

**Curious about Curiosity?** Join the Morgan County Forum for Arts, Sciences & Technologies (**FAST**).

In 1743, Benjamin Franklin started the country's first forum where people could communicate their **records and interpretations of "all philosophical Experiments that let Light into the Nature of Things, tend to increase the Power of Man over Matter, and multiply the Conveniences or Pleasures of Life."** Then, the study of Nature that we now call science and technology was called "natural philosophy" and the club was called the American Philosophical Society.

Its members included doctors, lawyers, clergymen, merchants, artisans and tradesmen like Franklin. They helped America's economic independence by improving agriculture, manufacturing, and transportation. They also helped prepare Lewis and Clark about scientific, linguistic, and anthropological aspects of their exploration of the Louisiana Territory.

In 2003, the Morgan County Forum for Arts, Sciences and Technologies (**FAST**) began community discussions to help all Morgan County residents find ways to **"let Light into the Nature of Things, tend to increase the Power of Man over Matter, and multiply the Conveniences or Pleasures of Life."**

This afternoon with Dr. Hibbeln is one of a series of educational events to advance the use of arts, sciences and technologies in the daily lives of individuals in Morgan County. **FAST** is a tax-exempt, non-profit charitable corporation under IRS Code, Section 501(c)(3). It is supported by grants, donations, membership dues, and other income related to its purpose. Its primary mission is informal education to advance the use of arts, sciences and technologies in the daily lives of individuals in Morgan County.

**FAST** supports community band and theater projects, discussions on nutrition, health and computer technology; the "*Morgan County Menu*" booklet; the Great Gray Matter Challenge; Song Writing Contest Awards; Very Short Video Show Contest Awards at the County Fair; plus a wide range of informal learning experiences, including advanced training. Families are invited to start planning ideas now for novel informative video exhibits for the 2009 County Fair Exhibit Contest when over \$1,000.00 in prizes will again be awarded.

People can send tax-exempt donations to **FAST**, P.O. Box 674, Berkeley Springs, WV 25411.

Visit the **FAST** website at <http://www.fastlearner.org> or contact us at [wemlands@att.net](mailto:wemlands@att.net)

## NUTRITION & NEUROSCIENCE: PREVENTING MISERY WITH FOOD



**Captain Joseph Hibbeln, MD**

1:30 pm Sunday, May 3  
Berkeley Springs High School Auditorium  
Followed by a reception to meet the speaker

Co-sponsored by:  
Morgan County Library  
WVU-Morgan County Extension  
Morgan County Forum for Art, Science & Technology (**FAST**)

# High Risk of Depression & Heart Attacks [81% '6']

**Unseen Cause of Problems** = Vitamin-like essential fatty acids are stored in our tissues where they make hormones that control the physiology and pathology of our bodies. This meal plan was meant to be a 'healthy' way to reduce weight, but it failed to see that omega-6 intakes are much greater than omega-3 intakes. Like many USA diets with fried foods, mayonnaise and salad dressings, it keeps 81% of tissue "long" fats as omega-6 rather than omega-3.

Free planning software is at: <http://efaeducation.nih.gov/sig/kim.html>.

## KIM Report by Meal Times For LowCarb-lowCal 81% Plan # 445

### Breakfast

	Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
452 Frittata with Salsa	1 Serving	469	349	1	1401	254	71	21
Tea, brewed, prepared with tap water,	1 cup (8 fl oz)	237	2	1	2	7	0	0

### Lunch

	Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Beef, chuck, tender steak, separable lean only,	3 oz (1 serving)	85	137	1	255	34	51	0
Lettuce, cos or romaine, raw	0.5 cup, shredded	28	4	1	9	21	0	0
Lettuce, looseleaf, raw	0.5 cup, shredded	28	5	1	13	32	0	0
Salad dressing, french, diet, low fat, 5 calories per	1 tbsp	16	43	2	980	128	0	0
Gelatin desserts, dry mix, reduced calorie, with	1 package (0.35	10	35	1	0	0	0	0

### Dinner

	Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Cauliflower, cooked, boiled, drained, with salt	0.5 cup (1" pieces)	62	14	1	31	104	0	0
Beans, snap, green, cooked, boiled, drained,	1 cup	125	44	1	70	111	0	0
438 Garden Salad	1 Serving	295	179	1	1286	169	0	0
451 Lite Ricotta desert	1 Serving	65	92	1	118	44	0	0

### Snacks

	Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Cheese, mozzarella, part skim milk	1 oz	28	144	2	190	78	0	0
447 Hummus	1 Serving	108	268	1	5137	133	0	0
Carrots, raw	1 cup, strips or	122	52	1	82	12	0	0
Celery, raw	1 cup, strips	124	20	1	86	0	0	0

Total Energy Choice = 1387 kcals

total mg = 9640 1126 122 21

Did you really plan enough food ?

%Cal= 6.25% 0.73% 0.08% 0.01%

#### KIM notes:

Your energy allowance is 2112 kcals

Get more exercise

These overall choices will give  
81% long 6 in your body's long total

% long 6 in long total ==>>> 47% 58% 78%

Heart attack deaths/100,000 ==>>> 50 90 200

## Captain Joseph R. Hibbeln, M.D.

is Acting Chief, Section of Nutritional Neurochemistry in the Laboratory of Membrane Biophysics and Biochemistry at the National Institutes of Health. He is an Eagle Scout, BSA and a close neighbor, residing just over the Morgan County border in Sleepy Hollow near the Woods in Berkeley County, WV. He received a BA with special honors from the University of Chicago in 1983 and an M.D from the University of Illinois at Chicago in 1988. He is a Captain in the United States Public Health Service, licensed as a Physician and Surgeon in California and Board Certified in Psychiatry and Neurology.

Dr. Hibbeln is frequently sought out as an invited speaker at international scientific conferences and by the media. He has awards from: the McGarrison Society in London for furthering public health nutrition; the National Association for Research in Schizophrenia and Depression; USPHS Crisis Response Awards for deployments in response to hurricanes and suicide clusters among Native Americans; USPHS Outstanding Service Metal, the third highest award in the USPHS.

Captain Hibbeln originated the field of omega-3 fatty acids in depressive and aggressive disorders and contributed more than 75 peer-reviewed scientific papers. He describes benefits of fish consumption during pregnancy in supporting higher IQ and more optimal social behaviors among the children. He co-authored the recent FDA evaluation of benefits of seafood during pregnancy outweighing risks of typical methyl mercury exposure. He participated in the 2006 American Psychiatric Association recommendations for omega-3 treatments.

His interests include: comparisons of seafood consumption to rates of psychiatric illnesses; epidemiological comparisons among countries; omega-3 fatty acid depletion during pregnancy [a preventable and reversible cause of depressions associated with pregnancy]. He examined how people's omega-3 deficiencies change neurotransmitters and peptides regulating the stress axis which are thought to underlie increased risk of violence and aggression. Excessive alcohol use depletes brain stores of omega-3 DHA; a deficiency that may contribute to aggression, suicide, depression and addictive behaviors common among alcoholics.

Dr. Hibbeln studies omega-3 deficiencies and their role in severe pathological states such as suicide, major depression and psychosis plus more normal personality traits and emotional states such as neuroticism and unhappiness. Because emotions are central to the fabric of human experience, he has considered psychotropic properties of omega-3 fatty acids in influencing the cultural symbolism of fish in religious and medical belief systems.

He wonders if a substantial proportion of emotional distress of modern societies can be reversed by adequate intakes of omega-3 fatty acids. He calculated intakes of omega-3 fatty acid required to reduce risk for 12 different illness models. Such intakes can be less with less intake of competing omega-6 fatty acids.

### Recent reports from Captain J.R. Hibbeln, M.D.

- High levels of Depressive Symptoms in Pregnancy With Low Omega-3 Fatty Acid Intake From Fish. Golding J, Steer C, Emmett P, Davis JM, Hibbeln JR. *Epidemiology*. 2009 Mar 10. PMID: 19289957
- Low plasma levels of docosahexaenoic acid are associated with an increased relapse vulnerability in substance abusers. Buydens-Branchey L, Branchey M, Hibbeln JR. *Am J Addict*. 2009 Jan-Feb;18(1):73-80. PMID: 19219668
- Depression, suicide and deficiencies of omega-3 essential fatty acids in modern diets. Hibbeln JR. *World Rev Nutr Diet*. 2009;99:17-30. Epub 2009 Jan 9. Review. No abstract available. PMID: 19136836
- Plasma polyunsaturated fatty acids and regional cerebral glucose metabolism in major depression. Elizabeth Sublette M, Milak MS, Hibbeln JR, Freed PJ, Oquendo MA, Malone KM, Parsey RV, John Mann J. *Prostaglandins Leukot Essent Fatty Acids*. 2009 Jan;80(1):57-64. PMID: 19128951
- From homicide to happiness--a commentary on omega-3 fatty acids in human society. Cleave Award Lecture. Hibbeln JR. *Nutr Health*. 2007;19(1-2):9-19. PMID: 18309762
- Omega-3 fatty acids and supportive psychotherapy for perinatal depression: a randomized placebo-controlled study. Freeman MP, Davis M, Sinha P, Wisner KL, Hibbeln JR, Gelenberg AJ. *J Affect Disord*. 2008 Sep;110(1-2):142-8 PMID: 18206247
- Associations between increases in plasma n-3 polyunsaturated fatty acids following supplementation and decreases in anger and anxiety in substance abusers. Buydens-Branchey L, Branchey M, Hibbeln JR. *Prog Neuropsychopharmacol Biol Psychiatry*. 2008 Feb 15;32(2):568-75. PMID: 18060675
- High omega-6 and low omega-3 fatty acids are associated with depressive symptoms and neuroticism. Conklin SM, Manuck SB, Yao JK, Flory JD, Hibbeln JR, Muldoon MF. *Psychosom Med*. 2007 Dec;69(9):932-4. PMID: 17991818
- Maternal seafood consumption in pregnancy and neurodevelopmental outcomes in childhood (ALSPAC study): an observational cohort study. Hibbeln JR, Davis JM, Steer C, Emmett P, Rogers I, Williams C, Golding J. *Lancet*. 2007 Feb 17;369(9561):578-85. PMID: 17307104
- Omega-3 fatty acid supplementation in patients with recurrent self-harm. Single-centre double-blind randomised controlled trial. Hallahan B, Hibbeln JR, Davis JM, Garland MR. *Br J Psychiatry*. 2007 Feb;190:118-22. PMID: 17267927
- Omega-3 fatty acids: evidence basis for treatment and future research in psychiatry. Freeman MP, Hibbeln JR, Wisner KL, Davis JM, Mischoulon D, Peet M, Keck PE Jr, Marangell LB, Richardson AJ, Lake J, Stoll AL. *J Clin Psychiatry*. 2006 Dec;67(12):1954-67. Review. Erratum in: *J Clin Psychiatry*. 2007 Feb;68(2):338. PMID: 17194275

## Curious about Biology & Medicine?

### Medical literature is easy to find.

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi> => PubMed is a free internet service of the U.S. National Library of Medicine that includes over 19 million citations from MEDLINE and other life science journals for biomedical articles back to the 1950s. Some abstracts have an internet link to a free full-text pdf file with all of the data of the original paper. Also, each article listed on PubMed has links to other related articles that can broaden readers' awareness of the topic.

When full-text articles are needed to see important facts, and not available direct from PubMed, **FAST** has arranged with the WVU-Morgan County Extension Service and the Morgan County Library to help obtain them for the education of Morgan County residents. We use the Loansome Doc service that enables ordering documents listed in PubMed-MEDLINE. County residents can request full-text articles by sending the complete URL of the needed article cited in PubMed to the County Library or to Extension Agent Denis Scott to obtain a full-text document. This special informal education service allows PubMed users to pursue their curiosity in detail through links with the County Library, County Extension Agent and the WVU Medical Library in a semi-automated interlibrary loan request system. More general information about the Loansome Doc service is at:

[http://www.nlm.nih.gov/loansomedoc/loansome\\_home.html](http://www.nlm.nih.gov/loansomedoc/loansome_home.html)

Outlined below are the steps involved in requesting a document.

1. Perform a literature search using PubMed.
  2. Copy and paste the address from the browser address line into an email to the County Library (spring\_l@martin.lib.wvu.us) or to Denis Scott (denis.scott@mail.wvu.edu).
  3. Be sure your email request includes your name, phone number and email address.
  4. Review your email and then click 'Send'.
  5. Your request will be forwarded electronically by Denis Scott to the WVU Medical Library.
  6. Staff at the WVU Medical Library handle Loansome Doc requests from Denis by sending the pdf file of the full-text article to him.
  7. When Denis receives the pdf file, he will forward it to you by email.
- For people wanting to explore a topic further, **FAST** can arrange informal educational or tutorial sessions.

You can help more people learn more about life by contributing your time and energy to the Morgan County Forum for Arts, Sciences & Technologies (**FAST**). Be a **FAST** learner!

## Low Risk of Depression & Heart Attacks [9% '6'] Plan to Prevent Problems

Eat more omega-3 - tuna, sardines, seafood  
Less omega-6 - french fries, mayonnaise, potato chips  
Fewer calories per meal.

This menu plan may keep 9% omega-6 and 91% omega-3 in tissue long-chain fats.  
 Download free menu planning software at: <http://efaeducation.nih.gov/sig/kim.html>.

### KIM Report by Meal Times For charley 9% Plan # 590 charley 2385

Breakfast		Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Milk, reduced fat, fluid, 2% milkfat, with added	1 cup	244	122	1	105	68	0	0	0
Bananas, raw	1 medium (7" to	118	109	1	66	39	0	0	0
Strawberries, raw	1 cup, sliced	166	25	0.5	90	65	0	0	0
Orange juice, raw	1 cup	248	112	1	72	27	0	0	0
Cereals ready-to-eat, GENERAL MILLS,	1 cup (1 NLEA	30	111	1	203	9	0	0	0
Lunch		Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Mushrooms, raw	0.5 cup pieces	35	9	1	47	0	0	0	0
Lettuce, looseleaf, raw	0.5 cup, shredded	28	5	1	13	32	0	0	0
Spinach, raw	1 cup	30	7	1	7	35	0	0	0
Peas, edible-podded, raw	1 cup, whole	63	26	1	47	8	0	0	0
Vinegar, cider	1 tbsp	15	2	1	0	0	0	0	0
Turkey breast meat	2 slices	43	95	2	224	17	0	0	0
Vegetable oil, sunflower, oleic (70% and over)	1 tbsp	14	248	2	1010	54	0	0	0
Cheese, low fat, cheddar or colby	1 oz	28	98	2	88	38	0	0	0
Dinner		Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Beans, snap, green, frozen, all styles, unprepared	1 cup	124	82	2	102	164	0	0	0
Finfish, bluefish, cooked, dry heat	1 fillet	117	372	2	180	501	0	2497	0
Artichokes, (globe or french), cooked, boiled,	1 artichoke,	120	60	1	59	22	0	0	0
Squash, winter, spaghetti, raw	1 cup, cubes	101	63	2	182	301	0	0	0
Cheese, cottage, lowfat, 1% milkfat	4 oz	113	81	1	25	10	0	0	0
Papayas, raw	1 cup, cubes	140	109	2	17	70	0	0	0
Snacks		Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Blackberries, raw	1 cup	144	75	1	213	108	0	0	0
Finfish, herring, Atlantic, pickled	1 oz, boneless	28	74	1	60	0	0	0	416
Ice creams, vanilla, light, soft-serve	0.5 cup (4 fl oz)	88	222	2	106	70	0	0	0
<b>Total Energy Choice = 2105 kcal</b>						<b>total mg = 2913 1638 0 2913</b>			
						<b>%Cal= 1.25% 0.70% 0.00% 1.25%</b>			

**KIM notes:**  
 Your energy allowance is 2385 kcal  
 Get more exercise

These overall choices will give  
 9% long 6 in your body's long total

% long 6 in long total ==>>> **47% 58% 78%**  
 Heart attack deaths/100,000 ==>>> **50 90 200**

## Modest Risk- Depression & Heart Attacks [40% '6'] Plan to Prevent Problems

Eat more omega-3 - tuna, sardines, seafood  
Less omega-6 - french fries, mayonnaise, potato chips  
Fewer calories per meal.

This menu plan may keep 40% omega-6 and 60% omega-3 in tissue long-chain fats.  
 Download free menu planning software at: <http://efaeducation.nih.gov/sig/kim.html>.

### KIM Report by Meal Times For John Smith 40% Plan # 319 John Smith

Breakfast		Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Cereals ready-to-eat, QUAKER, CAP'N CRUNCH	0.75 cup	27	108	1	191	10	0	0	0
Milk, nonfat, fluid, with added vitamin A (fat free or	1 cup	245	88	1	12	5	0	0	0
Orange juice, raw	1 cup	248	112	1	72	27	0	0	0
Lunch		Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Potatoes, Russet, flesh and skin, baked	1 potato large (3"	299	290	1	96	30	0	0	0
Finfish, salmon, sockeye, canned, drained solids	1 can	389	565	1	314	723	1380	4550	0
Broccoli, cooked, boiled, drained, without salt	1 stalk, medium	180	50	1	68	232	0	0	0
Collards, frozen, chopped, cooked, boiled, drained,	1 cup, chopped	170	61	1	102	218	0	0	0
Cauliflower, cooked, boiled, drained, with salt	0.5 cup (1" pieces)	62	14	1	31	104	0	0	0
Dinner		Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Beans, pinto, immature seeds, frozen, cooked,	0.333 package (10 oz)	94	152	1	93	186	0	0	0
Spinach, cooked, boiled, drained, without salt	1 cup	180	41	1	29	153	0	0	0
Beans, snap, green, cooked, boiled, drained, with	1 cup	125	44	1	70	111	0	0	0
Chicken, broilers or fryers, light meat, meat only,	0.5 chicken, bone	107	93	0.5	396	21	43	32	0
Cheese, parmesan, grated	1 oz	28	65	0.5	45	49	0	0	0
Egg, whole, cooked, hard-boiled	1 large	50	78	1	594	18	75	22	0
Tea, instant, sweetened with sugar, lemon-flavored,	1 serving (3	23	89	1	7	14	0	0	0
Snacks		Serving Size	grams	kcal	Servings	Short 6	Short 3	Long 6	Long 3
Bananas, raw	1 large (8" to 8-7/8"	136	125	1	76	45	0	0	0
Ice creams, vanilla, rich	0.5 cup	107	259	1	396	257	0	0	0
<b>Total Energy Choice = 2231 kcal</b>						<b>total mg = 2591 2181 1497 4603</b>			
						<b>%Cal= 1.05% 0.88% 0.60% 1.86%</b>			

**KIM notes:**  
 Your energy allowance is 2210 kcal  
 Your Weight seems OK

These overall choices will give  
 40% long 6 in your body's long total

% long 6 in long total ==>>> **47% 58% 78%**  
 Heart attack deaths/100,000 ==>>> **50 90 200**