May 2017 Fish Consumption Advisory Program Media Campaign Summary

A media campaign announced the completion of the FISH Project and introduced the new fish consumption advice brochure and website targeted for women who are or may become pregnant. The campaign incorporated traditional news releases, social media, and pre-roll ads before YouTube videos. These actions resulted in print, web, radio, and TV coverage and greatly expanded the number of potential people reached with this information. Careful planning and relationship building over time allowed this media campaign to be successful.

MDH Media Campaign Actions

MDH News Releases

On May 8, 2017, MDH published two news releases (see Appendix A).

1. FISH Project Final Results Summary

http://www.health.state.mn.us/news/pressrel/2017/fishproject050817.html

Announced availability of the final summary of the Fish are Important for Superior Health (FISH) Project on the Sawtooth Mountain Clinic (SMC) website.

2. HealthPartners/MDH brochure and website release

http://www.health.state.mn.us/news/pressrel/2017/fish050817.html

Announced the new Choose Your Fish brochure and website. A video - "New information for women to choose the best fish" – summarized the key points from the new release and was posted on the MDH website, MDH Facebook page, and HealthPartners Facebook page. https://www.youtube.com/watch?v=XxRlnN8vJpg&feature=youtu.be

MDH and Partners Social Media

MDH, HealthPartners, and SMC utilized social media (Facebook and Twitter) to highlight news release content, emphasize healthy fish eating, and promote the new ChooseYourFish.org website. MDH posted social media the week of the news releases and the following week during Women's Week (week of May 15).

YouTube Video Pre-Roll Ads

Three YouTube pre-roll ads were produced to further share the message to choose safe fish to eat and point people to resources for choosing which fish to eat. The ads targeted women in three geographic areas: Grand Portage, Cook County, and the rest of Minnesota (aka Minnesota Statewide). The three ads were identical, except for the last 10-15 seconds, which differed based on viewers' geographic location. For example, ad viewers in Cook County were directed to obtain more information from SMC's website (sawtoothmountainclinic.org).

The 45-second ads ran from May 8 through May 29, 2017 (3-week time period). In week 1, ads were targeted to women of all ages in all 3 geographic areas. Analysis of numbers of women watching the videos at the end of week 1 resulted in changes for weeks 2 and 3 for Grand Portage and Minnesota Statewide areas. The audience in Grand Portage was expanded to target everyone because this community's population is small and anectdotal information from the FISH Project indicated everyone

(male and female of all ages) would be good communicators of information to women. In weeks 2 and 3, the Minnesota Statewide area (excluding Grand Portage and Cook County) was limited to target women only ages 18-34 versus women of all ages. Women ages 18-34 had higher rates of watching the video to the end during week 1, and older women may not think the topic applies to them. Ads for Cook County were targeted at women of all ages for the entire 3-week period.

- YouTube ad run in Cook County (www.sawtoothmountainclinic.org): https://youtu.be/tHTHggR-DW4
- YouTube ad run in Grand Portage Zip Code: https://youtu.be/yQtCT7BTGc
- YouTube ad run Minnesota Stateside except Cook County and Grand Portage (www.health.state.mn.us/fish): https://youtu.be/fusCQ2YDNGo

HealthPartners Internal Communications

In preparation for the news releases, extensive internal communications at HealthPartners, including talking points for doctors and clinicians, promoted the Choose Your Fish message and are summarized below.

Table 1. HealthPartners Internal Communications

Item/tactic	Description	Message/notes	Timing	Estimated reach (# people)
Inform Healthy Pregnancy leaders & nurses	Member program offered by certain employers	Informed about Choose Your Fish campaign	4/27/17	2 leaders, 5 nurses
HealthPartners Institute Huddle	Brief weekly meeting for all Institute employees	Informed about Choose Your Fish campaign	5/3/17	Potentially ~400 Likely seen by ~100
Hotsheet article	Weekly e- newsletter for physicians	Informed about Choose Your Fish campaign	5/5/17	~1300
The Beat	Weekly email for HealthPartners- wide news	Informed about Choose Your Fish campaign	5/8/17	Viewed by 881; Average time 3 minutes (anecdotally high amount of time)
Organization- wide Huddles	Brief weekly meetings held by each department organization-wide	Informed about Choose Your Fish campaign	Week of May 8	Potentially ~23,000 Likely seen by ~13,800
Institute Update	Monthly email for HealthPartners Institute employees	Informed about Choose Your Fish website and educational effort	5/31/17	Potentially ~400

Responses to Media Campaign

"Earned" Media from News Releases

The news releases resulted in 16 "earned" media stories online, in print, or through radio/TV coverage (see Table 2 summary table below). News articles electronically available at time of report publication are in Appendix B. Over 4 million people were potentially reached through "earned" media sources following the two news releases.

- **183,336** total potential broadcast impressions
- **320,957** total potential print impressions
- **3,990,789** total potential online impressions (not including social media share headline impressions) (this number increases to 18,036,406 when including U.S. News online impressions, which includes views of all stories in that edition of US News, not just the one FISH Project story)
- 249 total shares on social media

Note: Impression totals capture the number of potential people who viewed the article but does not necessarily represent the actual number of unique readers for individual news stories.

Table 2. Summary of "Earned" Media*

Date	Media Source	Title	Potential Broadcast Impressions	Potential Print Impressions	Potential Online Impressions	Online Shares
5/8/17	MPR News: https://www.mprnews.org/story/201 7/05/08/project-reduces-mercury- levels-in-women-on-north-shore	Project reduces mercury levels in women on North Shore	106,375	n/a	345,035	27 (Facebook, Twitter, LinkedIn)
5/8/17	Duluth News Tribune: http://www.duluthnewstribune.com/ news/health/4263649-study-north- shore-women-who-switched-fish- meals-lowered-mercury	Study: North Shore women who switched fish meals lowered mercury	n/a 32,642		139,306	85 (Facebook, Twitter)
5/8/17	Mankato Times: http://mankatotimes.com/2017/05/0 8/department-of-health-highlights- health-benefits-of-eating-fish-before- and-during-pregnancy/	Department of Health Highlights Health Benefits of Eating Fish Before and During Pregnancy	n/a	n/a	2475	6 (Facebook, Twitter, LinkedIn)
5/8/17	The Ely Echo: www.elyecho.com/articles/2017/05/ 08/fish-project-reduces-mercury- women-shore	FISH project reduces mercury in women on the Shore	n/a	n/a	3581	0
5/9/17	WTIP radio - Tuesday morning show with Jay Anderson: http://www.wtip.org/fish-are- important-superior-health-study- results-are-released	Fish are Important for Superior Health study results are released	100	n/a	20	n/a
5/9/17	The Star Tribune: www.startribune.com/northern- minnesota-campaign-reduces-fish- related-mercury- consumption/421669973/	Northern Minnesota campaign reduces fish- related mercury consumption	n/a	288,315	2,188,583	23 (Facebook)

^{*} Table continued on next 2 pages.

Date	Media Source	Title	Potential Broadcast Impressions ¹	Potential Print Impressions ¹	Potential Online Impressions ¹	Online Shares
5/9/17	Minnesota Ag Connection: www.minnesotaagconnection.com/st ory-state.php?Id=475	New Approach Easier for Women to Choose Best Fish for Health	n/a	n/a	66	0
5/9/17	Minnesota News Network: http://minnesotanewsnetwork.com/n ew-website-has-info-on-which-fish- are-safe-for-pregnant-women-to-eat- with-audio/	New website has info on which fish are safe for pregnant women to eat (with AUDIO)	8797 n/a		589	1 (Facebook)
5/9/17	MinnPost: www.minnpost.com/second- opinion/2017/05/fish-project- reduced-mercury-levels-north-shore- women-expanding-statewide	FISH project that reduced mercury levels in North Shore women is expanding statewide	n/a	n/a	188,982	32 (Facebook, Twitter)
5/9/17	KDAL radio - Duluth, MN: http://kdal610.com/news/articles/20 17/may/09/choosing-the-right-fish-to-eat/	Choosing The Right Fish To Eat	8990	n/a	500	2 (Facebook Twitter)
5/11/17	WCCO This Morning show: http://minnesota.cbslocal.com/video/ 3664829-study-fish-helps-babies- develop-in-utero/	Study: Fish Helps Babies Develop in Utero	59,174 (live studio interview)	n/a	535,881	53 (Facebook, Twitter)
5/12/17	Conservation Minnesota: https://www.conservationminnesota. org/news/interests/healthy-kids-and-families/choosing-safe-fish-for-health	Choosing safe fish for health	n/a	n/a	n/a	12 (Facebook, Twitter)
5/12/17	Hometown Focus News – Virginia, MN: http://www.hometownfocus.us/news /2017-05- 12/Health/ChooseYourFishorg helps pregnant_women_choose_thehtml	ChooseYourFish.org helps pregnant women choose the best fish for health	n/a	n/a	1756	0

Date	Media Source	Title	Potential Broadcast Impressions ¹	Potential Print Impressions ¹	Potential Online Impressions ¹	Online Shares
5/12/17	Home Town Source: http://hometownsource.com/2017/0 5/12/new-approach-makes-it-easier- for-women-to-choose-the-best-fish- for-their-health-their-babys-health/	New approach makes it easier for women to choose the best fish for their health, their baby's health	n/a	n/a	2455	7 (LinkedIn)
5/13/17	U.S. News & World Report Best States: https://www.usnews.com/news/best- states/minnesota/articles/2017-05- 13/project-aims-to-reduce-mercury- levels-in-women-in-minnesota	Project Aims to Reduce Mercury Levels in Women in Minnesota	n/a	n/a	14,045,617 (note: # of impressions is for all stories on www.usnews.com site, not just the FISH Project news story)	0
6/20/17	Health Insurance Industry News AHIP Solutions SmartBrief: http://www.smartbrief.com/branded /95EE6D60-D70D-4789-82C2- F1105A0A863C/39F7ADE2-5092- 44C1-933F-AECD580C7529	Minnesota Department of Health and HealthPartners: New approach makes it easier for women to choose the best fish for their health and their baby's health	n/a	n/a	413,097	0

MDH and Partners Social Media

MDH, SMC, and HealthPartners (HP) social media efforts are described in the table below. Facebook was used as the distribution platform for all posts; MDH also used Twitter. Images of Facebook posts are in Appendix C.

Table 3. Summary of MDH and Partners Social Media

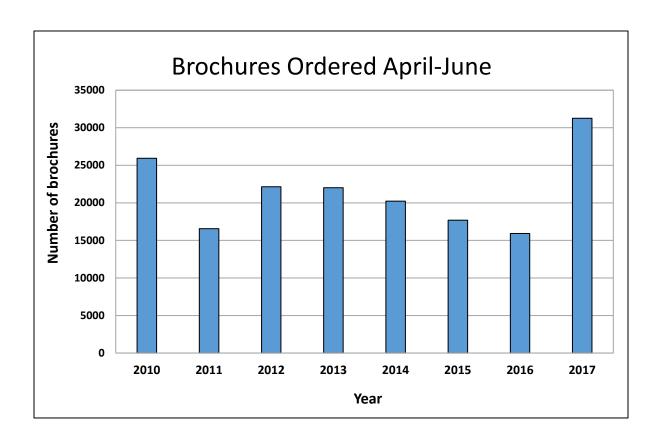
Theme	Date	Facebook Post	Twitter Post (max 140 characters, including spaces)	Facebook: People Reached	Facebook: Post/Link Clicks	Twitter: Impressions
FISH Project Final Summary	5/8/2017 (SMC)	FISH Project Final summary available! Check out the FISH page on the clinic website (http://sawtoothmountainclinic.org/files/finalfish.pdf) to read the technical report along with a lot of other fish related information and videos of women's personal story about the role fish plays in their lives. Thanks to all that participated in sharing their time and stories to make this project a success!	n/a	348	11	n/a
News Release: Choose Your Fish	5/8/2017 (MDH)	and during pregnancy, as well as the importance of choosing the right	News Release: New approach makes it easier for women to choose best fish for their health and their baby's health https://lnks.gd/2/3bv_p3	841	9	785
News Release: Choose Your Fish	5/8/2017 (HP)	The Choose your Fish campaign is making a splash. HealthPartners Institute partnered with the Minnesota Department of Health to create a brochure and website that is aimed at increasing awareness about the safest fish to eat for pregnant women and women of childbearing age. Check out this website for easy to understand guidelines and great, simple recipes you can make tonight. chooseyourfish.org	n/a	6371	2700	n/a
Dinner Ideas: Choose Your Fish	5/9/2017 (MDH)	Need ideas for a healthy and nutritious dinner tonight? Choose fish! This online guide shows which fish are low in mercury and healthy for you and your family to eat.	Need some ideas for a healthy and nutritious dinner tonight? Choose fish! http://chooseyourfish.org/fish/recipe pic.twitter.com/5McZ0P5RvQ	892	22	794
HealthPartners: Choose Your Fish	5/11/2017 (MDH)	We've teamed up with HealthPartners on a new campaign that gives women the information they need on choosing the right fish to eat.	Study: Fish Helps Babies Develop In Utero http://cbsloc.al/2q6ZyV3	2304	48	1127
Omega-3 fatty acids: Choose Your Fish		Hey moms-to-be! Did you know omega-3 fatty acids are important for your baby's eye and brain development? Eating fish is the best way to gets these nutrients, but choosing the right fish is important. Learn more about which types of fish to eat and which to avoid. #NWHW	fatty acids that are important for baby's eye & brain development http://chosseyourfish.org/fish/home #NWHW		15	651
Health benefits of eating fish: Choose Your Fish	5/17/2017 (MDH)	The benefits of eating fish outweigh the risks if you eat fish low in mercury and other contaminants. Studies show that eating fish	DYK studies show that eating fish regularly can lower the risk of heart disease? http://chooseyourfish.org/fish/content/74 #NWHW pic.twitter.com/00Opl7yVYj	530	3	526
Sport Fish in MN: Choose Your Fish	5/18/2017 (MDH)	Did you know different fish from Minnesota lakes and rivers have different amounts of mercury? Some fish you should only eat once a month, but other fish you can eat weekly.	Plan on fishing this weekend? Learn more about eating sport fish and which ones you should limit: http://chooseyourfish.org/fish/content/76 #mercury pic.twitter.com/5pZIj07uJu	2036	84	825
Site-specific guidelines for eating fish: Choose Your Fish	5/19/2017 (MDH)	How clean a lake looks is not a sign of how safe the fish are to eat! Check out our site-specific guidelines for eating fish from Minnesota rivers and lakes.	How clean a lake looks is not a sign of how safe the fish are to eat! More about choosing the right fish: http://chooseyourfish.org/fish/home pic.twitter.com/jz2faFRtBA	1267	20	1943

Website Activity

Google analytics showed increased views on the MDH, SMC, and ChooseYourFish.org websites during the media campaign. The news release on May 8, 2017, announced the new brochure and launching of the website, initiating a burst of traffic to the site from a variety of media sources internal and external to MDH and HealthPartners. Between the beginning of the evaluation survey and the press release (August 12, 2016-May 7, 2017), there had been 848 users of the ChooseYourFish.org website. Then on May 8 (date of press release), there were 858 visitors to the site, 94% of whom were new visitors. Altogether, there have been 2,491 site visitors between the media launch and the completion of this grant (May 8 - June 27, 2017). (Appendix D).

Distribution of MDH Fish Consumption Guidelines Brochure

Announcement of the Choose Your Fish brochure available in May 2017 resulted in a surge of requests with over 22,000 brochure orders in the month of May alone. Data from past years for the MDH Family Guide brochure, renamed Choose Your Fish, are shown below for the months around the Minnesota fishing opener (April, May, and June) when most brochures are typically requested.



YouTube Pre-Roll Ads

YouTube analytics for the three geographic areas are below. Minnesota Statewide ad had the highest view rates in all 3 weeks with a higher rate each subsequent week even though the target parameters changed from all women in week 1 to women ages 18-34 in weeks 2 and 3. In Grand Portage, the impressions and view rates went up in week 3 likely due in part to the target parameters changing from all women in week 1 to everyone in weeks 2 and 3.

Table 4. YouTube Ad Analytics by Geographic Area

	MN Statewide			Со	Cook County			Grand Portage		
	Impressions	Views	View rate	Impressions	Views	View rate	Impressions	Views	View rate	
May 8 - 14	30699	9510	30.98%	1959	424	21.64%	9	1	11.11%	
May 15 - 21	34458	10797	31.33%	1649	401	24.32%	12	2	16.67%	
May 22 - 29	32905	12038	36.58%	2071	474	22.89%	167	38	22.75%	

Overall, there were a total of just over 100,000 impressions with nearly 34,000 views for the three weeks the ads ran. The overall view rate was 32%. The 18 to 34 year old age groups had the highest rate for watching the entire video ad.

Table 5. YouTube Ad Analytics by Age

Time period	Age	Impressions	Views	View rate	Video played to %				
Time period					25%	50%	75%	100%	
May 8 - 14	18-24	6,187	2,203	35.61%	53.01%	42.04%	35.02%	30.24%	
	25-34	3,899	1,403	35.98%	54.31%	41.25%	35.19%	30.52%	
	35-44	3,024	915	30.26%	47.62%	35.87%	29.26%	24.01%	
	45-54	2,106	610	28.96%	43.19%	32.47%	27.36%	22.50%	
	55-64	3,163	704	22.26%	36.95%	25.82%	20.91%	16.13%	
	65 or more	3,708	732	19.74%	36.40%	22.00%	16.80%	11.89%	
	Undetermined	10,576	3,337	31.55%	51.01%	37.65%	29.63%	24.33%	
	All ages	32,658	9,904	30.33%	47.93%	35.47%	28.82%	23.82%	
May 15 - 21	18-24	14,049	4,913	34.97%	53.68%	40.87%	33.69%	29.06%	
	25-34	10,067	3,419	33.96%	53.53%	39.58%	32.30%	26.76%	
	35-44	1,320	351	26.59%	44.38%	31.85%	25.36%	20.68%	
	45-54	1,259	297	23.59%	39.13%	27.56%	21.97%	16.77%	
	55-64	2,388	404	16.92%	30.68%	19.19%	15.45%	11.78%	
	65 or more	3,196	540	16.90%	31.17%	18.41%	13.88%	9.27%	
	Undetermined	3,837	1,227	31.98%	51.20%	38.46%	30.78%	25.14%	
	All ages	36116	11151	30.88%	48.99%	36.02%	29.30%	24.35%	
May 22 - 29	18-24	20,020	7,358	36.75%	55.04%	42.96%	35.56%	30.24%	
	25-34	13,765	4,855	35.27%	54.97%	41.38%	33.93%	28.76%	
	35-44	313	69	22.04%	41.21%	28.12%	20.45%	16.29%	
	45-54	168	42	25.00%	40.96%	27.11%	25.30%	23.49%	
	55-64	243	36	14.81%	29.63%	18.93%	12.76%	11.11%	
	65 or more	263	47	17.87%	30.53%	18.70%	17.56%	14.89%	
	Undetermined	367	73	19.89%	34.33%	24.80%	20.71%	18.53%	
	All ages	35,139	12,480	35.52%	54.25%	41.60%	34.29%	29.14%	
verall	All ages	103,913	33,535	32.27%					

Appendix A

News Releases

FISH Project Final Results Summary

http://www.health.state.mn.us/news/pressrel/2017/fishproject050817.html

News Release

May 8, 2017

Contact information

FISH project reduces mercury in women on the Shore

Women choose to eat fish

Increased efforts to improve advice to women about eating fish are yielding positive results for the health of women on the North Shore.

Women involved in a follow-up group to a major project aimed at reducing mercury in women through changes in fish consumption were found to have decreased mercury levels in their blood, but they didn't lower their consumption of healthy, low-mercury fish.

The Fish are Important to Superior Health (FISH) project started after a 2011 study by the Minnesota Department of Health (MDH) showed that 10 percent of newborns tested in the North Shore – Arrowhead region had mercury above levels of concern in their blood. Too much mercury can cause lasting problems with understanding and learning.

The study results spurred a collaboration among Sawtooth Mountain Clinic, Grand Portage Health Service, North Shore Health, Grand Portage Band of Lake Superior Chippewa Trust Lands and MDH to reduce mercury exposure in women in the area and pilot an in-clinic screening for high mercury exposure. Nearly 500 women from Cook County, Grand Portage and the surrounding area participated in the FISH Project.

Participants provided information about which fish they ate and how often they ate fish. They also had a blood sample analyzed for mercury and healthy fatty acids. They received information about healthy diets that included which type (species) of fish to eat and how often they can eat fish.

Women in the FISH Project reported eating more fish than women nationally. They also had higher fatty acids levels and blood mercury levels, but about the same percentage of women in the project as nationally (3 percent) had mercury levels above the level of concern. Mercury levels were lowest in blood collected in the spring and highest in fall samples. Results from FISH support the findings of the 2011 study.

An important finding from the project is that women did not stop eating fish as a result of the project. Studies have shown that fish can provide important nutrients that help fetuses and babies develop, as long as they are low in mercury and other contaminants. The fatty acids, vitamins and minerals in fish are also important for adults.

"Fish and fishing is our history and a strong part of the culture of the communities along the North Shore," said Rita Plourde, CEO of Sawtooth Mountain Clinic. "Our board of directors and staff appreciate any opportunity to improve the care of our patients and the health of our communities. Together with our patients, we wholeheartedly agreed to do whatever was needed to educate and ultimately reduce mercury exposure in women who are or may become pregnant, thereby reducing mercury levels in future babies. Now we know we can eat fish wisely and give birth to healthy babies!"

Some of the women in the FISH project were asked to participate in a follow-up clinic visit six months after their initial visit. Changes at the follow-up were positive: the project did not cause women to eat less low-mercury fish, and fatty acid levels did not change. In fact, many women said they ate more fish. Mercury levels had declined in the follow up group and the participants with elevated mercury reduced their consumption of fish species shown to contribute most to higher mercury exposure.

The FISH project clinics are now including screening for high mercury in future prenatal visits. Community education and WIC visits will include information about choosing which fish to eat and how often. More information on the project is at FISH Project News.

The goals of the FISH project are aligned with a new campaign launched today by MDH and HealthPartners. The goal of this new campaign is to equip women who are or may become pregnant with the information they need to choose the right fish to eat.

"We want women and children to eat fish. The benefits outweigh risks if they choose fish low in mercury and other contaminants," said Pat McCann, research scientist for MDH.

The campaign highlights the health benefits of eating fish before and during pregnancy and the importance of choosing the right fish to reduce exposure to mercury or other contaminants.

Based on findings from the FISH project and other research, a brochure and ChooseYourFish.org were launched to reach more women and families and make it easier for them to follow MDH's fish consumption guidelines. The new website (ChooseYourFish.org) provides easy access to information on the web and on mobile devices. Both the brochures and website describe how often different types (species) of fish can be eaten to provide safe yet beneficial meals. The website also features simple recipes, videos and tips for selecting and cooking fish. Versions of the brochures were designed for the North Shore and Grand Portage communities and will be distributed by FISH Project partners.

These efforts were supported in part through funding from the U.S. Environmental Protection Agency (EPA) Great Lakes Restoration Initiative. A video – "New Information for Women to Choose the Best Fish" (YouTube) – highlights the key points of the new campaign.

MDH gives fish consumption recommendations for pregnant women, women who could become pregnant and children under age 15, as well as for men, boys age 15 and over and women not planning to become pregnant. In general, men, boys 15 years and older and women who are not and will not become pregnant can eat fish about 3 times more often than the guidelines for pregnant women and younger children.

To learn more about MDH's recommendations, visit Fish Consumption Guidance.

-MDH-

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HealthPartners/MDH brochure and website release – "Choose Your Fish"

http://www.health.state.mn.us/news/pressrel/2017/fish050817.html

News Release May 8, 2017

Contact information

New approach makes it easier for women to choose the best fish for their health and their baby's health

Minnesota Department of Health and HealthPartners launch new campaign

Equipping women who are or may become pregnant with the information they need to choose the right fish to eat -- that's the goal of a new campaign launched today by the Minnesota Department of Health (MDH) and HealthPartners.

The campaign highlights the health benefits of eating fish before and during pregnancy and the importance of choosing the right fish to reduce exposure to mercury or other contaminants. ChooseYourFish.org is a new website that helps people navigate the many fish choices and choose the best ones for women who are or may become pregnant.

"We want women and children to eat fish. The benefits outweigh risks if they choose fish low in mercury and other contaminants," said Pat McCann, research scientist for MDH.

A brochure and ChooseYourFish.org were launched to reach more women and families and make it easier for them to follow MDH's fish consumption guidelines. The website provides additional information about how to select and cook fish. Building on previous research and work by the Great Lakes Consortium for Fish Advisories, including Cornell University and Essentia Health, HealthPartners Institute gathered information through a series of focus groups and surveys to understand how messages about eating fish are best delivered and what additional context is needed. The goal was to design, write and develop materials that were clear and easy to understand. MDH originally approached HealthPartners because of its commitment to health education and regional reputation as a trusted, integrated health system. Both MDH and HealthPartners share a common priority of improving the health of Minnesotans.

"HealthPartners Institute reached out to women to find out the best and most accessible way to communicate this important information about eating fish," said Dr. Tom Kottke, HealthPartners Medical Director for Well-Being. "We want to empower women with the information they need to make an important decision that will affect their health and the health of their families."

Studies have shown that fish can provide important nutrients that help fetuses and babies develop, as long as they are low in mercury and other contaminants. The fatty acids, vitamins and minerals in fish are also important for adults.

Increased efforts to improve advice to women about eating fish started after a 2011 study by MDH showed that 10 percent of newborns tested in the North Shore – Arrowhead region had mercury above levels of concern in their blood.

The study results spurred a collaboration among Sawtooth Mountain Clinic, Grand Portage Health Service, North Shore Health, Grand Portage Band of Lake Superior Chippewa Trust Lands and MDH to reduce mercury exposure in women in the area and pilot an in-clinic screening for high mercury exposure. Nearly 500 women from Cook County, Grand Portage and the surrounding area participated in the Fish are Important to Superior Health (FISH) Project.

Participants provided information about which fish they ate and how often they ate fish. They also had a blood sample analyzed for mercury and healthy fatty acids. Three percent of participants had blood mercury levels above the level of concern. They received information about healthy diets that included which type (species) of fish to eat and how often they can eat fish. More information on the project is at FISH Project News.

A new brochure is available in several different versions that each target a different community and/or region of the state, as well as a statewide version. The new website (ChooseYourFish.org) provides easy access to information on

the web and on mobile devices. Both the brochures and website describe how often different types (species) of fish can be eaten to provide safe yet beneficial meals. The website also features simple recipes, videos and tips for selecting and cooking fish.

These efforts were supported in part through funding from the U.S. Environmental Protection Agency (EPA) Great Lakes Restoration Initiative. A video – "New Information for Women to Choose the Best Fish" (YouTube) – highlights the key points of the new campaign.

MDH gives fish consumption recommendations for pregnant women, women who could become pregnant and children under age 15, as well as for men, boys age 15 and over and women not planning to become pregnant. In general, men, boys 15 years and older and women who are not and will not become pregnant can eat fish about 3 times more often than the guidelines for pregnant women and younger children.

To learn more about HealthPartners, visit About HealthPartners. To learn more about MDH's recommendations, visit Fish Consumption Guidance.

-MDH-

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Appendix B

"Earned" Media News Articles and Coverage

MPR - Dan Kraker

http://www.mprnews.org/story/2017/05/08/project-reduces-mercury-levels-in-women-on-north-shore

Project reduces mercury levels in women on North Shore

Dan Kraker · Duluth · May 8, 2017



Fisherman Steve Dahl's catch of lake herring Nov. 23, 2015, at the Knife River Marina. Lake herring are low in mercury. *Derek Montgomery for MPR News* 2015

After a 2011 study by the Minnesota Department of Health showed that 10 percent of newborns tested along the North Shore had concerning levels of mercury in their blood, public health officials faced a conundrum.

Too much mercury can cause lasting problems with understanding and learning.

So how could they reduce the levels of mercury in women of child-bearing age, without sacrificing the health benefits of eating fish — especially in communities in northeast Minnesota with a deep cultural connection to fishing?

The answer was a partnership between the Minnesota Department of Health and health clinics in Cook County and on the Grand Portage reservation dubbed FISH — Fish are Important to Superior Health.

Smelt fishermen take their nets back into the waters of Lake Superior on April 22, 2012, at Park Point in Duluth. Women in Duluth have lowered their mercury levels in their blood while eating fish. *Derek Montgomery for MPR 2012*



Nearly 500 women had their blood sampled for mercury and healthy fatty acids. They answered questions about how much fish they ate. And health care providers talked to them about what types of fish they could safely eat, and how often.

Six months later, women came back for a return visit, and had blood samples taken again. The results, officials say, were encouraging.

"We found that women did not stop eating fish. That was good," said Pat McCann, a research scientist who led the project for the Minnesota Department of Health.

Research has shown that when women receive information about mercury in fish, they often stop eating fish, McCann said — either because they find it too complicated to decide what kinds of fish, or how much fish they can safely eat, or because they feel it's just too scary to risk being exposed to mercury.

But McCann said the information provided to participants along the North Shore seemed to assuage those fears.

"Their fatty acid levels didn't change, so that indicates they're still getting the beneficial aspects of eating fish," she said. "But their mercury levels were lower at the follow-up visit."

Moreover, many women reported during their follow-up visits that they actually ate more fish. But they switched to eating more species low in mercury, like Lake Superior herring or whitefish.

"Fish and fishing is our history and a strong part of the culture of the communities along the North Shore," said Rita Plourde, CEO of Sawtooth Mountain Clinic, which took part in the project.

Clinics are now including screening for high mercury levels in future prenatal visits. They're also including information about safe fish consumption in other patient visits.

The Department of Health has also <u>teamed up with Health Partners</u> to launch a statewide campaign to highlight the health benefits of eating fish, and the importance of choosing the right fish to reduce mercury exposure.

"We want women and children to eat fish," said McCann. "The benefits outweigh risks if they choose fish low in mercury and other contaminants."

Duluth News Tribune - John Myers

http://www.duluthnewstribune.com/news/health/4263649-study-north-shore-women-who-switched-fish-meals-lowered-mercury

Study: North Shore women who switched fish meals lowered mercury

By John Myers on May 8, 2017 at 8:14 p.m.



News Tribune file photo

Women along the North Shore who reduced their meals of higher-mercury fish and instead ate lower-mercury fish reduced the mercury level in their blood by an average of 40 percent, according to results of a Minnesota Department of Health study released Monday.

The study of 499 women in Cook County, including many members of the Grand Portage Band of Lake Superior Chippewa, found that 3 percent of the women tested had elevated mercury levels.

Those 15 women with high mercury levels and another 30 women who did not have elevated mercury levels were asked to reduce the amount of large walleye and lake trout that they are and instead choose other fish like lake herring, also called cisco.

The effort was aimed at women between the ages of 16 and 50 and is the state's response to an alarming 2011 study that found 10 percent of newborn babies tested in the Lake Superior watershed of Minnesota had dangerous levels of mercury in their blood.

Unable to track exactly where those babies came from because the original tests were anonymous, the Department of Health instead focused on areas near Lake Superior where fish consumption is high. Fish and seafood are the most likely pathway for toxic mercury to enter people.

The state coordinated outreach efforts through the Sawtooth Mountain Clinic in Grand Marais and on the Grand Portage Reservation.

"We found that we could successfully reduce mercury levels in women through education ... educating women about mercury in fish did result in them changing their fish meals away from higher-mercury fish to lower-mercury fish, so they still received the health benefits of eating fish," Pat McCann, fish consumption program manager for the Minnesota Department of Health, told the News Tribune.

"Fish and fishing is our history and a strong part of the culture of the communities along the North Shore," said Rita Plourde, CEO of Sawtooth Mountain Clinic. "Together with our patients, we wholeheartedly agreed to do whatever

was needed to educate and ultimately reduce mercury exposure in women who are or may become pregnant, thereby reducing mercury levels in future babies."

The study results — released five days before Minnesota's fishing opener — also found that asking women several key questions about their fish consumption is a very good predictor of which ones will have higher mercury in their blood, McCann said.

The question results "tended to overstate the mercury level, so we had some false positives. But we got a pretty good indicator by asking a few key questions," she said, noting that should help healthcare providers statewide track down and educate potential high-mercury patients.

With the state's targeted North Shore effort now concluded, the Department of Health is focusing on a statewide and Great Lakes-wide effort to encourage women to reduce or eliminate high-mercury fish from their diet.

Exposure to mercury, even small amounts, may cause serious health problems, especially for children and developing fetuses. Mercury may have toxic effects on the nervous, digestive and immune systems, and on lungs, kidneys, skin and eyes.

Some mercury that enters the atmosphere comes from volcanic activity and weathering of rocks but most comes from human activity such as burning coal in power plants, mining gold, incinerating garbage and processing taconite iron ore. Once in the environment, especially in water, mercury can be transformed by bacteria into toxic methylmercury, an organic compound that bioaccumulates in fish. Mercury increases as it moves up the food chain, including in people and animals that eat contaminated fish.

Minnesota's fish consumption advisory warns against eating frequent meals of large predatory fish like walleyes, northern pike and lake trout, especially for women and children. Smaller fish contain less mercury. Some types of tuna and other seafood also are high in mercury.

New website launched

Based on findings from the North Shore project and other research, the state and Health Partners joined efforts to release a new brochure and website, www.ChooseYourFish.org, both launched Monday. They are aimed at making it easier for women and families to follow the state's fish consumption guidelines. ChooseYourFish.org describes how often different fish species can be eaten to provide safe yet beneficial meals. The website also features simple recipes, videos and tips for selecting and cooking fish.

Duluth News Tribune story also shared on Duluth News Tribune Facebook page:



Mankato Times

http://mankatotimes.com/2017/05/08/department-of-health-highlights-health-benefits-of-eating-fish-before-and-during-pregnancy/

DEPARTMENT OF HEALTH HIGHLIGHTS HEALTH BENEFITS OF EATING FISH BEFORE AND DURING PREGNANCY

Posted by Joe Steck | May 8, 2017 | Health | 0



Department of Health highlights health benefits of eating fish before and during pregnancy

- Minnesota Department of Health and HealthPartners launch new campaign
- Makes it easier for women to choose the best fish for their health and their baby's health

Mankato Times

Equipping women who are or may become pregnant with the information they need to choose the right fish to eat — that's the goal of a new campaign launched today by the Minnesota Department of Health (MDH) and HealthPartners.

The campaign highlights the health benefits of eating fish before and during pregnancy and the importance of choosing the right fish to reduce exposure to mercury or other contaminants. <u>ChooseYourFish.org</u> is a new website that helps people navigate the many fish choices and choose the best ones for women who are or may become pregnant.

"We want women and children to eat fish. The benefits outweigh risks if they choose fish low in mercury and other contaminants," said Pat McCann, research scientist for MDH.

A brochure and ChooseYourFish.org were launched to reach more women and families and make it easier for them to follow MDH's fish consumption guidelines. The website provides additional information about how to select and cook fish. Building on previous research and work by the Great Lakes Consortium for Fish Advisories, including Cornell University and Essentia Health, HealthPartners Institute gathered information through a series of focus groups and surveys to understand how messages about eating fish are best delivered and what additional context is needed. The goal was to design, write and develop materials that

were clear and easy to understand. MDH originally approached HealthPartners because of its commitment to health education and regional reputation as a trusted, integrated health system. Both MDH and HealthPartners share a common priority of improving the health of Minnesotans.

"HealthPartners Institute reached out to women to find out the best and most accessible way to communicate this important information about eating fish," said Dr. Tom Kottke, HealthPartners Medical Director for Well-Being. "We want to empower women with the information they need to make an important decision that will affect their health and the health of their families."

Studies have shown that fish can provide important nutrients that help fetuses and babies develop, as long as they are low in mercury and other contaminants. The fatty acids, vitamins and minerals in fish are also important for adults.



Fish are a great choice for serving up lean protein with plenty of vitamins and minerals. Fish also are a natural source of omega-3 fatty acids – a good kind of fat!

Increased efforts to improve advice to women about eating fish started after a 2011 study by MDH showed that 10 percent of newborns tested in the North Shore – Arrowhead region had mercury above levels of concern in their blood.

The study results spurred a collaboration among Sawtooth Mountain Clinic, Grand Portage Health Service, North Shore Health, Grand Portage Band of Lake Superior Chippewa Trust Lands and MDH to reduce mercury exposure in women in the area and pilot an in-clinic screening for high mercury exposure. Nearly 500 women from Cook County, Grand Portage and the surrounding area participated in the Fish are Important to Superior Health (FISH) Project.

Participants provided information about which fish they ate and how often they ate fish. They also had a blood sample analyzed for mercury and healthy fatty acids. Three percent of participants had blood mercury levels above the level of concern. They received information about healthy diets that included which type (species) of fish to eat and how often they can eat fish. More information on the project is at <u>FISH Project News</u>.

A new brochure is available in several different versions that each target a different community and/or region of the state, as well as a statewide version. The new website (ChooseYourFish.org) provides easy access to information on the web and on mobile devices. Both the brochures and website describe how often different types (species) of fish can be eaten to provide safe yet beneficial meals. The website also features simple recipes, videos and tips for selecting and cooking fish.

These efforts were supported in part through funding from the U.S. Environmental Protection Agency (EPA) Great Lakes Restoration Initiative.

MDH gives fish consumption recommendations for <u>pregnant women</u>, <u>women who could become pregnant and children under age 15</u>, as well as for <u>men</u>, <u>boys age 15 and over and women not planning to become pregnant</u>. In general, men, boys 15 years and older and women who are not and will not become pregnant can eat fish about 3 times more often than the guidelines for pregnant women and younger children.

To learn more about HealthPartners, visit <u>About HealthPartners</u>.

To learn more about MDH's recommendations, visit Fish Consumption Guidance.

Mankato Times story shared on Facebook:



The Ely Echo

http://www.elyecho.com/articles/2017/05/08/fish-project-reduces-mercury-women-shore (Ely, MN)

FISH project reduces mercury in women on the Shore

Submitted by admin on Mon, 05/08/2017 - 13:14

Women choose to eat fish

Increased efforts to improve advice to women about eating fish are yielding positive results for the health of women on the North Shore.

Women involved in a follow-up group to a major project aimed at reducing mercury in women through changes in fish consumption were found to have decreased mercury levels in their blood, but they didn't lower their consumption of healthy, low-mercury fish.

The Fish are Important to Superior Health (FISH) project started after a 2011 study by the Minnesota Department of Health (MDH) showed that 10 percent of newborns tested in the North Shore – Arrowhead region had mercury above levels of concern in their blood. Too much mercury can cause lasting problems with understanding and learning.

The study results spurred a collaboration among Sawtooth Mountain Clinic, Grand Portage Health Service, North Shore Health, Grand Portage Band of Lake Superior Chippewa Trust Lands and MDH to reduce mercury exposure in women in the area and pilot an in-clinic screening for high mercury exposure. Nearly 500 women from Cook County, Grand Portage and the surrounding area participated in the FISH Project.

Participants provided information about which fish they ate and how often they ate fish. They also had a blood sample analyzed for mercury and healthy fatty acids. They received information about healthy diets that included which type (species) of fish to eat and how often they can eat fish.

Women in the FISH Project reported eating more fish than women nationally. They also had higher fatty acids levels and blood mercury levels, but about the same percentage of women in the project as nationally (3 percent) had mercury levels above the level of concern. Mercury levels were lowest in blood collected in the spring and highest in fall samples. Results from FISH support the findings of the 2011 study.

An important finding from the project is that women did not stop eating fish as a result of the project. Studies have shown that fish can provide important nutrients that help fetuses and babies develop, as long as they are low in mercury and other contaminants. The fatty acids, vitamins and minerals in fish are also important for adults.

"Fish and fishing is our history and a strong part of the culture of the communities along the North Shore," said Rita Plourde, CEO of Sawtooth Mountain Clinic. "Our board of directors and staff appreciate any opportunity to improve the care of our patients and the health of our communities. Together with our patients, we wholeheartedly agreed to do whatever was needed to educate and ultimately reduce mercury exposure in women who are or may become pregnant, thereby reducing mercury levels in future babies. Now we know we can eat fish wisely and give birth to healthy babies!"

Some of the women in the FISH project were asked to participate in a follow-up clinic visit six months after their initial visit. Changes at the follow-up were positive: the project did not cause women to eat less low-mercury fish, and fatty acid levels did not change. In fact, many women said they are more fish. Mercury levels had declined in the follow up group and the participants with elevated mercury reduced their consumption of fish species shown to contribute most to higher mercury exposure.

The FISH project clinics are now including screening for high mercury in future prenatal visits. Community education and WIC visits will include information about choosing which fish to eat and how often. More information on the project is at FISH Project News.

The goals of the FISH project are aligned with a new campaign launched today by MDH and HealthPartners. The goal of this new campaign is to equip women who are or may become pregnant with the information they need to choose the right fish to eat.

"We want women and children to eat fish. The benefits outweigh risks if they choose fish low in mercury and other contaminants," said Pat McCann, research scientist for MDH.

The campaign highlights the health benefits of eating fish before and during pregnancy and the importance of choosing the right fish to reduce exposure to mercury or other contaminants.

Based on findings from the FISH project and other research, a brochure and ChooseYourFish.org were launched to reach more women and families and make it easier for them to follow MDH's fish consumption guidelines. The new website (ChooseYourFish.org) provides easy access to information on the web and on mobile devices. Both the brochures and website describe how often different types (species) of fish can be eaten to provide safe yet beneficial meals. The website also features simple recipes, videos and tips for selecting and cooking fish. Versions of the brochures were designed for the North Shore and Grand Portage communities and will be distributed by FISH Project partners.

These efforts were supported in part through funding from the U.S. Environmental Protection Agency (EPA) Great Lakes Restoration Initiative. A video – "New Information for Women to Choose the Best Fish" (YouTube) – highlights the key points of the new campaign.

MDH gives fish consumption recommendations for pregnant women, women who could become pregnant and children under age 15, as well as for men, boys age 15 and over and women not planning to become pregnant. In general, men, boys 15 years and older and women who are not and will not become pregnant can eat fish about 3 times more often than the guidelines for pregnant women and younger children.

To learn more about MDH's recommendations, visit Fish Consumption Guidance.

WTIP radio: Tuesday morning show with Jay Anderson

http://www.wtip.org/fish-are-important-superior-health-study-results-are-released



The Star Tribune - Jeremy Olson

http://m.startribune.com/northern-minnesota-campaign-reduces-fish-related-mercury-consumption/421669973/

Northern Minnesota campaign reduces fish-related mercury consumption

By JEREMY OLSON, STAR TRIBUNE



May 09, 2017 - 6:52 PM

A campaign to reduce the number of babies in northeastern Minnesota born with elevated mercury levels in their blood appears to be working.

The Minnesota Department of Health reported Monday that mercury levels have declined in a study group of women living along the North Shore of Lake Superior, where studies have found widespread mercury contamination in freshwater fish. The women's mercury levels came down even though they continued to eat fatty fish that offer dietary and health benefits.

The findings were welcomed by doctors and public health officials on the North Shore, where a 2011 study had found that 10 percent of newborns had risky levels of mercury — which among other things increases the danger of learning disabilities. Officials had worried that overcorrecting for the problem would cause women to miss out on the benefits of fish, such as fatty acids for their personal health and nutrients that support fetal development during pregnancy.

Monday's report showed that women in the region were eating more fish on average than women nationally and had higher mercury levels. But only 3 percent of the North Shore women had mercury levels that were considered troubling, which matches the national rate and suggests they have been following the latest guidance on the proper amount and type of fish to eat.

"Now we know we can eat fish wisely and give birth to healthy babies!" said Rita Plourde, chief executive of Sawtooth Mountain Clinic, based in Grand Marais, which participated in the study and education campaign.

The project, known as Fish are Important to Superior Health (FISH), consisted of educational materials presented to 500 women of childbearing ages in Cook County. Their blood mercury levels also were tested.

Fifteen women with troubling mercury levels in their blood were then selected for a follow-up study, along with 30 healthy women for comparison. Six months later, none of the women had mercury levels that were concerning.

Presumably, reducing mercury levels in women of childbearing age will also reduce levels in newborns. However, the latest study did not examine blood levels in newborns.

"We wanted to focus on it in women, because we wanted to prevent it in the babies," said Pat McCann, the lead state health researcher on the project.

Also participating were Grand Portage Health Service, North Shore Health and the Grand Portage Band of Lake Superior Chippewa Trust Lands. Partial funding came from the U.S. Environmental Protection Agency Great Lakes Restoration Initiative.

Clinics in the region now include screening for mercury levels in prenatal visits.

The HealthPartners Institute also reacted to the results with a new website, chooseyourfish.org, to help women make healthy fish consumption choices.

Lake trout and walleye caught in Minnesota tend to have higher mercury content, for example, and should be consumed only once a month by women who are pregnant or likely to become pregnant. The guidance also applies for children younger than 15.

Farm-raised catfish and Atlantic or Pacific salmon tend to have low mercury levels by comparison and can be consumed by these higher-risk groups twice per week.

"We want women and children to eat fish," McCann said, adding that benefits outweigh risks if proper choices are made.

Jeremy Olson • 612-673-7744

Minnesota Ag Connection

www.minnesotaagconnection.com/story-state.php?Id=475

New Approach Easier for Women to Choose Best Fish for Health

Minnesota Ag Connection - 05/09/2017

Equipping women who are or may become pregnant with the information they need to choose the right fish to eat -- that's the goal of a new campaign launched today by the Minnesota Department of Health (MDH) and HealthPartners.

The campaign highlights the health benefits of eating fish before and during pregnancy and the importance of choosing the right fish to reduce exposure to mercury or other contaminants. ChooseYourFish.org is a new website that helps people navigate the many fish choices and choose the best ones for women who are or may become pregnant.

"We want women and children to eat fish. The benefits outweigh risks if they choose fish low in mercury and other contaminants," said Pat McCann, research scientist for MDH.

A brochure and ChooseYourFish.org were launched to reach more women and families and make it easier for them to follow MDH's fish consumption guidelines. The website provides additional information about how to select and cook fish. Building on previous research and work by the Great Lakes Consortium for Fish Advisories, including Cornell University and Essentia Health, HealthPartners Institute gathered information through a series of focus groups and surveys to understand how messages about eating fish are best delivered and what additional context is needed. The goal was to design, write and develop materials that were clear and easy to understand. MDH originally approached HealthPartners because of its commitment to health education and regional reputation as a trusted, integrated health system. Both MDH and HealthPartners share a common priority of improving the health of Minnesotans.

"HealthPartners Institute reached out to women to find out the best and most accessible way to communicate this important information about eating fish," said Dr. Tom Kottke, HealthPartners Medical Director for Well-Being. "We want to empower women with the information they need to make an important decision that will affect their health and the health of their families."

Studies have shown that fish can provide important nutrients that help fetuses and babies develop, as long as they are low in mercury and other contaminants. The fatty acids, vitamins and minerals in fish are also important for adults.

Increased efforts to improve advice to women about eating fish started after a 2011 study by MDH showed that 10 percent of newborns tested in the North Shore -- Arrowhead region had mercury above levels of concern in their blood.

The study results spurred a collaboration among Sawtooth Mountain Clinic, Grand Portage Health Service, North Shore Health, Grand Portage Band of Lake Superior Chippewa Trust Lands and MDH to reduce mercury exposure in women in the area and pilot an in-clinic screening for high mercury exposure. Nearly 500 women from Cook County, Grand Portage and the surrounding area participated in the Fish are Important to Superior Health (FISH) Project.

Participants provided information about which fish they ate and how often they ate fish. They also had a blood sample analyzed for mercury and healthy fatty acids. Three percent of participants had blood mercury levels above the level of concern. They received information about healthy diets that included which type (species) of fish to eat and how often they can eat fish. More information on the project is at FISH Project News.

A new brochure is available in several different versions that each target a different community and/or region of the state, as well as a statewide version. The new website (ChooseYourFish.org) provides easy access to information on the web and on mobile devices. Both the brochures and website describe how often different types (species) of fish can be eaten to provide safe yet beneficial meals. The website also features simple recipes, videos and tips for selecting and cooking fish.

These efforts were supported in part through funding from the U.S. Environmental Protection Agency (EPA) Great Lakes Restoration Initiative. A video -- "New Information for Women to Choose the Best Fish" (YouTube) -- highlights the key points of the new campaign.

MDH gives fish consumption recommendations for pregnant women, women who could become pregnant and children under age 15, as well as for men, boys age 15 and over and women not planning to become pregnant.

In general, men, boys 15 years and older and women who are not and will not become pregnant can eat fish about 3 times more often than the guidelines for pregnant women and younger children.

Minnesota News Network

http://minnesotanewsnetwork.com/new-website-has-info-on-which-fish-are-safe-for-pregnant-women-to-eat-with-audio/

New website has info on which fish are safe for pregnant women to eat (with AUDIO) MAY 9, 2017 BY BILL WERNER



Women who are or may become pregnant should check out a new website that tells which fish can be eaten safely, and how often. HealthPartners Doctor Abbey Mello says it applies to store-bought fish as well as those caught by anglers. Mello says, "That's really I think what started this project, is noticing that there were women who were eating fish that weren't safe, and so this is going to help them know what's safe to eat when they do catch it locally."

Mello says fish has Omega Three, not found in any other food source. She says, "This provides a really good source of this fatty acid, which is really important in brain development." But Mello says it's essential to reduce exposure to contaminants: "If fish have — primarily we worry about mercury — but other heavy metals, that can also have negative side effects on the health of the developing fetus, probably in the same area of brain development."

Information for mothers-to-be about eating fish is at ChooseYourFish.org.

More in this interview:

Audio Player

http://minnesotanewsnetwork.com/wp-content/uploads/2017/05/bwmello.mp3



MinnPost

https://www.minnpost.com/second-opinion/2017/05/fish-project-reduced-mercury-levels-north-shore-women-expanding-statewide

FISH project that reduced mercury levels in North Shore women is expanding statewide

By <u>Susan Perry</u> | 05/09/17



North Shore women were encouraged to eat less walleye and lake trout, which are higher in mercury. Photo credit: Creative Commons/briandjan607

An initiative to reduce mercury levels among pregnant women living in northeastern Minnesota by getting them to change their fish consumption habits has been effective and is being expanded to include women throughout the state, the Minnesota Department of Health (MDH) announced on Monday.

North Shore women who took part in the initiative successfully lowered their mercury levels by being more careful about which types (species) of fish they ate — and how often they ate them.

"We don't want to discourage women from eating fish, but we want to encourage them to eat fish that is low in mercury," said Pat McCann, a research scientist for MDH, in a phone interview with MinnPost.

For the North Shore women, that often meant eating less walleye and lake trout, she said, but not eating less fish overall.

A source of lasting health problems

McCann and her colleagues launched the initiative, called the Fish are Important to Superior Health (FISH) project, after a 2011 MDH <u>study</u> found that 1 in 10 newborns in the North Shore/Arrowhead region had unhealthy levels of mercury in their blood.

Mercury is a toxic metal. Babies who are exposed to too much of it in the womb <u>may experience neurological damage</u> that can lead to long-term learning difficulties, as well as vision and hearing problems.

Contaminated fish are the primary source of high mercury levels in the United States. The mercury gets into the fish through airborne pollution — often from the burning of fossil fuels — which settles in the water and eventually makes its way into the food chain. Both fish and humans easily absorb a type of mercury known as methylmercury, making it especially dangerous. The larger and older the fish, the more methylmercury they are likely to have in their bodies — and the greater the threat to human health.

Yet, while fish can be a source of unhealthful levels of mercury, they are also a source of healthful fatty acids.

"Studies have shown that babies whose mothers have eaten low-mercury fish during pregnancy do better developmentally," said McCann.

An educational project

The 499 women of childbearing age from Cook County, the Grand Portage reservation and the surrounding area who participated in the FISH project were therefore not told to stop eating fish. Research has shown, said McCann, that when women are informed about the dangers of mercury in fish, they often eliminate all fish — including healthy fish — from their diet.

Instead, the women's health-care providers counseled them about what species of fish to eat and how often to eat them.

Walleye, northern pike, lake trout, bass and catfish, for example, should be eaten no more than once a month, according to the MDH, while other Minnesota favorites, such as lake herring (also known as Cisco), crappie, bullhead and lake whitefish, can be eaten once a week.

When the women were enrolled in the FISH project (between June 2014 and June 2015), their blood was tested for mercury and healthy fatty acids. Data from the study revealed that the women in the project ate more fish than women nationally — not surprising, given the North Shore's strong cultural connection to fishing, said McCann. They also tended to have higher fatty acid levels and blood mercury levels than women nationally.

Only 3 percent of the women in the project had mercury levels above the level of concern. That's much lower than the 10 percent found in the 2011 study, and it's the same percentage seen in women nationally. That finding suggests that in recent years many women in northeastern Minnesota have been following health officials' recommendations regarding fish consumption, said McCann.

Some of the women in the FISH project, including 15 with concerning levels of mercury in their blood, were re-tested six months later. That follow-up data revealed positive changes. The women's mercury levels had declined, undoubtedly because they had reduced — as counseled — their consumption of walleye, lake trout and other fish species high in mercury.

"We also found that participating in the project didn't cause the women to eat less low-mercury fish, and that was good," said McCann.

New resources

The MDH, in partnership with <u>HealthPartners</u>, has published a fish-consumption brochure — customized for different regions of the state and translated into several languages — which will be distributed to women and families in all health-care systems across Minnesota.

They've also launched a website, <u>ChooseYourFish.org</u>, to help inform Minnesotans about how often different types of fish can be eaten to minimize exposure to mercury. The website also offers recipes, videos and tips for selecting and cooking fish.

"How much fish you can eat and how often depends on who you are," said McCann.

Pregnant women and kids need to be particularly careful about the fish they eat, she stressed, but people should not be afraid to eat fish.

"The benefits outweigh the risks — if you eat fish low in mercury," she said.

FYI: At the <u>ChooseYourFish.org</u> website, you'll find helpful lists of the fish to eat and the fish to avoid — from Minnesota lakes and rivers as well as from stores and restaurants. Among the fish-related cooking tips on the website is a helpful <u>video</u> from British chef Gordon Ramsey on what to look for when buying fish. The MDH also has information at its <u>Fish Consumption Guidance</u> website.

MinnPost story also shared on MinnPost Facebook page:



KDAL radio (Duluth, MN)

http://kdal610.com/news/articles/2017/may/09/choosing-the-right-fish-to-eat/

Choosing The Right Fish To Eat

Tuesday, May 09, 2017 5:42 a.m. CDT by Dave Strandberg



MN Dept. of Health

ST. PAUL, MN (KDAL) - A new campaign has been launched by the Minnesota Department of Health and Health Partners on the benefits of eating fish and the importance of choosing the right fish to reduce exposure to mercury and other contaminants.

A new brochure and website <u>ChooseYourFish.org</u> will help pregnant women and others navigate the many fish choices and pick the best ones.

Studies have shown that fish can provide important nutrients that help fetuses and babies develop and they have fatty acids, vitamins and minerals that are important for adults too.

The website details how often different types of fish can be eaten to provide safe and beneficial meals and features recipes and tips for selecting and cooking fish.

Efforts to improve advice to women about eating fish started after a 2011 study from the Department of Health showed that 10 percent of newborns tested along the North Shore and Arrowhead regions had mercury above levels of concern in their blood.

KDAL story also shared on KDAL Facebook page:



WCCO This Morning Show – Live TV Interview

http://minnesota.cbslocal.com/video/3664829-study-fish-helps-babies-develop-in-utero/



HealthPartners also shared WCCO video on HealthPartners Facebook page:



MDH also shared WCCO video on MDH Facebook page:



WCCO also linked to MDH's website from WCCO's Facebook page:



Conservation Minnesota

https://www.conservationminnesota.org/news/interests/healthy-kids-and-families/choosing-safe-fish-for-health/

Choosing safe fish for health

Posted on May 12, 2017 by Kathleen Schuler

The Minnesota Department of Health (MDH) is making it easier for women to choose and eat fish that are lower in common contaminants. In partnership with HealthPartners, MDH has launched a new <u>consumer-friendly web site</u>. This is an excellent resource for women of childbearing years, pregnant women, and parents of young children who benefit the most from safer fish consumption.

Eat safe fish

Fish are a good source of protein and healthy fats, so instead of eliminating fish from your diet, find healthier options. Keep in mind that humans can eliminate mercury from the body over a period of months, so women should carefully follow safe fish consumption advice before becoming pregnant. MDH notes, "If you are pregnant or may become pregnant, eating fish is one of the best ways to bring brain-boosting nutrients to your baby to come. Breastfeeding moms also pass these nutrients to their baby." Getting the benefits of eating fish without the risk of exposure to fish contaminants is especially important for women of childbearing age.

Fish contaminants and their effects on health

Fish are a common repository for an array of toxic chemicals. Minnesota fish are known to contain mercury, perfluorinated chemicals, dioxins and PCBs. These global pollutants are released through combustion and industrial and waste processes and find their way into the food chain. These chemicals are persistent in the environment and build up in aquatic organisms and the human body.



Methyl mercury is a potent brain toxin and chronic exposure is

associated with toxicity to the central nervous system. Fetuses and infants exposed to mercury at high levels can experience reduced intelligence, impaired hearing, poor coordination or delayed motor and verbal skills. Fetuses are at greatest risk from exposure to dioxins, which cross the placenta during pregnancy. PCBs were banned in 1979, but their widespread use and persistence in the environment ensures that they continue to contaminate fish. Human health impacts from long-term exposure to low levels of dioxins and PCBs include effects on thyroid hormone, impaired brain development, effects on birth weight and immunity, permanent IQ deficits and cancer.

Sustainable fish choices

In addition to contaminants in fish, there is also a big concern about impacts of fishing and aquaculture practices on the environment and fish species. Issues such as overfishing, bottom trawling, dredging and damaging fish farming practices can decimate fish populations and cause irreparable damage to ocean ecosystems. The Monterey Bay Aquarium's Seafood Watch site provides guidance for purchasing sustainably-raised and sustainably-caught seafood.

Women can reduce their exposure

A 2011 study by MDH found that ten percent of newborns born to Minnesota North Shore mothers had unsafe levels of mercury in their blood. MDH launched a project in partnership with two local clinics to educate women on the benefits of fish consumption and which fish are safer to eat. They measured mercury and healthy fatty acids in the blood of 500 women, who then received education from their health providers on safe fish consumption. After 6 months their blood was tested again with hopeful results. The second blood testing found that levels of fatty acids were the same, but mercury levels went down. This shows that the women in the study continued to eat fish, but choose ones that were lower in harmful contaminants.

Tips for safe and sustainable fish consumption

Everyone can benefit from healthy fish consumption. Here are few quick tips that protect our health and the health of fish populations. Choose chunk light tuna, which is lower in mercury, instead of albacore tuna. Choose shrimp, U.S. tilapia, herring, wild-caught salmon, cod, pollock, scallops, crab, U.S. catfish, sunfish, crappie, yellow perch. Avoid shark, swordfish, tile fish, king mackerel, walleye over 20" and northern pike over 30". Follow the Minnesota Department of Health guidelines and look for seafood that's sustainably-raised or sustainably caught.

See our guide to safe, sustainable fish consumption.

Hometown Focus News (Virginia, MN)

Full article no longer available online at time of report publication. Excerpt found here: http://www.hometownfocus.us/news/2017-05-

12/Health/ChooseYourFishorg helps pregnant women choose the .html

2017-05-12 / Health

ChooseYourFish.org helps pregnant women choose the best fish for health

Equipping women who are or may become pregnant with the information they need to choose the right fish to eat—that's the goal of a new campaign launched this week by the Minnesota Department of Health (MDH) and HealthPartners.

Home Town Source

http://hometownsource.com/2017/05/12/new-approach-makes-it-easier-for-women-to-choose-the-best-fish-for-their-babys-health/

New approach makes it easier for women to choose the best fish for their health, their baby's health

By Home Town Source on May 12, 2017 at 9:53 am

Minnesota Department of Health and HealthPartners launch new campaign

Equipping women who are or may become pregnant with the information they need to choose the right fish to eat—that's the goal of a new campaign launched today by the Minnesota Department of Health (MDH) and HealthPartners.

The campaign highlights the health benefits of eating fish before and during pregnancy and the importance of choosing the right fish to reduce exposure to mercury or other contaminants. ChooseYourFish.org is a new website that helps people navigate the many fish choices and choose the best ones for women who are or may become pregnant.

"We want women and children to eat fish. The benefits outweigh risks if they choose fish low in mercury and other contaminants," said Pat McCann, research scientist for MDH.

A brochure and ChooseYourFish.org were launched to reach more women and families and make it easier for them to follow MDH's fish consumption guidelines. The website provides additional information about how to select and cook fish. Building on previous research and work by the Great Lakes Consortium for Fish Advisories, including Cornell University and Essentia Health, HealthPartners Institute gathered information through a series of focus groups and surveys to understand how messages about eating fish are best delivered and what additional context is needed. The goal was to design, write and develop materials that were clear and easy to understand. MDH originally approached HealthPartners because of its commitment to health education and regional reputation as a trusted, integrated health system. Both MDH and HealthPartners share a common priority of improving the health of Minnesotans.

"HealthPartners Institute reached out to women to find out the best and most accessible way to communicate this important information about eating fish," said Dr. Tom Kottke, HealthPartners Medical Director for Well-Being. "We want to empower women with the information they need to make an important decision that will affect their health and the health of their families."

Studies have shown that fish can provide important nutrients that help fetuses and babies develop, as long as they are low in mercury and other contaminants. The fatty acids, vitamins and minerals in fish are also important for adults.

Increased efforts to improve advice to women about eating fish started after a 2011 study by MDH showed that 10 percent of newborns tested in the North Shore – Arrowhead region had mercury above levels of concern in their blood.

The study results spurred a collaboration among Sawtooth Mountain Clinic, Grand Portage Health Service, North Shore Health, Grand Portage Band of Lake Superior Chippewa Trust Lands and MDH to reduce mercury exposure in women in the area and pilot an in-clinic screening for high mercury exposure. Nearly 500 women from Cook County, Grand Portage and the surrounding area participated in the Fish are Important to Superior Health (FISH) Project.

Participants provided information about which fish they ate and how often they ate fish. They also had a blood sample analyzed for mercury and healthy fatty acids. Three percent of participants had blood mercury levels about the level of concern. They received information about healthy diets that included which type (species) of fish to eat and how often they can eat fish. More information on the project is at FISH Project News.

A new brochure is available in several different versions that each target a different community and/or region of the state, as well as a statewide version. The new website (ChooseYourFish.org) provides easy access to information on the web and on mobile devices. Both the brochures and website describe how often different types (species) of fish can be eaten to provide safe yet beneficial meals. The website also features simple recipes, videos and tips for selecting and cooking fish.

These efforts were supported in part through funding from the U.S. Environmental Protection Agency (EPA) Great Lakes Restoration Initiative. A video - "New Information for Women to Choose the Best Fish" (YouTube) – highlights the key points of the new campaign.

MDH gives fish consumption recommendations for pregnant women, women who could become pregnant and children under age 15, as well as for men, boys age 15 and over and women not planning to become pregnant. In general, men, boys 15 years and older and women who are not and will not become pregnant can eat fish about 3 times more often than the guidelines for pregnant women and younger children.

To learn more about HealthPartners, visit About HealthPartners.

To learn more about MDH's recommendations, visit Fish Consumption Guidance.

U.S. News & World Report Best States

https://www.usnews.com/news/best-states/minnesota/articles/2017-05-13/project-aims-to-reduce-mercury-levels-in-women-in-minnesota

Project Aims to Reduce Mercury Levels in Women in Minnesota

The Minnesota Department of Health is partnering with North Shore health clinics to reduce the level of mercury in women of child-bearing age without sacrificing the benefits of eating fish.

May 13, 2017, at 11:20 a.m.

Project Aims to Reduce Mercury Levels in Women in Minnesota



ST. PAUL, Minn. (AP) — The Minnesota Department of Health is working with health clinics to reduce the level of mercury in women of child-bearing age without sacrificing the benefits of eating fish.

The department worked with health clinics in Cook County and on the Grand Portage Indian Reservation to sample the blood of nearly 500 women for mercury and healthy fatty acids in the project, called Fish are Important to Superior Health, Minnesota Public Radio (http://bit.ly/2q3STuw) reported.

Medical professionals talked to them about what types of fish they could safely eat and how often.

A 2011 study by the department showed that 10 percent of newborns tested along the North Shore of Lake Superior had concerning levels of mercury in their blood. Too much of the chemical element can cause lasting learning problems.

Officials said they were encouraged by the results when the women returned six months later after eating a healthy amount of fish.

"We found that women did not stop eating fish," said Pat McCann, a research scientist who led the project for the department. "That was good."

McCann said research has shown that when women receive information about mercury in fish, they often stop eating it because they find it too complicated to decide what kinds of fish or how much they can safely eat. Some also feel it's too scary to risk being exposed to mercury.

McCann said the information given to the North Shore participants seemed to alleviate those fears.

"Their fatty acid levels didn't change, so that indicates they're still getting the beneficial aspects of eating fish," she said. "But their mercury levels were lower at the follow-up visit."

Many women surveyed reported in their follow-up visits that they actually ate more fish, but switched to eating more species low in mercury, such as Lake Superior herring or whitefish.

The department also has teamed up with Health Partners to launch a statewide campaign to continue educating women about eating fish.

"We want women and children to eat fish," McCann said. "The benefits outweigh risks if they choose fish low in mercury and other contaminants."

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Information from: Minnesota Public Radio News, http://www.mprnews.org

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Appendix C

MDH and Partners Social Media

Sawtooth Mountain Clinic Facebook post – May 8, 2017 (Announcement of FISH Project Final Summary)



MDH Facebook post – May 8, 2017 ("Choose Your Fish" News Release)



Minnesota Department of Health

HEALTH May 8 - @

Our new campaign highlights the health benefits of eating fish before and during pregnancy, as well as the importance of choosing the right fish to reduce exposure to mercury and other contaminants.



News Release: New approach makes it easier for women to choose best fish for their health and their baby's health

pregnant women, women who could become...

CONTENT.GOVDELIVERY.COM

HealthPartners post on Facebook of Dr. Mello video - May 8, 2017



MDH shared HealthPartners Facebook video



MDH Facebook Post – May 9 (Fish Recipes)



Minnesota Department of Health

May 9 - 🚱

Need ideas for a healthy and nutritious dinner tonight? Choose fish! This online guide shows which fish are low in mercury and healthy for you and your family to eat.



Fish Recipes

CHOOSE FISH shows which types of fish are save to eat and which to avoid.

CHOOSEYOURFISH.ORG

MDH Facebook Post - May 16 (Fish for Omega-3s)



MDH Facebook Post - May 17 (Fish Great Choice)



Fish is a great choice for getting the low-fat protein your body needs. The benefits of eating fish outweigh the risks if you eat fish low in mercury and other contaminants. Studies show that eating fish regularly can lower the risk of heart disease.



What makes fish a great catch

The benefits of eating fish outweigh the risks if you eat fish low in mercury and other contaminants. You get the most benefit from eating fish...

CHOOSEYOURFISH.ORG

MDH Facebook Post - May 18 (Fish to Eat)



MDH Facebook Post – May 19 (Choose Your Fish)



Minnesota Department of Health

May 19 · 🚱

How clean a lake looks is not a sign of how safe the fish are to eat! Check out our site-specific guidelines for eating fish from Minnesota rivers and lakes.



Choose Your Fish

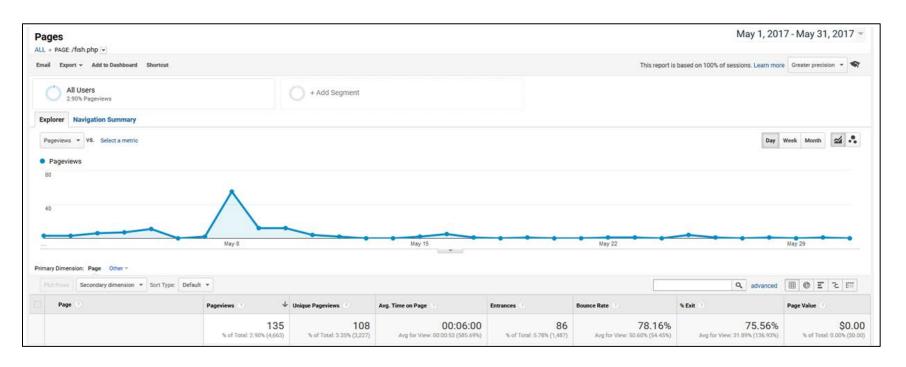
How to reduce your risk: If you fish in Minnesota, check out the site-specific guidelines for eating fish from Minnesota rivers and lakes,...

CHOOSEYOURFISH:ORG

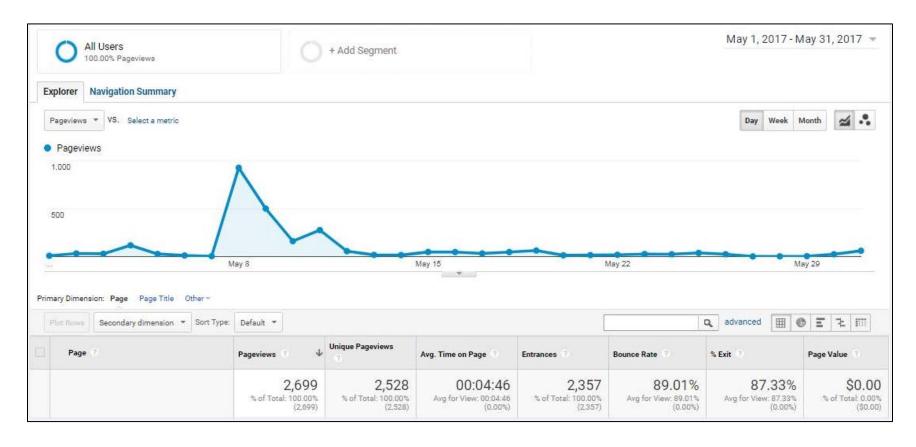
Appendix D

Google Analytics for Websites

Sawtooth Mountain Clinic FISH Project Page, May 2017 Analytics: http://sawtoothmountainclinic.org/fish.php

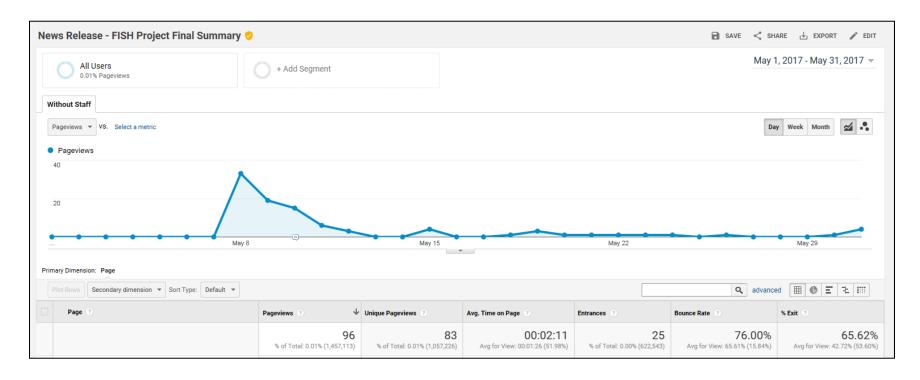


ChooseYourFish.org, May 2017 Analytics: http://chooseyourfish.org

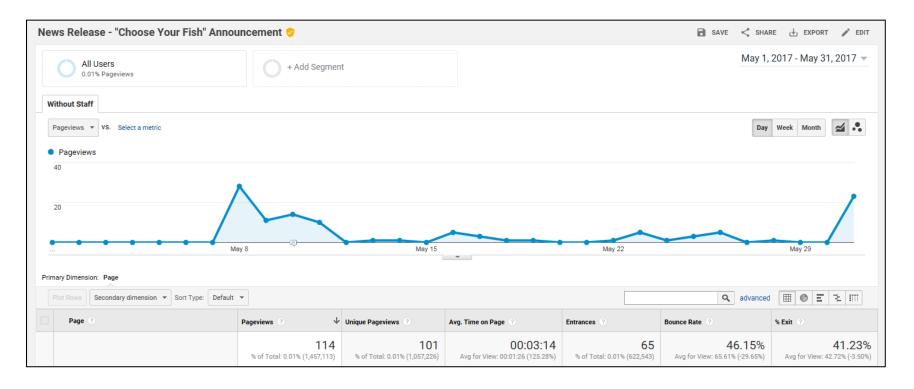


MDH Fish Consumption Guidance Pages, May 2017 Analytics

News Release - FISH Project Final Summary: http://www.health.state.mn.us/news/pressrel/2017/fishproject050817.html



News Release – "Choose Your Fish" announcement: http://www.health.state.mn.us/news/pressrel/2017/fish050817.html



Main Fish Guidance Page: http://www.health.state.mn.us/divs/eh/fish/

