

Supplementary Table 1. Weekly CBT Session Topics

Week	Session Topic	CBT Skills Education	Homework
1	Introducing CBT	a. Agenda Setting, Bridging b. CBT Model c. Identifying and rating moods with Subjective Units of Distress (SUDS)	Rating Moods Sheet
2	Situations and Emotions	a. ABC Model; Identifying situations, behaviors, emotions	ABC Sheet
3	Cognitions I	a. Identifying cognitions b. Automatic Thought Record (ATR) – 1st 3 Columns	ART Sheet (3 Columns)
4	Cognitions II: Cognitive Distortions	a. Identifying cognitive distortions b. Automatic Thought Record (ATR) – 5 Columns	ATR Sheet (5 Columns)
5	Behaviors I	a. Behavioral Activation; behaviors / activities and mood b. Activities checklist c. Activity and mood monitoring	Mood Monitoring & Activity Chart Sheet
6	Behaviors II: Problem Solving	a. Pros and cons of behaviors b. Consequences of behaviors c. “SOLVED” approach to problem solving	“SOLVED” Problem Solving Exercise Sheet
7	Relaxation Techniques	a. Diaphragmatic breathing b. Progressive muscle relaxation (PMR) c. Guided imagery	Practice diaphragmatic breathing, PMR or guided imagery once daily
8	Wrap-Up	a. Maintaining gains b. Self-management c. Wrap-up i. Likes / dislikes from CBT process ii. Most useful skills iii. Therapy termination, planning for self-management	N/A

Supplementary Table 2. Assay details

Assay	Laboratory ^a	Platform	Vendor	Kit Range
Androgens				
Total testosterone	DRC	Double antibody RIA	MP Biomedicals	Not reported
Free testosterone	DRC	Coated tube RIA	Beckman Coulter Diagnostics	0.18 - 100.0 pg/mL
Sex hormone binding globulin	CHOP	ELISA	ALPCO Diagnostics	33.00 - 2,950 nmol/L
Metabolic Labs				
Cholesterol	CHOP	MicroSlide assay	Orthoclinical Diagnostics	50 – 325 mg/dL
HDL	CHOP	MicroSlide assay	Orthoclinical Diagnostics	5.0 – 110.0 mg/dL
Triglycerides	CHOP	MicroSlide assay	Orthoclinical Diagnostics	10.0 – 525.0 mg/dL
Glucose	CHOP	MicroSlide assay	Orthoclinical Diagnostics	20.0 – 625.0 mg/dL
Insulin	DRC	Double antibody RIA	EMD Millipore	2 – 200 µU/mL
Inflammatory Markers				
Apolipoprotein A1	CHOP	ELISA	R&D Systems	0.125 - 4.000 g/L
Apolipoprotein B	CHOP	ELISA	R&D Systems	39.1 - 2,500 µg/mL
Interleukin-6	CHOP	ECL	Mesoscale Discovery	0.183 - 749 pg/mL
High sensitivity C-reactive protein	CHOP	Immulinite 1000	Siemens	0.30 - 100 mg/L
Salivary cortisol	CHOP	ELISA	Salimetrics	0.00 – 3.00 µg/dL

^aLabs were run by either the Translational Core Laboratory at the Children’s Hospital of Philadelphia (CHOP) or the University of Pennsylvania Diabetes Research Center (DRC)