Integrative Medicine Use in Advanced Cancer

THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

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Objectives

Definitions

- CAM, actual practices, IM

CAM use among U.S. cancer patients

- General population
- Advanced cancer population

CAM use at NCCH

Complementary & Alternative Medicine (CAM)

A group of diverse medical and health care systems, practices, and products that are not presently considered part of conventional medicine.

CAM Practices

Four domains

- Mind/Body medicine
- Biologically based practices
- Manipulative and body-based practices
- Energy medicine

Whole medical systems

- Traditional Chinese Medicine (TCM)
- Ayurveda
- Homeopathy
- Naturopathy

NCCAM - http://nccam.nih.gov/health/whatiscam/#3

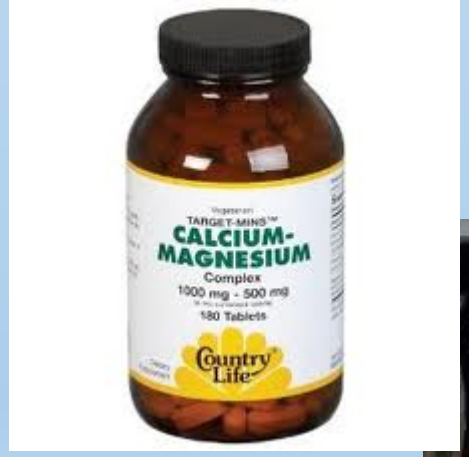
Mind-Body Medicine

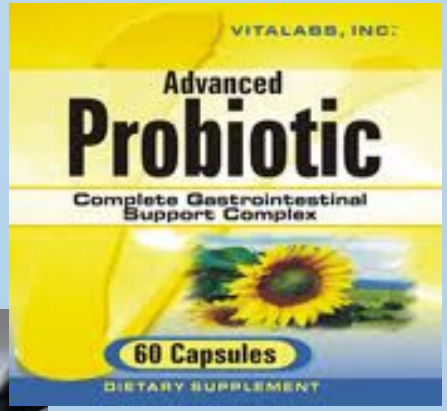
- Meditation, Yoga, Tai Chi Chuan
- Guided imagery, Progressive relaxation, Biofeedback, Hypnosis
- Support Groups, Expressive therapy

- anxiety, chronic pain
- mood, quality of life, sleep

Biologically based practices

Vitamins & Minerals





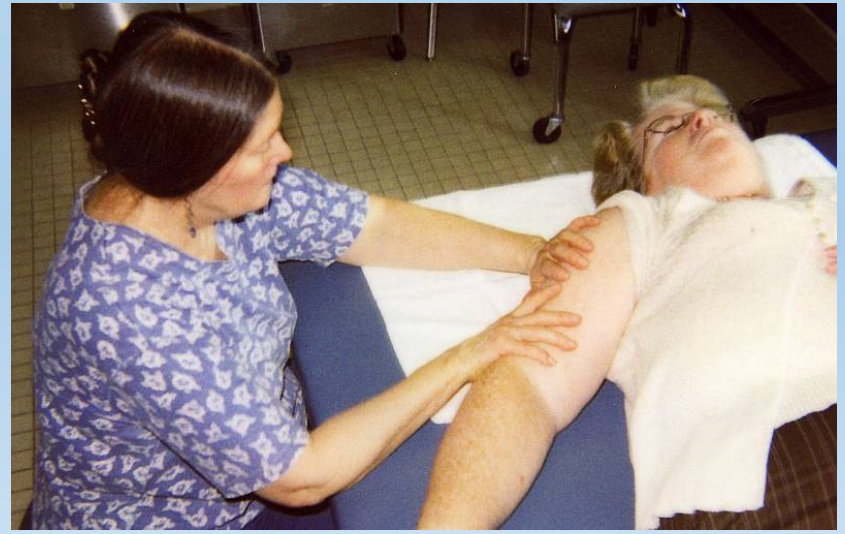
Others

Herbals

Body-based Therapies

Massage therapy

Lymphedema therapy



Pain, Anxiety, Edema

Energy Therapies

- Therapeutic touch, Reiki
  light, magnets, prayer

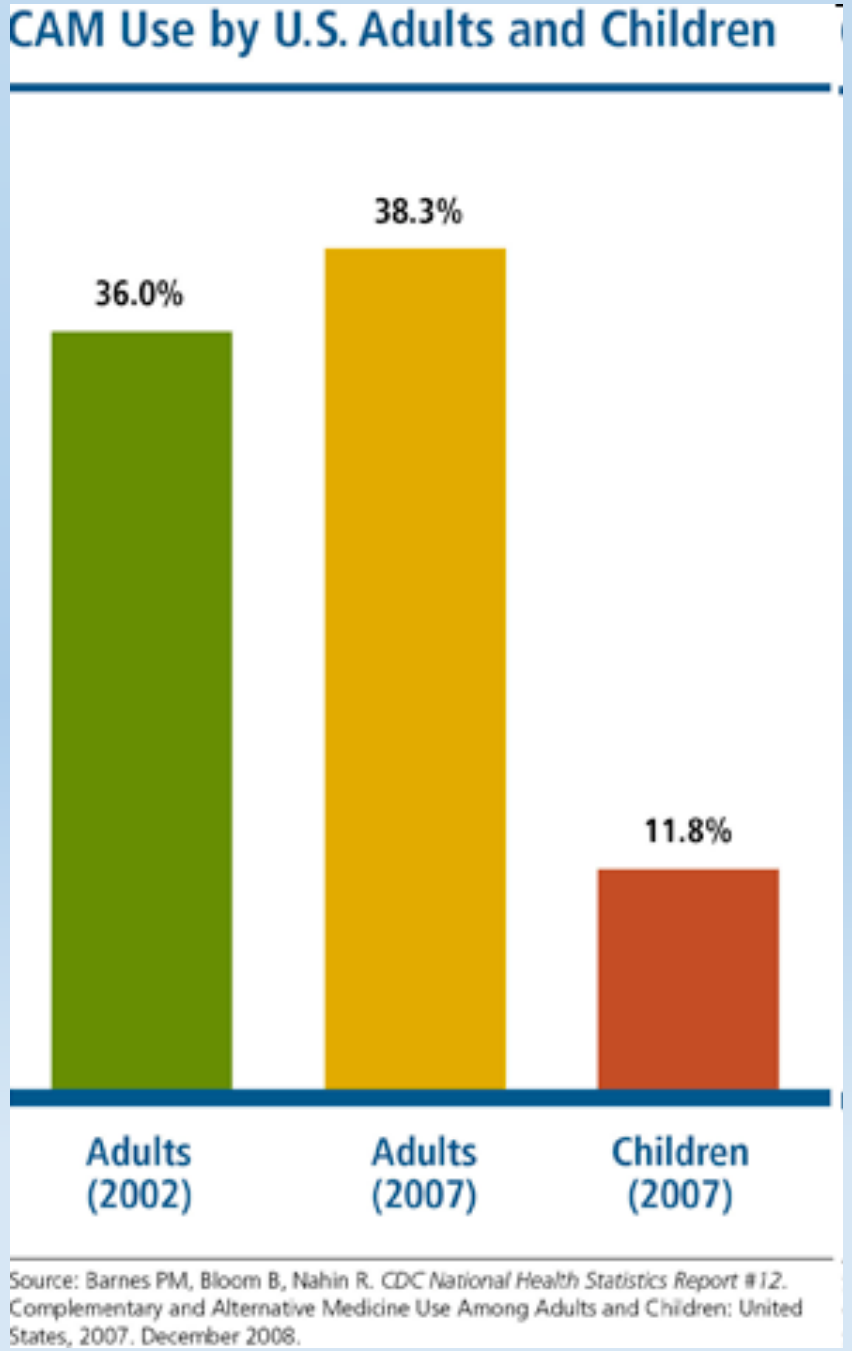
Stress reduction, enhancing quality of life

Integrative Medicine

A combination of therapeutic approaches that
includes best practices from
conventional and CAM medicine

AND

attempts to address the *intellectual*, *emotional*,
and *spiritual* aspects of illness
in addition to the physical.



Use of CAM therapies is common

CAM use: All Cancer Patients

- Following diagnosis: 54% - 69%

Vapiwala N. Cancer J, 2006:12:467

Ferrucci LM. J Alt Comp Med, 2009;15(6):673

- During treatment: 55-75%
  - 40-60% DS use

Hann DM. Integr Cancer Ther, 2005;4(4):294

Patterns of use: Advanced Cancer

- Prevalence: 15-100%

- Biologically-based therapies most common
  - With advancing disease, education associated with increased DS use

" …therapies that require little effort, with minimal side effects, available locally, and covered by insurance are more frequently used."

Reasons for CAM use: All Cancer Patients

- Perceived therapeutic response (38%)
  - Enhance conventional tx
  - Improve QoL
- Wanting control (17%)
- Strong belief in CAM (17%)
- Finding hope (10%)
- Last resort (10%)
- Disappointment with conventional treatment or practitioner (4%)

Verhoef MJ. Int Cancer Ther, 2005;4(4):274

Reasons for CAM use: Advanced Cancer

Direct

- Increase chance of cure
- ‘fighting disease’

Indirect

- Immune boosting
- Detoxifying

Other Reasons

- QoL: Improve well being, decrease stress, increase energy
- Reduce side effects

Belief about cure

2 GROUPS of CAM users with advanced cancers

(A) Believe cancer curable, in spite of poor prognosis

(B) Understand cancer is incurable

- Pragmatic
- Active problem solving
- Better coping skills
- ‘trying something in the face of adversity’

Sources of Info: Advanced Cancer

- Friends and Family

- Social groups
- Media
- Health food store staff
- CAM providers
- Conventional providers (often poor disclosure)

Our Survey: North Carolina Cancer Hospital

- Breast, Prostate, Colorectal, and Lung cancer
  - Tumor registry
- 2010-2012
- Paper questionnaire, follow-up phone call

Table 1 Characteristic of Respondents and Non-respondents

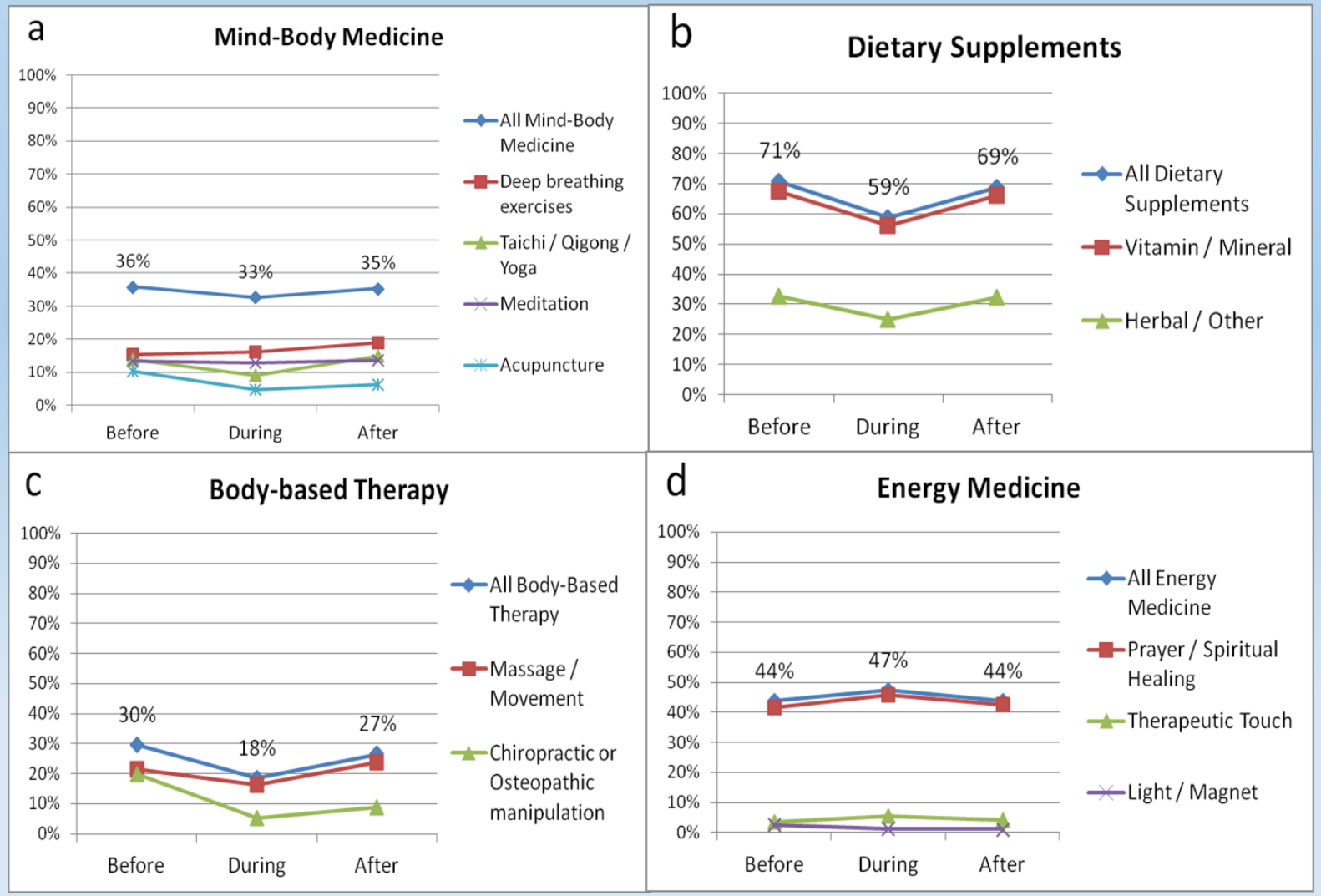
Characteristics		**Respondents (N=603)**	**Non-respondents (N=1189)**
		Mean (SD) or Freq. (%)	
Age (years)		63.5 (11.0)	61.1 (12.0)
Sex (female)		372 (61.7)	657 (55.3)
Race (white)		476 (78.9)	809 (68.0)
Ethnicity (non-Hispanic)		591 (98.0)	1141 (96.0)
Cancer Type			
	Breast	283 (46.9)	468 (39.4)
	Prostate	164 (27.2)	331 (27.8)
	Colorectal	87 (14.4)	221 (18.6)
	Lung	69 (11.4)	169 (14.2)
Cancer Stage[a]			
	0-1	278 (46.4)	463 (39.5)
	2	214 (35.7)	450 (38.4)
	3	68 (11.4)	158 (13.5)
	4	39 (6.5)	102 (8.7)

a. Of all surveyed participants (respondents and non-respondents), 160 were cancer stage "0", 581 patients were stage "1". Among 160 stage "0" participants, 144 (90%) had breast cancer; among 581 stage "1" patients, 259 (45%) had breast cancer. Nine patients' cancer stage was unknown.

Table 2 CAM use during or after initial cancer treatment for each cancer stage

	CAM use by CAM therapy category, n (%)				
Cancer Stage	Any CAM	MBM	DS	BBT	EM
All (n=599)	510 (85.1)	234 (39.1)	433 (72.3)	179 (29.9)	293 (48.9)
0-1 (n=278)	231 (83.1)	106 (38.1)	194 (69.8)	87 (31.3)	135 (48.6)
2 (n=214)	187 (87.4)	84 (39.3)	163 (76.2)	58 (27.1)	97 (45.3)
3 (n=68)	58 (85.3)	32 (47.1)	45 (66.2)	22 (32.4)	42 (61.8)
4 (n=39)	34 (87.2)	12 (30.8)	31 (79.5)	12 (30.8)	19 (48.7)

CAM Use Before, During, and After Active Cancer Treatment (N=603)



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Any CAM & Supplement use by time period

	Any CAM use %		
	Before diagnosis	During Treatment	After Treatment
All patients (603)	84.1%	79.1%	80.1%
End Stage Patients (39)	71.8%	84.6%	64.1%

	Any DS use %		
	Before diagnosis	During Treatment	After Treatment
All patients (603)	70.8%	58.7%	68.7%
End Stage Patients (39)	61.5%	74.4%	59.0%

Unadjusted Associations between Cancer Stage and Dietary Supplement use during and during/after Cancer Treatment (N=603)

		Dietary Supplement use during Cancer Treatment	Dietary Supplement use during or after Cancer Treatment
	n (%)[£]	OR (95%CI)	OR (95%CI)
Cancer Stage			
0-1	278 (46.2)	1.00	1.00
2	214 (35.6)	1.08 (0.75-1.55)	1.38 (0.92-2.08)
3	68 (11.3)	0.73 (0.43-1.24)	0.85 (0.48-1.49)
4	39 (6.5)	2.11 (0.99-4.49)	1.68 (0.74-3.80)

Table 3 Number of CAM therapies used during or after cancer treatment by cancer stage

		Number of Therapies used		
Cancer Stage		0	1	>1
All (n=599)		89 (14.9)	165 (27.6)	345 (57.6)
	0-1 (n=278)	47 (16.9)	71 (25.5)	160 (57.6)
	2 (n=214)	27 (12.6)	68 (31.8)	119 (55.6)
	3 (n=68)	10 (14.7)	16 (23.5)	42 (61.8)
	4 (n=39)	5 (12.8)	10 (25.6)	24 (61.5)

Sources of Advice on Supplement use (n=391)

Source		Freq (%)
Professional (75%)		
	Primary care providers (Family Doctor, Internist, etc.)	201 (51.4)
	Cancer care providers (surgeon, radiologist, oncologist)	137 (35.0)
	CAM provider	40 (10.2)
	Pharmacist	30 (7.7)
	Other providers (OBGyn, neurologist, psychiatrist, etc.)	12 (3.1)
	Nutritionist	6 (1.5)
Media (44%)		
	Internet	97 (24.8)
	Books	93 (23.8)
	Television/Magazines/Newspaper	91 (23.3)
Lay (47%)		
	Friends and Family	150 (38.4)
	Other patients with cancer / Support groups	58 (14.8)
	Staff at health food store	48 (12.3)

Association of New CAM Use after Cancer Diagnosis and Conversation about CAM with Oncology Provider

CAM Therapy	No CAM use prior to diagnosis	New CAM use after diagnosis[a] (%)	Prevalence Ratio (95% CI)[b]	p-value
MBM	366	52 (14.2)	1.79 (1.07, 2.99)	0.03
DS	162	63 (38.9)	1.83 (1.05, 3.19)	0.03
BBT	401	46 (11.5)	3.31 (1.85, 5.94)	0.00
EM	321	38 (11.8)	2.83 (1.48, 5.44)	0.00

Association of Cessation of CAM Use after Cancer Diagnosis with Conversation about CAM with Oncology Provider

CAM Therapy	CAM use prior to diagnosis	Cessation of CAM use after diagnosis[a] (%)	Prevalence Ratio with 95% CI[b]	p-value
MBM	210	57 (27.1)	0.46 (0.22, 0.93)	**0.03**
DS	414	111 (26.8)	0.85 (0.57, 1.28)	0.44
BBT	175	97 (55.4)	0.87 (0.63, 1.19)	0.37
EM	255	19 (7.5)	1.57 (0.65, 3.84)	0.32

Table 4 Association of New CAM Use after Cancer Diagnosis and Conversation about CAM with Oncology Provider

Cancer Stage	No CAM prior to diagnosis	New CAM use after diagnosis[a] (%)	Prevalence Ratio (95% CI)[b]	p-value
0-1	35	7 (20.0)	0.81 (0.10, 6.69)	0.84
2	35	15 (42.9)	1.76 (0.56, 5.52)	0.33
3	5	2 (40.0)	1.50 (0.09, 23.98)	0.77
4	11	7 (63.6)	1.80 (0.35, 9.28)	0.48

a. CAM therapy use changed from "No" before cancer diagnosis to "Yes" after cancer diagnosis

b. Model adjusted for no covariates

Table 5 Association of Cessation of CAM Use after Cancer Diagnosis with Conversation about CAM with Oncology Provider

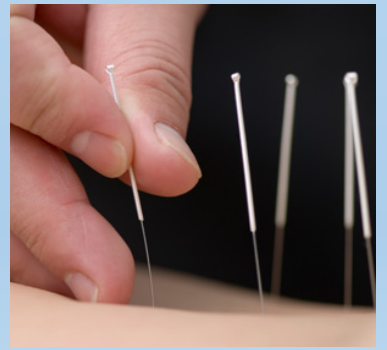
CAM Therapy	CAM use prior to diagnosis	Cessation of CAM use after diagnosis[a] (%)	Prevalence Ratio with 95% CI[b]	p-value
0-1	233	143 (61.4)	1.35 (0.94, 1.95)	0.11
2	170	99 (58.2)	1.15 (0.75, 1.77)	0.53
3	60	36 (60.0)	1.55 (0.79, 3.07)	0.20
4	27	20 (74.1)	1.01 (0.29, 3.46)	0.98

a. CAM therapy usage changed from "Yes" before active cancer treatment to "No" during/after cancer treatment

b. Model adjusted for no covariates

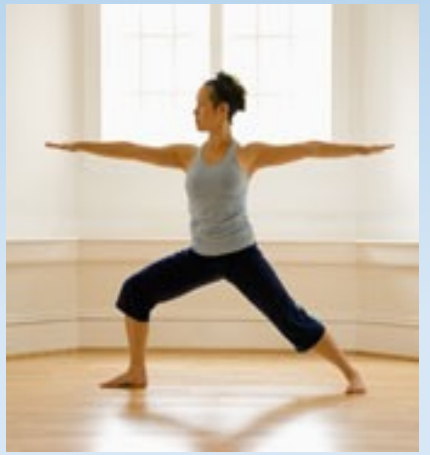
Integrative Medicine at Carolina Pointe II

- Integrative Medicine Consultation
- Telemedicine
- Acupuncture



- Psycho-oncology
- Support groups
- Integrative Health Coaching

- Lymphedema therapy
- Massage therapy
- Yoga classes
- Nutrition



Carol: 957-6600

http://www.unclineberger.org/ccsp/programs/integrative-medicine

Questions?

CAM use during or after initial cancer treatment for each cancer type

	CAM use by CAM therapy category, n (%)				
Cancer Type	Any CAM	MBM	DS	BBT	EM
All (n=603)	514 (85.2)	236 (39.1)	437 (72.5)	181 (30.0)	294 (48.8)
Breast (n=283)	262 (92.6)	148(52.3)	231 (81.6)	120 (42.4)	156 (55.1)
Prostate (n=164)	127 (77.4)	26 (15.9)	103 (62.8)	23 (14.0)	66 (40.2)
Colorectal (n=87)	72 (82.8)	38 (43.7)	63 (72.4)	22 (25.3)	45 (51.7)
Lung (n=69)	53 (76.8)	24 (34.8)	40(58.0)	16 (23.2)	27 (39.1)

Reported Herbal and Other Dietary Supplement Use during Treatment

Supplement	Herbal and Other DS Use During Cancer Treatment[b] (n=298)	Herbal and Other DS Use During Chemotherapy (n=110)	Herbal and Other DS Use During Radiation (n=138)
	N-treatment=603	N-chemo=213	N-radiation=270
		Frequency	
Omega-3 acids	172	46	80
Green tea beverage	117	49	46
Glucosamine	64	23	29
Probiotics	59	23	26
Coenzyme Q10	53	10	15
Antioxidant supplement	41	12	11
Aloe vera	38	19	28
Chondroitin	35	9	12
Garlic pills	30	7	11
Melatonin	23	8	9
Lutein	22	5	11
Curcumin /turmeric pills	20	7	7
Cranberry pills	19	4	8
Ginseng	19	3	4
Lycopene	17	5	6
Milk thistle	15	1	6
Ginkgo biloba	13	1	4
Grape seed extract	13	2	1
Green tea pills	13	2	3
Saw palmetto	13	2	3
Black cohosh	12	5	4
Mushroom extracts	12	4	3
Methylsulfonylmethane	10	2	4
Echinacea	7	1	2
Bilberry	6	0	1
Dehydroepiandrosterone	6	1	1
Soy supplement pills	6	2	1
Ashwagandha	5	0	1
Valerian	5	0	1

[b]Counts for the following were reported < 5 times: Acai juice, Arnica gel, Astragalus, Biotin, Cat's claw, Chlorophyll, Dandelion root, DIM, Dragon's blood, Ginger, Glutamine, Hawthorn, Lecithin, Parsley, Peppermint oil, Pomegranate, Protein supplement, Quercitin, St. John's wort, Tart cherry