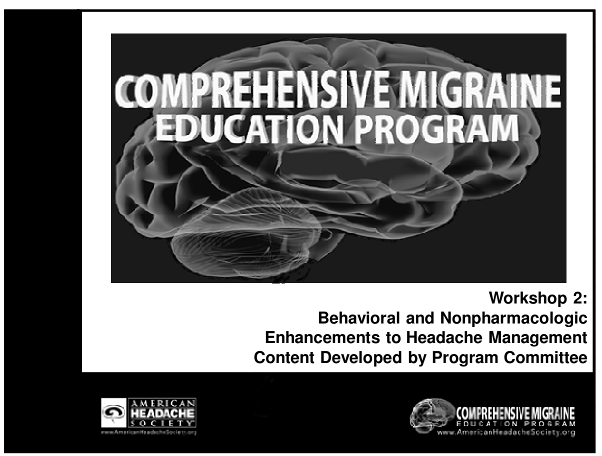

Program Committee Disclosures

PROGRAM CHAIR: DAWN C. BUSE, PHD, FAHS
Dr. Buse has received consulting fees and/or honoraria from Allergan, Inc., and Zogenix.

PROGRAM CHAIR: RICHARD B. LIPTON, MD, FAHS
Dr. Richard B. Lipton holds stock options in eNeura Therapeutics (a company without commercial products); serves as consultant, advisory board member, or has received honoraria from: Alder, Allergan, Inc., Autonomic Technologies, Boston Scientific, Bristol Myers Squibb, Colucid, Dr. Reddy's, ElectroCore, Eli Lilly, Endo, eNeura Therapeutics, Informa, Labrys, Merck, Novartis, Teva, Vedanta.

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Dr. Andrasik has nothing to disclose.

Program Committee Disclosures

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Dr. Gutterman has received consulting fees and/or honoraria from NuPathe, Teva Pharmaceuticals, Dr. Reddy Pharmaceuticals.

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Dr. Nicholson has nothing to disclose.

TODD SMITHERMAN, PHD, FAHS
Dr. Smitherman is the recipient of a research grant from Merck and Co., Inc.

Behavioral Seminar Course Developers

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Richard B. Lipton, MD, FAHS
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Learning Objectives

At the conclusion of this presentation, participants will be better able to:

- Understand the science and art of communication
- Enhance motivation and adherence among patients being managed for migraine
- Be familiar with and able to apply empirically supported behavioral treatments in clinical practice
- Incorporate behavioral strategies into treatment plans that are tailored to the needs of their patients

Overview of Program

The Science and Art of Communication	Motivation and Adherence for Managing Migraine
Empirically Supported Behavioral Treatments: Overview and Empirical Data	Tailoring Behavioral Strategies and Treatment Plans

Behavioral Interventions Include a Range of Techniques From a Range of Providers

	HCPs Can Provide	Behavioral Specialist Needed	Useful for All	Needed for Some
Education (triggers, healthy lifestyle)	✓		✓	
Effective communication	✓		✓	
Adherence enhancement strategies	✓		✓	
Relaxation training		✓	✓	
Stress Management		✓	✓	
Cognitive Behavioral Therapy		✓		✓
Dialectic Behavioral Therapy		✓		✓
Biofeedback		✓		✓

Clinician = Coach Patient = Player

Clinician	• Uses experience and expertise to teach patients the skills and tools to manage migraine • **Most effective when:** – Communicating what is important to the players – Enhancing their skills by addressing areas needing improvement
Patient	• Puts the principles and tools provided by the clinician "in play" on a daily basis for migraine management • **Most effective when:** – Absorbing what the coach teaches – Practicing to build their skills – Getting more instruction from the coach as needed

Nicholson R. *Curr Pain Head Rep.* 2010;14:47–54.

Why Is Effective Communication Essential for Migraine Management?

Why Is Effective Communication Essential for Migraine Management?

No external measure (eg, MRI, blood test) to assess pain that is more reliable or valid than the patient's report[1]

Any breakdown in patient-physician communication negatively impacts treatment quality[2–5]

1. Nicholson et al. *Headache.* 2006;46:754–765; 2. Buse et al. *Curr Pain Head Rep.* 2008;12:230–236; 3. Hahn *Wolff's Headache and Other Head Pain* 2008:805–824; 4. Lewicki et al. *Acad Mgmt Rev.* 1998;23:438–458; 5. Rousseau et al. *Acad Mgmt Rev.* 1998;23:393-404.

American Migraine Communication Studies

	AMCS-1
Assessed ictal impairment (%)	10
Assessed interictal impairment (%)	0
Addressed need for migraine prophylaxis (%)	50
Patient-physician agreement on frequency (%)	45
Patient-physician agreement on impairment (%)	49
Length of visit (minutes)	11

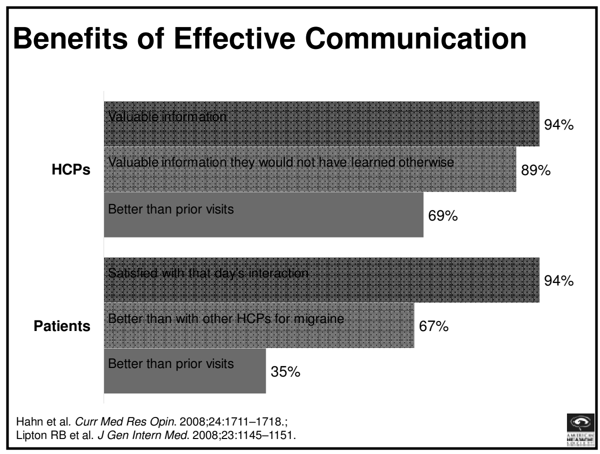
Hahn et al. *Curr Med Res Opin.* 2008;24:1711–1718.

American Migraine Communication Studies

	AMCS-1	AMCS-2
Assessed ictal impairment (%)	10	90
Assessed interictal impairment (%)	0	45
Addressed need for migraine prophylaxis (%)	50	74
Patient-physician agreement on frequency (%)	45	56
Patient-physician agreement on impairment (%)	49	61
Length of visit (minutes)	11	9

Hahn et al. *Curr Med Res Opin.* 2008;24:1711–1718.;
Lipton RB et al. *J Gen Intern Med.* 2008;23:1145–1151.

Benefits of Effective Communication



Hahn et al. *Curr Med Res Opin.* 2008;24:1711–1718.;
Lipton RB et al. *J Gen Intern Med.* 2008;23:1145–1151.

Ask-Tell-Ask in Migraine

Ask:
- How many headache attacks do you get each month?
- On average, how long do your headaches last?

Tell (Rephrase):
- So you have 5 headache attacks per month that last 2 days each on average?

Ask:
- So you are having headaches on about 10 days per month on average?
- Can you tell me about how headaches are impacting your life?

Hahn et al. *Curr Med Res Opin.* 2008;24:1711–1718;
Lipton RB et al. *J Gen Intern Med.* 2008;23:1145–1151.

Behavioral ARS Question 1

Which of the following provider characteristics is most predictive of patient's trust?

A. Where you attended medical school
B. Your empathy towards the patient
C. You and the patient having the same ethnicity
D. Your years of experience

Influence of Empathy and Trust

Patients who perceive their physician as being empathetic have:

- Less distress about their disease
- Greater confidence in their ability to cope with treatments and symptoms

Patients who trust their doctors more:

- Are more likely to be prescribed needed migraine medication
- Have less disability

Zachariae et al. *Br J Cancer*. 2003;88:658-665; Levinson et al. *JAMA*. 2000;284:1021-1027; Parchman et al. *Fam Med*. 2004;36:22-27; Heisler et al. *J Gen Intern Med*. 2002;17:243-252; Nicholson et al. *Headache*. 2006;46:754-765.

Show Empathy, Increase Trust

Collaborative Decision-Making

Open Ended Questions

Active Listening

Behavioral ARS Question 2

Migraine patients are often ambivalent about making needed changes to improve their condition.

A. True
B. False

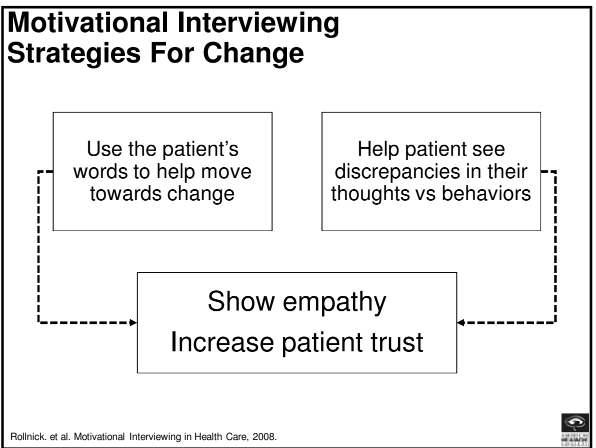
Motivational Interviewing

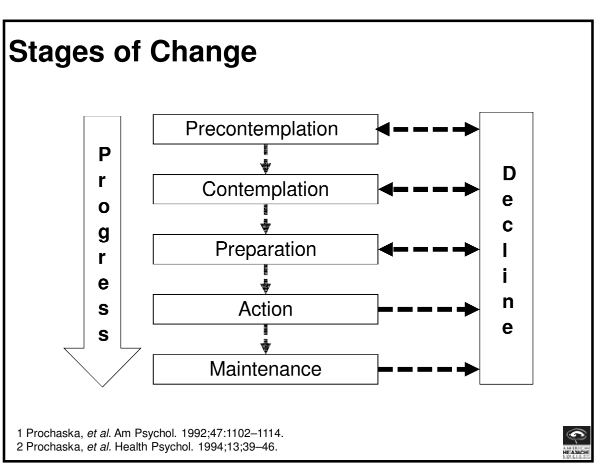
Collaborative | Guiding*

*To elicit/strengthen motivation for change

Involves:

- Recognizing a problem
- Identifying the patient's readiness for change
- Tailoring interventions to the patient's stage of readiness for change





Readiness to Change: Precontemplation

Description	Principles to Address
Not motivated to change	Challenge disabling beliefs
Doesn't see the need or disagrees about the need	Set treatment expectations

1 Prochaska et al. *Am J Health Prom.* 1997;12:38–148. ; 2 Prochaska et al. *Health Psychol.* 1994;13;39–46.; 3 Zimmerman et al. *Am Fam Physician.* 2000;61:1409–1416.; 4 Prochaska et al. *Am Psychol.*.1992;47:1102–104.

Tools to Use: Precontemplation

Make patients aware of the need to actively manage migraine

- Recommend tools that clarify treatment needs
  - Headache diary
  - MIDAS questionnaire
  - Address denial of chronic illness
- A "plan of action" will NOT work—patients are not yet motivated to actively manage their condition

Nicholson R. *Curr Pain Headache Rep.* 2010;14:47–54.

Readiness to Change: Contemplation

Description	Principles to Address
Patient has some motivation to change, however. . .	Explore consequences of changing or not changing
Lacks the skills needed to change **and/or**	
Remains unsure it is worth the time and effort	

Use Motivational Interviewing

1 Prochaska et al. *Am J Health Prom.* 1997;12:38–148. ; 2 Prochaska et al. *Health Psychol.* 1994;13;39–46.; 3 Zimmerman et al. *Am Fam Physician.* 2000;61:1409–1416.; 4 Prochaska et al. *Am Psychol.*.1992;47:1102–104.

Readiness to Change: Preparation

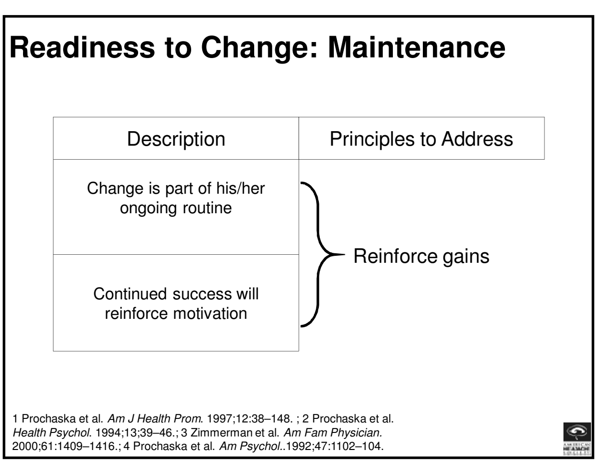
Description	Principles to Address
Motivated to change, but motivation may be impeded by. . .	Identify and address skills deficits
Lack of skills and/or **barriers** to successful change	Develop plans to address barriers

1 Prochaska et al. *Am J Health Prom.* 1997;12:38–148. ; 2 Prochaska et al. *Health Psychol.* 1994;13;39–46.; 3 Zimmerman et al. *Am Fam Physician.* 2000;61:1409–1416.; 4 Prochaska et al. *Am Psychol.*.1992;47:1102–104.

Readiness to Change: Action

Description	Principles to Address
Patient is actively making changes, but. . .	Reinforce adaptive changes
Barriers could diminish motivation	Facilitate self-maintenance

1 Prochaska et al. *Am J Health Prom.* 1997;12:38–148. ; 2 Prochaska et al. *Health Psychol.* 1994;13;39–46.; 3 Zimmerman et al. *Am Fam Physician.* 2000;61:1409–1416.; 4 Prochaska et al. *Am Psychol.*.1992;47:1102–104.



Tools to Use: Action or Maintenance

Focused problem-solving—
How to. . .

- Choose when to use a migraine-specific medication
- Remember to take preventative medication daily
- Manage triggers

Nicholson R. *Curr Pain Headache Rep.* 2010;14:47–54.

Cognitive Influences in Migraine: Self-Efficacy

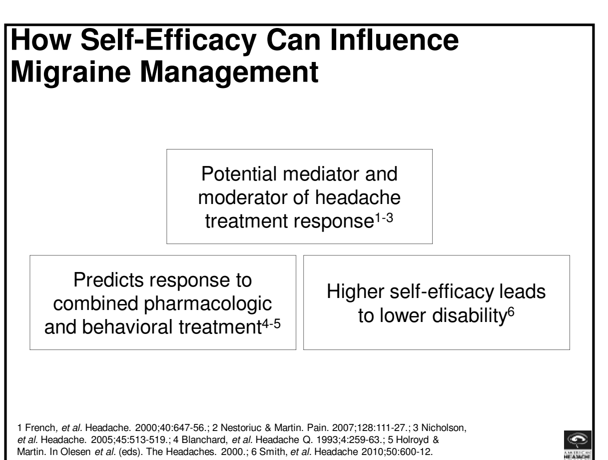
Patient's belief that:

- He/she can successfully engage in a course of action
- Action will produce a desired outcome

Individuals possess self-efficacy belief for various behaviors:

- Managing triggers
- Adhering to treatment regimens
- Coping with pain
- Limiting disability

1 Bandura. Psych Rev.1977;84:191-215.; 2 Schwarzer. Self-efficacy: Thought control of action. 1992.; 3 Bandura. Self-efficacy. Encyclopedia of human behavior. 1994.; 4 Bandura. Self-Efficacy in Changing Societies. 1995.



Locus of Control

Internal	Healthcare Professionals	Fate/Chance
"What can *I* do to manage these migraines?"	"*You* need to do something to manage these migraines"	"There is *nothing anyone* can do to manage these migraines"

1 Nicholson, *et al.* Headache. 2007;47:413-26.; 2 Lefcourt. Locus of control: Current trends in theory and research. 1982.; 3 Rotter. Psychological Monographs. 1966;80:609.; 4 Wallston et al. Health Educ Beh. 1978;1:160-70.

Behavioral ARS Question 3

What type of locus of control is associated with improved headache outcomes?

A. Internal
B. External
C. Chance
D. Locus of control is unrelated to headache outcomes

Consequences of a Locus of Control

Internal locus of control	External locus of control
Are aware of and actively manage their environment	Do not attempt to actively manage their situation
Improved management of triggers such as stress[5]	Feel "helpless" and/or "hopeless" about their situation
Value skill development and achievement reinforcement	Do not develop skills for headache management

↓

- Better treatment outcomes[1-3]
- Less disability[3]
- Less distress[4]

↓

- Poor treatment outcomes[1-3]
- More disability[3]
- More distress[4]

1 Hudzinsky et al. Headache. 1985;25:1-11.; 2 Nestoriuc & Martin. Pain. 2007;128:111-27.; 3 Scharff et al. Headache. 1995;35:527-33.; 4 Smith et al. Headache. 2010;50:600-12.; 5 Nicholson, et al. Headache. 2005;45:1124-39.

Adherence

- Definition: The extent to which a patient's behavior matches the agreed-upon treatment regimen
- Preferable to the term "compliance" which is less collaborative

Gillissen. *J Physiol Pharmacol.* 2007;58:205–222; Katic et al. *Headache.* 2010,50;117–129.

Medication Adherence Facts

- 10–20% of migraine prescriptions are never filled[2-4]
- <60% of migraineurs adhere to prescription regimen[1]
- 20–50% of patients are noncompliant with prophylactic medications[2,5-9]

1 Edmeads et al. *Can J Neurol Sci* 1993;20:131-7.; 2 Packard & O'Conell. *Headache* 1986;26:99-102.; 3 Gallagher et al. *Headache* 2003;43:36-43; 4 Nicholson et al. AHS scientific meeting. Chicago, IL. 2007; 5 Ifergene et al. *Headache* 2006;46:1261-3.; 6 Pavone et al. *Cephalalgia* 2007;27:1000-04.; 7 Etamed et al. *J Manag Care Pharm* 2005;11:137-44; 8 Mulleners et al. *Cephalalgia* 1998;18:52-6. ; 9 Fitzpatrick et al. *J R Soc Med* 1983;76:112-5.

Assessing and Addressing Adherence

Ask the Patient

- Are you taking medication the way I directed?
- Have you had any trouble with taking your medication?

Normalize Non-Adherence

1 Hahn, *et al. Ophthalmology* 2010;117:1339-47.
2 Hahn. *Ophthalmology* 2009;116(11 Suppl):S37-42.

Factors Driving Medication Adherence in Migraine

		Migraine	
		Important	**Not Important**
Medication	**Effective and Safe**	Adherence very likely	Address disease perception
	Not Effective and/or Safe	Address medication perception	Adherence very unlikely

1 Katic, *et al. Headache.* 2010,50;117-29. ; 2 Dunbar-Jacob & Mortimer-Stephens. *J Clin Epidemiol.* 2001;54:S57-60.; 3 Rains, *et al. Headache.* 2006;46:1395-1403.

Putting it All Together Use Case…5 Things from the "Choosing Wisely Campaign

1. Don't perform neuroimaging in patients with stable headaches that meet criteria for migraine
2. Don't perform computed tomography (CT) imaging for headache when magnetic resonance imaging (MRI) is available, except in emergency settings
3. Don't recommend surgical deactivation of migraine trigger points outside of a clinical trial
4. Don't prescribe opioid or butalbital-containing medications as first-line treatment for recurrent headache disorders
5. Don't recommend prolonged or frequent use of over-the-counter (OTC) pain medications for headache

Choosing Wisely®

An initiative of the ABIM Foundation

American Headache Society

AMERICAN HEADACHE SOCIETY

www.AmericanHeadacheSociety.org

Five Things Physicians and Patients Should Question

1 **Don't perform neuroimaging studies in patients with stable headaches that meet criteria for migraine.**
Numerous evidence-based guidelines agree that the risk of intracranial disease is not elevated in migraine. However, not all severe headaches are migraine. To avoid missing patients with more serious headaches, a migraine diagnosis should be made after a careful clinical history and an examination that documents the absence of any neurologic findings such as papilledema. Diagnostic criteria for migraine are contained in the International Classification of Headache Disorders.

2 **Don't perform computed tomography (CT) imaging for headache when magnetic resonance imaging (MRI) is available, except in emergency settings.**
When neuroimaging for headache is indicated, MRI is preferred over CT, except in emergency settings when hemorrhage, acute stroke or head trauma are suspected. MRI is more sensitive than CT for the detection of neoplasm, vascular disease, posterior fossa and cervicomedullary lesions and high and low intracranial pressure disorders. CT of the head is associated with substantial radiation exposure which may elevate the risk of later cancers, while there are no known biologic risks from MRI.

3 **Don't recommend surgical deactivation of migraine trigger points outside of a clinical trial.**
The value of this form of "migraine surgery" is still a research question. Observational studies and a small controlled trial suggest possible benefit. However, large multicenter, randomized controlled trials with long-term follow-up are needed to provide accurate estimates of the effectiveness and harms of surgery. Long-term side effects are unknown but potentially a concern.

4 **Don't prescribe opioid or butalbital-containing medications as first-line treatment for recurrent headache disorders.**
These medications impair alertness and may produce dependence or addiction syndromes, an undesirable risk for the young, otherwise healthy people most likely to have recurrent headaches. They increase the risk that episodic headache disorders such as migraine will become chronic, and may produce heightened sensitivity to pain. Use may be appropriate when other treatments fail or are contraindicated. Such patients should be monitored for the development of chronic headache.

5 **Don't recommend prolonged or frequent use of over-the-counter (OTC) pain medications for headache.**
OTC medications are appropriate treatment for occasional headaches if they work reliably without intolerable side effects. Frequent use (especially of caffeine-containing medications) can lead to an increase in headaches, known as medication overuse headache (MOH). To avoid this, OTC medication should be limited to no more than two days per week. In addition to MOH, prolonged overuse of acetaminophen can cause liver damage, while overuse of nonsteroidal anti-inflammatory drugs can lead to gastrointestinal bleeding.

http://bit.ly/1xJSrjm

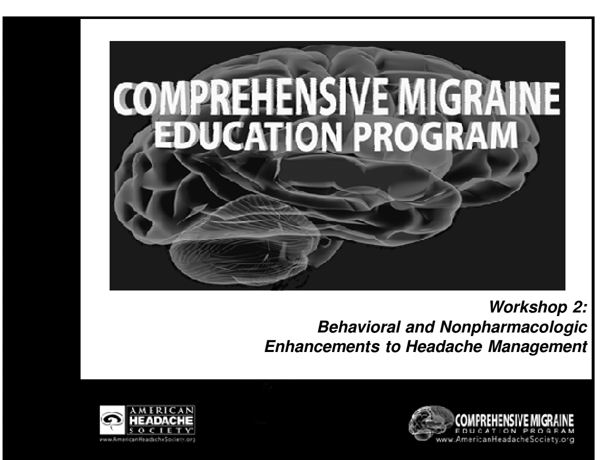
Summary

The Science and Art of Communication

- Establishing empathy
- Collaborative care
- Communication strategies (AMCS)

Motivation and Adherence for Managing Migraine

- Motivational interviewing and stages of change
- Self-efficacy and locus of control
- Enhancing adherence

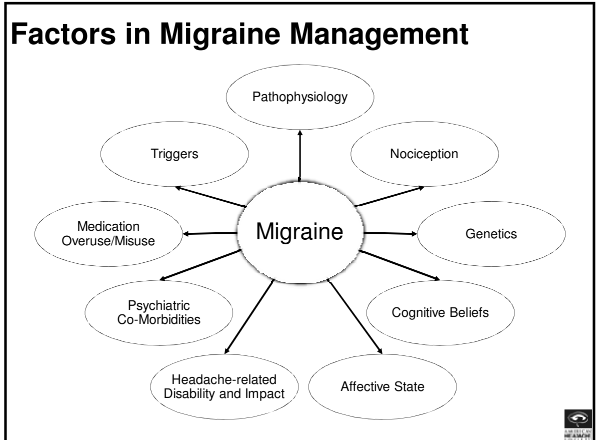


Part II

Overview: Part 2

- The biopsychosocial model of migraine
- Behavioral interventions for migraine: the evidence
- Behavioral interventions for migraine: the nuts and bolts
- Behavioral interventions for migraine for all healthcare professionals
- Behavioral interventions for migraine for the behavioral specialists
- How to identify appropriate patients for behavioral treatments for migraine
- Tips on how to make referrals
- Conclusions, Q &A

Factors in Migraine Management



Behavioral Interventions Include a Range of Techniques From a Range of Providers

	HCPs Can Provide	Behavioral Specialist Needed	Useful for All	Needed for Some
Education (triggers, healthy lifestyle)	✓		✓	
Effective communication	✓		✓	
Adherence enhancement strategies	✓		✓	
Relaxation training		✓	✓	
Stress Management		✓	✓	
Cognitive Behavioral Therapy		✓		✓
Dialectic Behavioral Therapy		✓		✓
Biofeedback		✓		✓

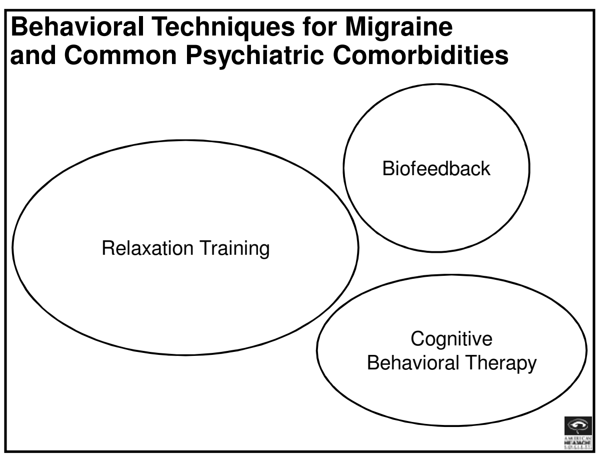
Brief Behavioral Strategies for ALL Healthcare Professionals

Education About Behavioral Factors in Migraine
Triggers
Exacerbating/maintaining factors
Proper medication use and timing

Headache Self-Monitoring
Diaries for triggers
Lifestyle factors
Sleep
Medication use (paper-pencil, web-based or Smartphone apps)

Promote Healthy Lifestyle Behaviors
Stress reduction/management
Consistent, adequate sleep
Regular exercise
Smoking cessation
Healthy diet
Maintain a healthy weight or weight loss

Behavioral Techniques for Migraine and Common Psychiatric Comorbidities



Emerging Therapies

- Acceptance and Commitment Therapy reduces[1,2]:
  - Headache-related disability
  - Emotional distress
  - Two small studies

1. Dindo et al. J Behav Res Ther 2012;50:537-43.; 2. Mo'tamedi et al. Headache 2012;52:1106-19.

Emerging Therapies

- Acceptance and Commitment Therapy[1,2]
  - Two small studies
    - Reduced headache-related disability
    - Reduced emotional distress
- Mindfulness Meditation[3,4]
  - Two pilot studies
  - Effects on headache frequency merit study with larger samples
    - Improvements in self-efficacy, disability, and acceptance of pain

1. Dindo et al. J Behav Res Ther 2012;50:537-43.; 2. Mo'tamedi et al. Headache 2012;52:1106-19.; 3. Day et al. Clin J Pain 2014;30:152-161.; 4. Wells et al. Headache. 2014; doi: 10.1111/head.12420.

Targets of Behavioral Interventions

- Migraine symptoms, pain
- Migraine related disability
- Migraine attack triggers
- Comorbidities

US Headache Consortium

- American Academy of Family Physicians
- American Headache Society
- American Academy of Neurology
- American College of Emergency Physicians
- National Headache Foundation
- American College of Physicians
- American Osteopathic Association

US Headache Consortium Guidelines for Non-pharmacologic Treatment

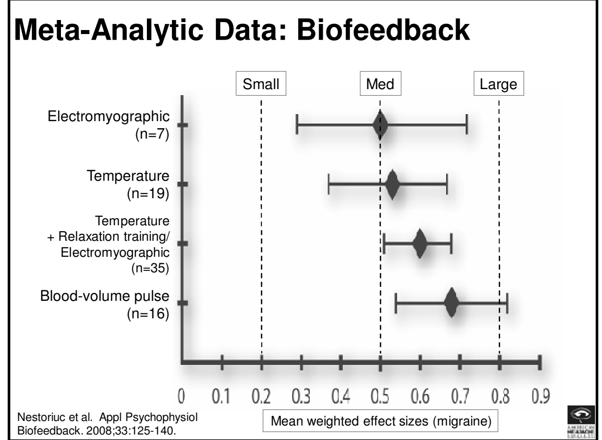
Migraine Prevention

- Grade A evidence
  - Relaxation
  - Thermal BF + relaxation
  - EMG Biofeedback
  - CBT
- Grade B evidence:
  - Behavioral therapy improves drug outcomes
  - 2010 Holroyd data would qualify as Grade A

AHRQ www.ahrq.gov

Campbell et al. 2000. Holroyd et al. BMJ. 2010;341:c4871.

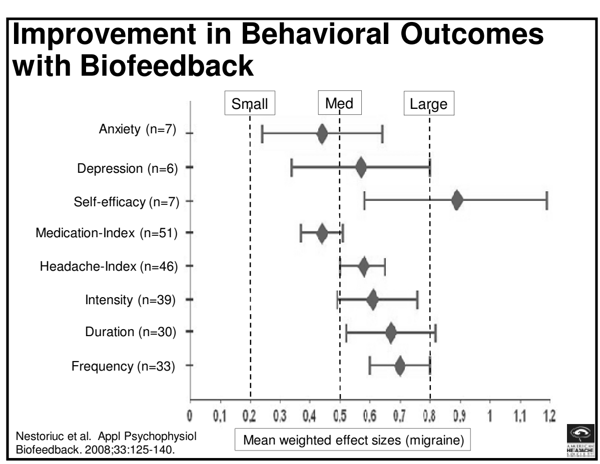
Meta-Analytic Data: Biofeedback



Mean weighted effect sizes (migraine)

Nestoriuc et al. Appl Psychophysiol Biofeedback. 2008;33:125-140.

Improvement in Behavioral Outcomes with Biofeedback



Mean weighted effect sizes (migraine)

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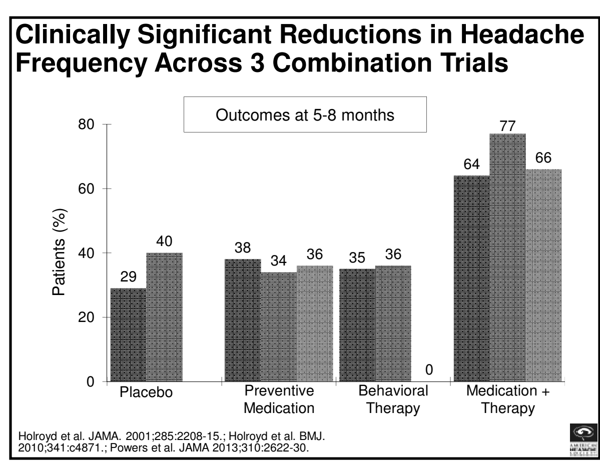
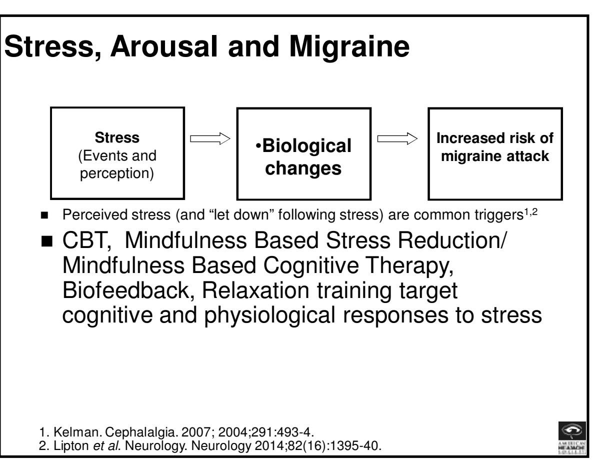

Clinically Significant Reductions in Headache Frequency Across 3 Combination Trials
Outcomes at 5-8 months
Patients (%)
80
60
40
20
0
29
40
38
34
36
35
36
0
64
77
66
Placebo
Preventive Medication
Behavioral Therapy
Medication + Therapy
Holroyd et al. JAMA. 2001;285:2208-15.; Holroyd et al. BMJ. 2010;341:c4871.; Powers et al. JAMA 2013;310:2622-30.


Stress, Arousal and Migraine
Stress
(Events and perception)
•Biological changes
Increased risk of migraine attack
Perceived stress (and "let down" following stress) are common triggers1,2
CBT, Mindfulness Based Stress Reduction/ Mindfulness Based Cognitive Therapy, Biofeedback, Relaxation training target cognitive and physiological responses to stress
1. Kelman. Cephalalgia. 2007; 2004;291:493-4.
2. Lipton et al. Neurology. Neurology 2014;82(16):1395-40.

Progressive Muscle Relaxation

Identifying Patients Who Will Benefit from Specialized Behavioral Interventions

- Consortium guideline recommendations

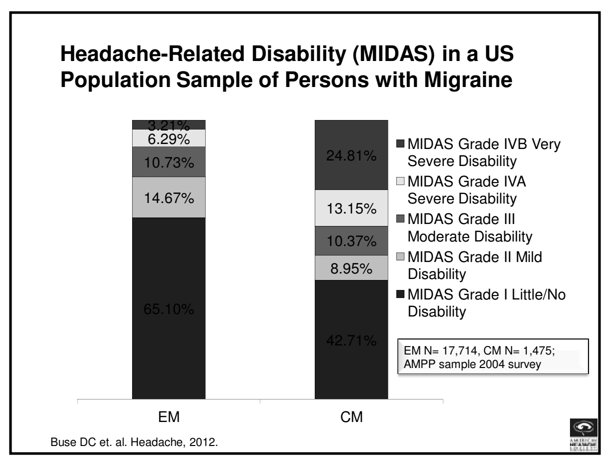
Identifying Patients Who Will Benefit from Specialized Behavioral Interventions

- Consortium guideline recommendations
- Additional factors to consider:
  - Headache-related disability
  - Headache Impact
  - Quality of life

Behavioral ARS Question 1

Among individuals with chronic migraine, about _____% experience little or no migraine-related disability, but approximately _____% have severe or very severe disability?

A. 5, 20
B. 10, 25
C. 25, 33
D. 40, 40



Identifying Patients Who Will Benefit from Specialized Behavioral Interventions

- Consortium guideline recommendations
- Additional factors to consider:
  - Headache-related disability
  - Impact
  - Quality of life
  - Psychiatric comorbidities

Why Are Psychiatric Comorbidities Important?

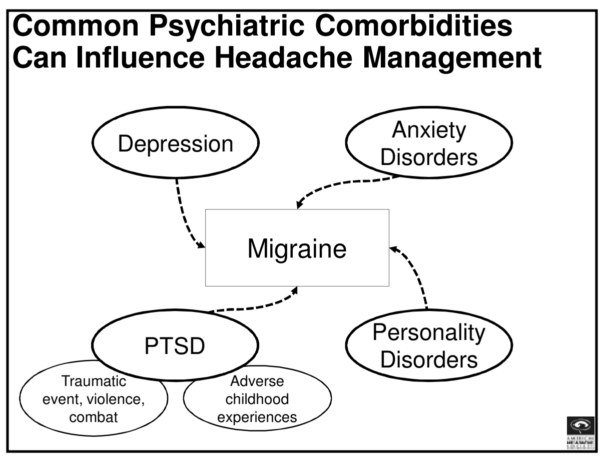
Have serious consequences (eg, suicide)

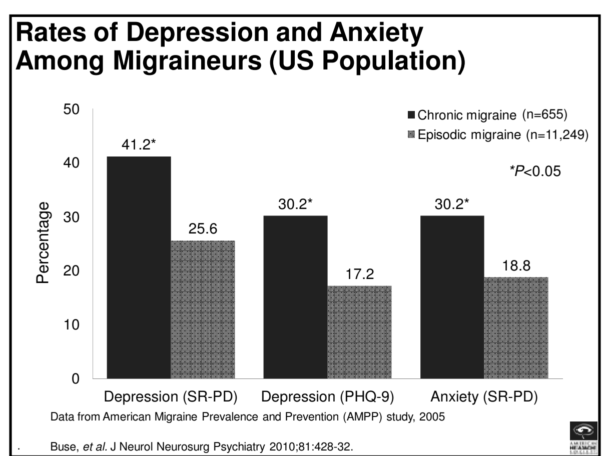
May share underlying biologic mechanism(s)

Risk factors for progression from episodic to chronic migraine (depression, anxiety, etc.)

Contribute to:
- Problems with adherence
- Treatment refractoriness
- Poor treatment outcomes

Significantly affect patient's quality of life





Behavioral ARS Question 2

I use psychiatric screening instruments in my clinical practice_____.

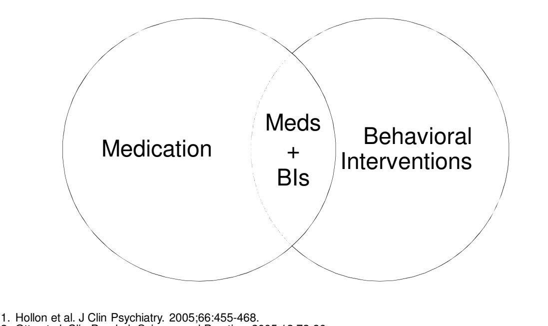
A. Rarely, if ever
B. On some patients
C. On most patients
D. On all/nearly all patients

Depression and Anxiety: Assessment Instruments

PRIME-MD Screens most DSM-IV Axis I disorders	**PHQ-9** Depression
GAD-7 Anxiety	**GAD-4** Brief depression and anxiety screen

- All are available for use and distribution free of charge
- See www.phqscreeners.com for measures, manuals, validation manuscripts, and versions in multiple languages
- Additional information listed in the printed “Resource Guide”
- More information available through the online AHS CME CMEP programs “Behavioral Tools You Can Use”

Options for Treating Psychiatric Comorbidities



1. Hollon et al. J Clin Psychiatry. 2005;66:455-468.
2. Otto et al. Clin Psychol: Science and Practice. 2005;12:72-86.

Pharmacologic Treatment: Comorbidities

- Tailor treatment to the comorbid disorder
- Pharmacologic “two-fers” are often unrealistic
  - SSRIs and SNRIs lack strong efficacy for migraine[1]
  - Antidepressant dose higher than antimigraine dose
  - Separate agents are usually indicated
    - Risk of serotonin syndrome likely overblown[2]
    - Beware drug-drug interactions
    - Use a staggered start
- The effect on comorbid depression of antidepressants prescribed for headache prophylaxis is largely unknown

1. Moja et al. Cochrane Database of Systematic Reviews. 2005;3:Art CD002919; 2. Evans et al. Headache. 2010;50:1089-1099.

General Pharmacologic Strategies

Depression
Roughly 2/3 respond to an SSRI/SNRI within 2 months[1]
Consider a second SSRI/SNRI if failure with first
Another failure—try drug with a different or dual mode of action

Anxiety
SSRIs are effective; require higher doses than for depression
Benzodiazepines are a short-term option but contribute to:
- Addiction potential
- Avoidant coping

1. Stahl SM. Stahl's Essential Psychopharmacology. 2008.

Brief Behavioral Interventions: Depression

Encourage depressed patients to be **active**

Don't wait—activate!

- Write an "Activity Prescription"
- **Be specific**—do X activity Y times/week for Z duration
  - Walk around the neighborhood for 30 minutes each day
  - Go to the church you've been thinking about visiting
  - Engage in 30 minutes of brisk walking 3 times a week, stopping only if your pain becomes severe

Refer to mental health professional for clinically significant depression

Brief Behavioral Interventions: Stress and Anxiety

- Educate patients about maladaptive consequences of avoidance
- Recommend patient workbook or relaxation exercises
  - PMR, visual imagery, diaphragmatic breathing
  - Available as smartphone apps, podcasts, CD
- "Prescribe" activities for stress management
  - Pleasant activities
  - Daily relaxation time
  - Exercise/yoga

Refer for clinically significant anxiety, non-response to medication or concerns about addiction

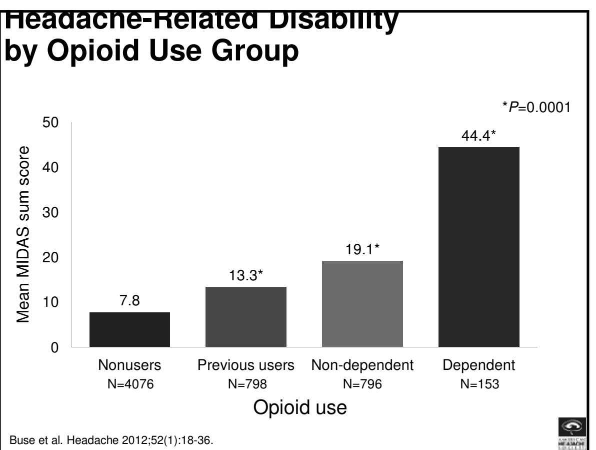
Identifying Patients Who Will Benefit from Specialized Behavioral Interventions

- Consortium guideline recommendations
- Additional factors to consider:
  - Headache-related disability
  - Impact
  - Quality of life
  - Psychiatric comorbidities
  - Medication overuse or misuse

Opioid Use by Migraineurs

- Opioids are not:
  - Migraine-specific
  - Recommended by US Headache Consortium
- Still commonly used for migraine
- Frequent use related to negative outcomes
  - More frequent attacks
  - Greater headache-related disability
  - High rates of psychiatric comorbidities
  - More healthcare resource utilization

Headache-Related Disability by Opioid Use Group



Buse et al. Headache 2012;52(1):18-36.

ICHD-III β MOH

New Diagnostic Criteria

A. Headache* ≥15 days/month in a patient with pre-existing headache disorder

B. Regular overuse for >3 months of ≥1 acute/symptomatic treatment

1. Ergotamine, triptans, opioids, or combination analgesic medications on ≥10 days/month
2. Simple analgesics or any combination of ergotamine, triptans, analgesics, or opioids on ≥15 days/month on a regular basis without overuse of any single class alone

*If attributed to substance withdrawal, sub-classify as caffeine withdrawal headache; opioid withdrawal headache; estrogen withdrawal headache

Headache Classification Subcommittee of the IHS. ICHD-III (beta). *Cephalalgia.* 2013;33:629–808.

Presence of Comorbid Psychiatric Disorders in Migraine With and Without MOH

Disorder	With MOH (%)	Without MOH (%)	Odds Ratio	*P*-value
All mood disorders	85	51	4.5	0.007
Major depressive episode	39	2	21.8	0.004
All anxiety disorders	83	54	3.5	0.02
Panic disorder	24	2	12.1	0.02
Generalized anxiety disorder	42	10	6.0	0.004
Social phobia	34	12	4.3	0.02
All substance disorders	44	15	7.6	0.001

Radat et al. Cephalalgia. 2005;25:519-522.

Behavioral Therapy Combined with Medication Management in MOH

Adding behavioral therapy to medication withdrawal and prophylaxis for MOH can improve outcomes and reduce relapse[1-4]

Behavioral sleep intervention yields improvement in MOH and reversion to episodic migraine[5]

Adding biofeedback-assisted relaxation training to medication withdrawal and prophylaxis reduced relapse rates and analgesic use at 3-year follow up[6]

1. Blanchard et al. Biof Self Reg 17:197-202. 2. Matthew et al. Headache 1990;30:634-8.
3. Baumgartner et al. Headache 1989;29:510-4-97. 4. Lake, Headache 2006;46:S88-97.
5. Calhoun & Ford, Headache 2007;47:1178-83. 6. Grazzi et al. Headache 2002;42:483-90.

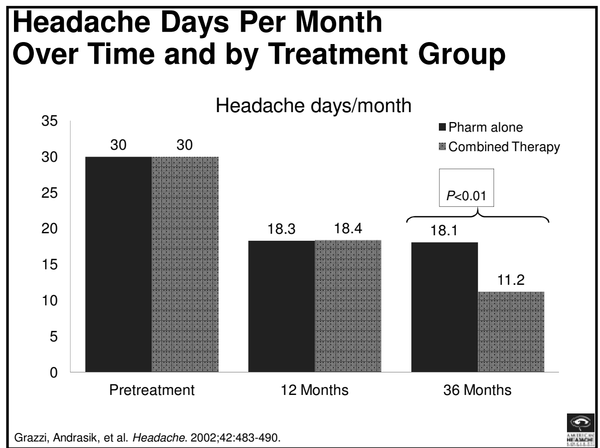
Behavioral vs Pharmacologic Treatment of MOH: A 3-Year Outcome Study

Quasi-randomized trial

- Asses medication + behavioral intervention for MOH
- Subjects: n= 61; 83% women
- Group 1
  - Medication withdrawal
  - Tailored medication prophylaxis
- Group 2
  - Medication withdrawal
  - Tailored medication prophylaxis
  - Biofeedback-assisted relaxation training
    - PMR
    - EMG biofeedback (total 8 sessions) with home practice

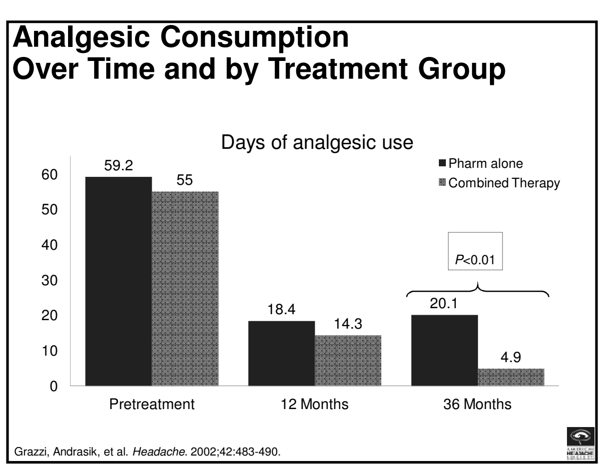
Grazzi, Andrasik, et al. *Headache.* 2002;42:483-490.

Headache Days Per Month Over Time and by Treatment Group



Grazzi, Andrasik, et al. *Headache.* 2002;42:483-490.

Analgesic Consumption Over Time and by Treatment Group



Grazzi, Andrasik, et al. *Headache.* 2002;42:483-490.

Identifying Patients Who Will Benefit from Specialized Behavioral Interventions

- Consortium guideline recommendations
- Additional factors to consider:
  - Headache-related disability
  - Impact
  - Quality of life
  - Psychiatric comorbidity
  - Medication overuse or misuse
- Risk factors for progression

Risk Factors for CM/CDH

Comorbidities
- Depression
- Anxiety
- Other pain disorders
- Obesity
- Asthma
- Snoring

Exogenous Factors
- Stressful life events
- Head/Neck injury
- Caffeine

Treatment-related
- Poor treatment efficacy
- Medication overuse

Headache Features
- Attack frequency (headache days)
- Persistent, frequent nausea with migraine
- Allodynia

AMPP; FRHE.

Clinical Considerations for CM Onset Prevention

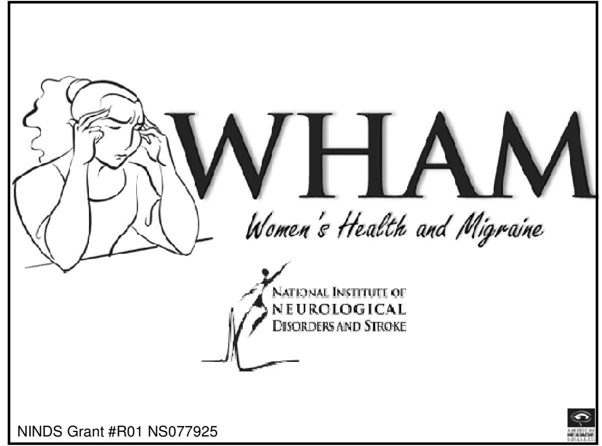
Risk Factor	Treatment/ Intervention
Treatment patterns	Monitor and modify medication use, consider preventive other non-oral treatments, and behavioral interventions*
Attack frequency	Reduction/Prevention with pharmacologic and behavioral interventions
Obesity	Weight loss, Exercise, Behavioral Interventions
Stress	Behavioral interventions, Exercise, Lifestyle modification
Snoring	Diagnose and treat sleep apnea, Weight loss
Allodynia	Manage migraine attack frequency and treat migraine early
Depression	Assess, Treat/Refer with pharmacologic and behavioral therapies
Anxiety	Assess, Treat/Refer with pharmacologic and behavioral therapies

*Biofeedback, cognitive behavioral therapy, relaxation training, stress management

Insomnia Treatment in Chronic Migraine

- Single 20-minute session(s)
- Treatments
  - 5 behavioral insomnia instructions
  - Placebo instructions
- Results at 6 weeks
  - 35% of treated subjects reverted to episodic migraine
  - 0% of placebo group

Calhoun et al. *Headache.* 2007;47:1178–1183.



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How to Make a Referral for Behavioral and Psychological Treatment

Terminology:

Biobehavioral training

Behavioral medicine

Stress management

Relaxation training

Reassure Patients. . .

You are not “abandoning” them—you will work in collaboration with a mental health provider	You believe they have a biological condition
You are not judging—this is a common response to chronic pain	Treatment may help management of headache and improve quality of life

Useful Websites: Referrals and Info

Sponsor	Site address
American Headache Society membership and referral database	www.achenet.org
American Psychological Association	http://locator.apa.org
Association for Behavioral and Cognitive Therapies	www.abct.org
Association for Applied Psychophysiology and Biofeedback	http://www.aapb.org/providers.html
Society for Behavioral Medicine	http://www.sbm.org

Websites for finding referrals are listed in “Resource Guide”