

Observed Salivary Supplementation Ranges

Following is a table of *observed* ranges for specific dosages and modes of delivery of bioidentical hormone replacement therapy (BHRT). ZRT does not endorse or recommend any mode of delivery or dosage of BHRT, but provides these ranges as a guide for prescribing health care providers to monitor patients.

OBSERVED SALIVARY PROGESTERONE RANGES FOR BIOIDENTICAL PROGESTERONE PRODUCTS					
Route of Administration	Time Since Dosage (hours)	Dosage (mg)	Observed Range		
			20th %	50th %	80th %
Topical (male)	24	5	40	100	400
Topical (male)	24	10	50	135	1000
Topical	8	15	500	2000	7500
Topical	8	20	600	3000	10000
Topical	8	30	700	4000	12500
Topical	12	10	140	500	2400
Topical	12	15	170	625	3000
Topical	12	20	200	775	3350
Topical	12	25	225	925	4000
Topical	12	30	250	1100	4500
Topical	12	40	300	1400	5500
Topical	12	50	400	1700	6500
Topical	12	60	450	2000	7500
Topical	12	100	700	3000	12000
Topical	24	10	90	350	1400
Topical	24	15	100	400	1600
Topical	24	20	115	450	1800
Topical	24	25	125	525	2100
Topical	24	30	135	600	2300
Topical	24	40	150	700	2800
Topical	24	50	175	800	3500
Topical	24	60	200	950	4000
Topical	24	100	275	1500	6000
Oral	8	50	25	85	200
Oral	8	100	35	100	350
Oral	8	150	45	110	500
Oral	8	200	55	125	700
Oral	8	300	75	150	1100
Oral	12	50	20	50	150
Oral	12	100	25	50	175
Oral	12	150	25	50	200
Oral	12	200	35	100	300
Oral	12	300	50	150	600
Oral	24	50	15	40	125
Oral	24	100	25	45	150
Oral	24	150	35	50	175
Oral	24	200	40	60	250
Oral	24	300	45	125	500

OBSERVED SALIVARY ESTRADIOL RANGES FOR BIOIDENTICAL ESTROGEN PRODUCTS

Estradiol Type	Route of Administration	Time Since Dosage (hours)	Dosage (mg)	E2 Daily Dose (mg)	Observed Range		
					20th %	50th %	80th %
Estradiol	Oral	12	0.5	0.25	3	5	14
Estradiol	Oral	12	1	0.5	4	10	25
Estradiol	Oral	12	2	1.0	8	15	32
Estradiol	Oral	24	0.5	0.5	1.8	3	7.5
Estradiol	Oral	24	1	1.0	2.5	5	10
Estradiol	Oral	24	2	2.0	3.5	10	18
4:1 Biest	Oral	24	1.0 - 2.5	0.2 - 0.5	1.3	2	3.6
1:1 Biest	Topical	12	0.2 - 0.625	0.1 - 0.3125	1.5	4	13
1:1 Biest	Topical	12	1.0 - 1.5	0.5 - 0.75	3.1	10	50
1:1 Biest	Topical	24	0.2 - 0.625	0.1 - 0.3125	1.4	3	6.6
1:1 Biest	Topical	24	1.0 - 1.5	0.5 - 0.75	2.2	5	15
1:1 Biest	Topical	24	2.0 - 3.0	1.0 - 1.5	3.2	6	20
4:1 Biest	Topical	12	0.2 - 0.625	0.04 - 0.125	1.5	3	7.5
4:1 Biest	Topical	12	1.0 - 2.5	0.2 - 0.5	5	10	50
4:1 Biest	Topical	24	0.2 - 0.625	0.04 - 0.125	1.2	2.5	5
4:1 Biest	Topical	24	1.0 - 2.5	0.2 - 0.5	2.5	5	9
Estradiol	Topical	12	0.5	0.5	2.5	20	80
Estradiol	Topical	12	1.0 - 1.5	1.0 - 1.5	5	20	100
Estradiol	Topical	12	2.0 - 8.0	2.0 - 8.0	8	40	500
Estradiol	Topical	24	0.5	0.5	2	5	15
Estradiol	Topical	24	1.0 - 1.5	1.0 - 1.5	3.5	10	20
Estradiol	Topical	24	2.0 - 8.0	2.0 - 8.0	5	15	50

OBSERVED SALIVARY ESTRADIOL RANGES FOR MANUFACTURED ESTROGEN PRODUCTS

Estradiol Type	Route of Administration	Time Since Dosage (hours)	Dosage (mg)	E2 Daily Dose (mg)	Observed Range		
					20th %	50th %	80th %
Cenestin	Oral	12	0.625-1.25		2	3	5
Cenestin	Oral	24	0.625		1	2	3.5
Cenestin	Oral	24	1.25		1.4	3	5.6
Premarin	Oral	12	0.3		1	1.5	3.9
Premarin	Oral	12	0.625		1.6	2.6	4.6
Premarin	Oral	12	1.25		1.9	4.2	7
Premarin	Oral	24	0.3		0.9	1.4	2.7
Premarin	Oral	24	0.45		1	1.7	3.1
Premarin	Oral	24	0.625		1.2	1.9	3.6
Premarin	Oral	24	0.9		1.5	2.3	4.3
Premarin	Oral	24	1.25		1.8	2.8	5.3
Estratest	Oral	24	0.25		2	2.7	5.1
Estratest	Oral	24	0.625		1.5	2.5	4.4
Estropipate	Oral	12	0.625-0.75		3.3	8	15
Estropipate	Oral	24	0.625		1.5	3.5	6.6
Estropipate	Oral	24	1.25		1.7	5	10
Climara (estradiol)	Patch	Weekly	0.025	0.025	0.5	1.2	2
Climara (estradiol)	Patch	Weekly	0.0375	0.0375	0.6	1.3	2.3
Climara (estradiol)	Patch	Weekly	0.05	0.05	0.7	1.4	2.6
Climara (estradiol)	Patch	Weekly	0.075	0.075	0.9	1.6	3.2
Climara (estradiol)	Patch	Weekly	0.1	0.1	1	1.7	3.8
Estraderm	Patch	Bi-weekly	0.05	0.05	0.6	1.2	2.1
Estraderm	Patch	Bi-weekly	0.1	0.1	0.9	1.3	2.3
Vivelle (Estradiol)	Patch	Bi-Weekly	0.025	0.025	0.6	1.2	1.9
Vivelle (Estradiol)	Patch	Bi-Weekly	0.0375	0.0375	0.7	1.2	1.9
Vivelle (Estradiol)	Patch	Bi-Weekly	0.05	0.05	0.7	1.2	2
Vivelle (Estradiol)	Patch	Bi-Weekly	0.075	0.075	0.8	1.5	2.3
Vivelle (Estradiol)	Patch	Bi-Weekly	0.1	0.1	0.9	1.5	2.7
Estring	Vaginal	Continuous	2	0.02	0.5	0.9	2.2
Femring (E2-Acetate)	Vaginal	Continuous	0.05	0.05	0.5	0.9	2.5

OBSERVED SALIVARY TESTOSTERONE RANGES FOR BIOIDENTICAL TESTOSTERONE PRODUCTS

Route of Administration	Time Since Dosage (hours)	Dosage (mg)	Observed Range		
			20th %	50th %	80th %
Topical (Female)	12	0.1	20	40	50
Topical (Female)	12	0.2	20	45	65
Topical (Female)	12	0.3	20	50	80
Topical (Female)	12	0.5	30	55	110
Topical (Female)	12	1	35	75	180
Topical (Female)	12	2	40	120	350
Topical (Female)	24	0.1	20	38	65
Topical (Female)	24	0.2	20	35	70
Topical (Female)	24	0.3	20	39	75
Topical (Female)	24	0.5	20	38	80
Topical (Female)	24	1	25	44	100
Topical (Female)	24	2	30	56	135
Topical (Male)	12	50	700	3000	30000
Topical (Male)	24	5	100	250	900
Topical (Male)	24	10	150	375	1500
Topical (Male)	24	25	250	650	3000
Topical (Male)	24	50	400	1175	6000
Topical (Male)	24	50 (Androgel)	500	1600	4000
Topical (Male)	24	100	700	2000	8500
Oral (Female)	8 - 24	0.5 - 5	13	25	50
			No Significant Increase Over Baseline Levels		

OBSERVED SALIVARY DHEA-S RANGES FOR BIOIDENTICAL DHEA PRODUCTS

Route of Administration	Time Since Dosage (hours)	Dosage (mg)	DHEA-S Observed Range		
			20th %	50th %	80th %
Topical (female)	12	5	3	5	9
Topical (female)	12	10	4	7	13
Topical (female)	24	2	2	4	6
Topical (female)	24	3	2	4	7
Topical (female)	24	5	3	4	7
Topical (female)	24	10	3	5	8
Oral (female)	12	5	3	5	8
Oral (female)	12	10	4	8	11
Oral (female)	12	25	5	10	17
Oral (female)	24	5	3	5	9
Oral (female)	24	10	3	6	9
Oral (female)	24	25	5	8	14
Oral (male)	24	25	6	10	17
Oral (male)	24	50	6	12	21