



# Use of Complementary and Alternative Medicine in Older Adults With Diabetes

<https://doi.org/10.2337/dc17-0682>

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Older adults with diabetes are at high risk for having multiple chronic conditions and diabetes complications and often take multiple medications concomitantly. Studies have shown that many Americans are using complementary and alternative medicine (CAM) to either improve or manage their health (1,2). Individuals have diverse purposes for using CAM, from treating specific conditions, such as back and neck pain (e.g., acupuncture and chiropractic), to improving general health and wellness (e.g., meditation and tai chi). Since relatively little is known about the prevalence and patterns of CAM use in older adults with diabetes, we investigated this topic to guide integrated, patient-centered health care use for this population.

We used data from the 2012 National Health Interview Survey (NHIS), which is an annual cross-sectional in-person interview survey demonstrating health care trends among noninstitutionalized civilians in the U.S. (3). The NHIS collects comprehensive CAM-related information every 5 years. The sample included adults aged 65 or older who reported having any type of diabetes ( $n = 1,475$  unweighted). We estimated key selected characteristics (e.g., age, sex, and race/ethnicity) of older CAM users with diabetes. We calculated prevalence rates of past-year CAM use by type and reason for use (i.e., treatment

only, wellness only, and both treatment and wellness) (1,2,4). We performed all analyses using Stata/SE version 13.1 (StataCorp, College Station, TX), accounting for the survey sampling design (e.g., unequal probability of selection, clustering, and stratification) (5). All research procedures performed in this study were in accordance with the ethical standards of the institutional review board at Yale School of Medicine (approval ID #2000021662).

In 2012, more than 2 million older adults with diabetes (25.0%) used some form of CAM in the past year. Among older CAM users with diabetes, the mean age was 72.4 years and 54.3% were female. Race/ethnicity consisted primarily of non-Hispanic whites (73.4%), non-Hispanic blacks (8.8%), and Hispanics (10.6%). Of this sample, over half (56.2%) had some college or higher education.

Table 1 presents the prevalence of CAM use by type and reason for use and lists the individual modalities under each class. The most commonly used classes of CAM were biologically based therapies (62.8%) and manipulative body therapies (36.8%). The most commonly used individual therapies were herbal therapies (62.8%), chiropractic (23.9%), massage (14.7%), acupuncture (10.2%), and yoga (5.2%). Significant prevalence differences by reason for use (for treatment, wellness, or both) were found

for herbal therapies, chiropractic, and meditation.

More than 25% of older adults with diabetes used some type of CAM in the past year, which is only slightly less than the prevalence rate among the general adult population with diabetes (2). Older CAM users with diabetes utilized diverse types of CAM, and some of these CAM types had different prevalence rates by reason for use. Clinicians should actively query older patients with diabetes about CAM use. This can potentially prevent harm (e.g., drug-herb interactions and herb-disease interactions). Furthermore, patients should be educated to proactively discuss their CAM use with their health care providers, so that patient-centered care can be provided to meet the needs of older adults with diabetes. There are several limitations in this study, which are mentioned elsewhere (1,2). Despite the limitations, our findings highlight that CAM is widely used in older adults with diabetes. Future research should address integrative and holistic approaches for self-management of diabetes in older adults.

**Acknowledgments.** Publicly available data were obtained from the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). Analyses, interpretation, and conclusions are solely those of the authors and do

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Received 5 April 2017 and accepted 4 March 2018.

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**Table 1—Prevalence of past-year CAM use by reason in older adults with diabetes, 2012 NHIS**

	Among CAM users with diabetes, CAM used for:			Total	P value
	Treatment only	Wellness only	Both treatment and wellness		
Alternative medical systems	8.5	14.8	7.7	10.2	0.272
Acupuncture	6.0	5.6	3.6	4.5	0.733
Ayurveda	0.0	0.0	0.0	0.0	—
Naturopathy	0.0	0.3	1.4	0.8	0.290
Homeopathy	1.7	8.7	3.5	4.8	0.096
Traditional healers	0.8	1.0	0.0	0.5	0.278
Biologically based therapies	45.7	67.6	66.4	62.8	0.030
Chelation	0.0	0.0	0.0	0.0	—
Herbal therapies	45.7	67.6	66.4	62.8	0.030
Manipulative body therapies	53.3	27.2	36.9	36.8	0.015
Chiropractic	47.7	10.9	23.2	23.9	<0.001
Massage	7.1	17.4	15.8	14.7	0.202
Movement therapies	0.0	1.2	0.4	0.6	0.558
Mind-body therapies	6.6	10.6	14.2	11.6	0.365
Meditation	0.5	2.5	5.0	3.3	0.046
Yoga	0.0	4.9	7.4	5.2	0.158
Tai chi	0.0	5.5	4.2	3.8	0.217
Qi gong	0.0	1.0	0.7	0.6	0.566
Biofeedback	1.2	1.4	0.2	0.8	0.419
Others <sup>a</sup>	5.0	1.4	0.6	1.7	0.049
Energy therapies <sup>b</sup>	0.3	0.4	1.6	1.0	0.185
Sample size (n)					
Unweighted sample	65	124	188	377	
Weighted population	383,840	653,279	975,717	2,012,836	

Data are percent unless otherwise indicated. P value compares proportion differences by reason for use, using weight-corrected Pearson  $\chi^2$  statistic. <sup>a</sup>Includes guided imagery, progressive muscle relaxation, and hypnosis. <sup>b</sup>Includes energy healing and craniosacral therapies.

not necessarily reflect the views of the CDC's Division of Health Interview Statistics or NCHS.

**Funding.** T.G.R. received funding support from the National Institutes of Health National Institute on Aging (grant T32AG019134). The funding agency had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; or decision to submit the manuscript for publication.

**Duality of Interest.** No potential conflicts of interest relevant to this article were reported.

**Author Contributions.** T.G.R. conceived and designed the study, acquired the data, performed statistical analyses, and drafted the manuscript. All authors interpreted the data and participated in

critical revision of the manuscript for important intellectual content. T.G.R. is the guarantor of this work and, as such, had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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