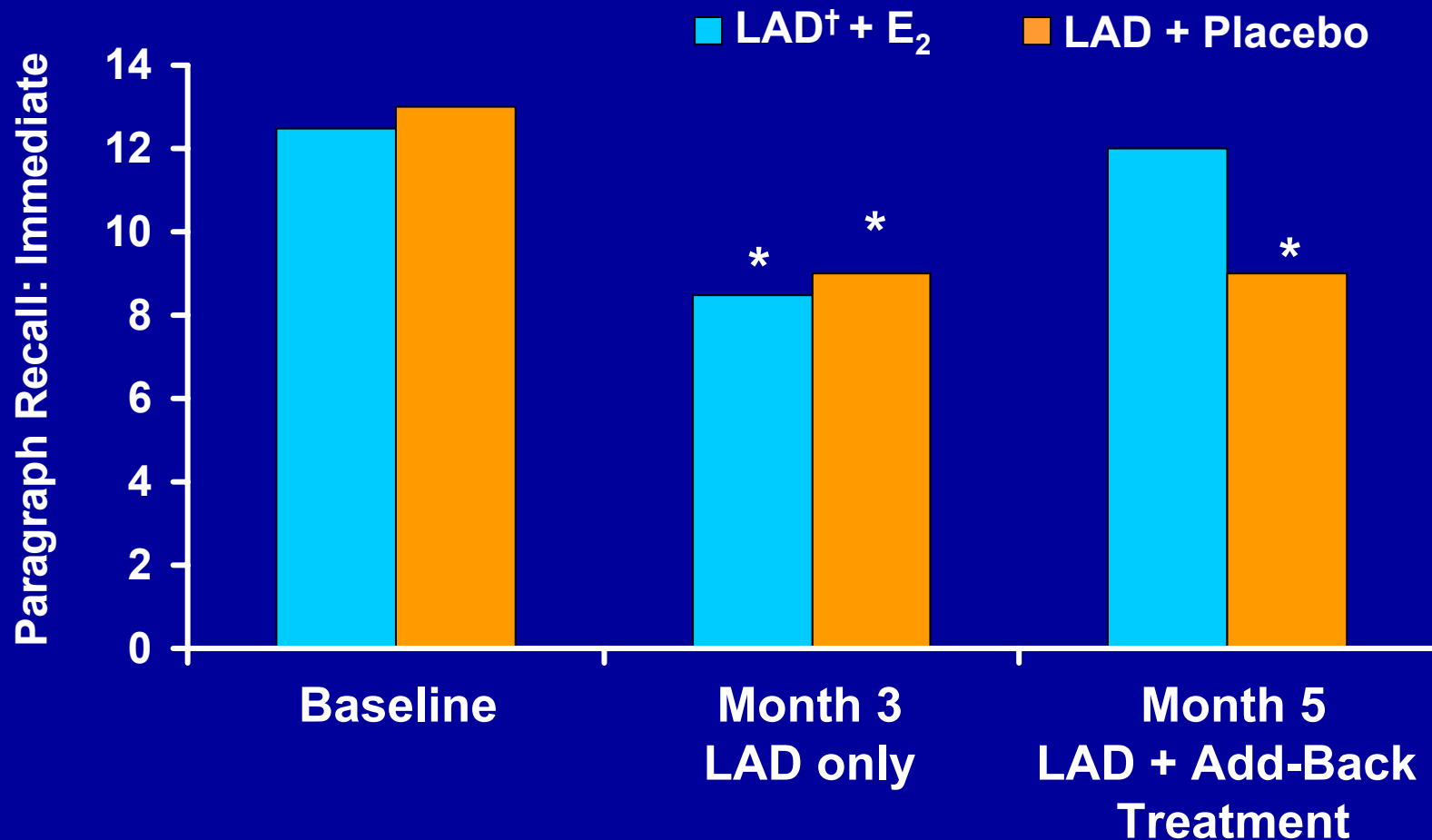
- Month 1
- Month 2
- Month 3

- Month 4
- Month 5

- Month 6



Declines in Cognitive Function with Estrogen Loss

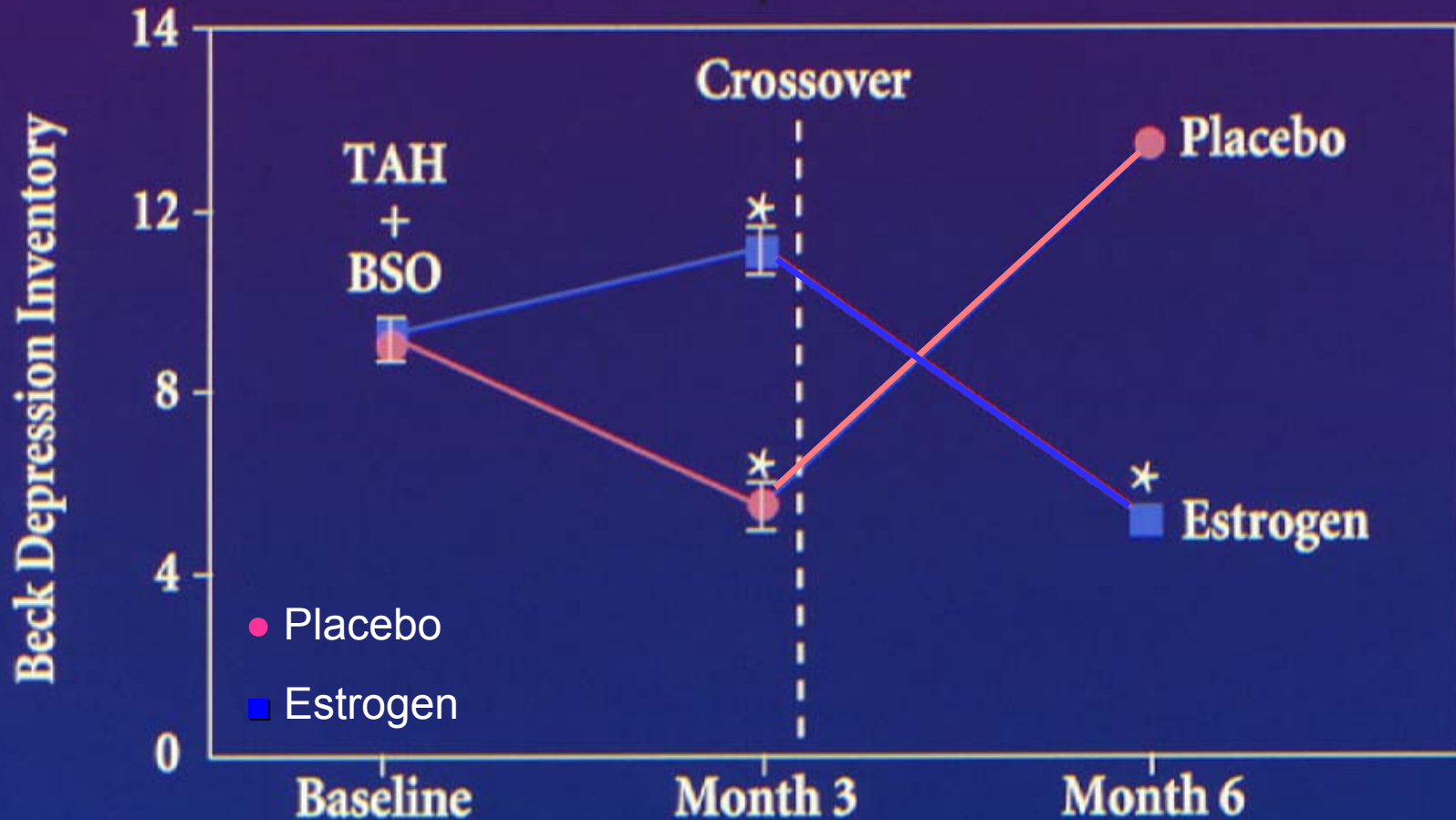


* $P < .05$ compared to baseline

† LAD = leuprolide acetate depot

Adapted from Sherwin BB and Tulandi T. *J Clin Endocrinol Metab.* 1996;81:2545-9.

Mood Changes Following Surgical Menopause



From Sherwin BB et al, *Biol Psychiatry* 28:339–348, 1990.

* p < 0.01

Other Factors Associated with Ovarian Failure

- Premature Ovarian Failure:
 - familial
 - immune
 - idiopathic
- Chemotherapeutic Agents
- Radiation Therapy

Ovarian Failure Following Chemotherapy

Age	Premature Ovarian Failure
<20 years	13%
20-30 years	50%
>30 years	100%

Cyclophosphamide pulse therapy

Bone Density in Women following Treatment for Hodgkin's Disease and Leukemia

	Z-Scores		
	All Subjects	HRT	No HRT
	<i>n</i> = 33	<i>n</i> = 11	<i>n</i> = 22
Distal Radius	-0.15	0.51	-0.47
Proximal Radius	-0.36	0.21	-0.65 *
Lumbar Spine	-0.22	0.43	-0.56
Femoral Neck	-0.38	0.24	-0.45

* $p = 0.03$.

Criteria for Major Depressive Episode

- 1) Depressed mood most of the day.....
- 2) Markedly diminished interest or pleasure....
- 3) Significant weight loss or gain
- 4) Insomnia or hypersomnia
- 5) Psychomotor agitation or retardation ...
- 6) Fatigue or loss of energy ...
- 7) Feelings of worthlessness or guilt ...
- 8) Diminished ability to think or concentrate
- 9) Recurrent thoughts of death ...

Adapted from: DSM-IV

Sustained Attention to Response Task in Depressed and Nondepressed Women

