

# Kev Tshawb Fawb MN FEET: Tshaj xov tawm rau ib tsoom zej zog paub



Cov tshuaj kua hlau nyaum heev (mercury), txhuas hlau (lead) thiab txhuas hlau dawb (cadmium) yogi b co tshuaj khes mis (chemicals) uas nyob ib puag ncig peb thiab ua mob tau tibneeg. Thaum pojniam cev xeeb menyuam, cov tshauj khes mis no cuam tshuam tau nrog txoj kev loj hlob ntawm menyuam lub paj hlwb. Kev soj ntsuam tsev neeg raug tej yam twg nyob ib puag ncig lawv (Minnesota Family Environmental Exposure Tracking (MN FEET)) yog koom tes tshawb fawb nrog Minnesota Chaw Ua Haujlwm Saib Xyuas Kev Noj Qab Haus Huv (Minnesota Department of Health (MDH)), HealthPartners Institute and SoLaHmo Partnership for Health & Wellness at Minnesota Community Care (thaum i muab hu ua West Side Community Health Services). Peb ntsuas tej tshuaj khes mis no los ntawm co pojniam thiab lawv co mos ab yug tshiab kom thiaj li kawm paub seb yuav pab tiv thaiv tsev neeg li cas.

## Txog MN FEET

Peb nug cov pojnam cev xeeb menyuam uas npaj tias yuav los so rau tom tsev kho mob loj Regions Hospital lossis Abbott Northwestern Hospital los mus koom tes nrog txoj kev tshawb fawb no. Cov pojnam los ntawm tej tebchaws Esxias, Neeg Afikas nyob sab hnuv tuaj, Mev thiab Neeg Dawb. Peb nug pawg pojnam no yogi m tias lub zej lub zog muaj kev txhawj xeeb thiab ho muaj ntaub ntawv tshawb fawb pom tias muaj tej tshuaj khes mis no nyob rau hauv cov pojnam no lub cev ntau dua li lwm haiv neeg. Xya caum fee pua ntawm cov pojnam peb nug seb puas kam los koom tes nrog peb kev tshawb fawb txaus siab koom. Ib txhia haiv neeg muaj pojnam coob dua los koom kev tshawb fawb no ntau dua lwm haiv neeg.

Cov pojnam uas txaus siab koom kev tshawb fawb no yog teb tej lus nug hauv xov tooj. Ces, thaum lawv yug menyuam, lawv muab lawv cov zis thiab mentsis ntshav los ntawm tus mos ab txoj hlab ntaws los mus kuaj. MDH Public Health Laboratory yog qhov chaw tshuam ntsuam cov ntshav thiab zis.

### Cov pojnam koom tes nrog MN FEET

- 779 leej pojnam teb cov lus nug no: 323 cov pojnam Mev, 226 cov pojnam Tawv Dawb, 145 cov pojnam Esxias, 85 cov pojnam nyob Afikas sab hnuv tuaj.

- 408 tus pojniam kam muab ntshav thiab/lossis zis los kuaj: 156 cov pojniam Mev, 141 cov pojniam Tawv Dawb, 83 cov pojniam Esxias, 28 cov pojniam nob Afikas sab hnuv tuaj.
- Tshaj ib nrab (63%) nyob hauv lub nras Ramsey County Cov pojniam los ntawm 11 lub nras nyob hauv Minnesota.
- 98% cov pojniam Mev, 36% cov pojniam nyob Afikas sab hnuv tuaj thiab 2% cov pojniam Esxias teb lawv cov lus teb ua lawv yam lus.

## Peb Nrhiav Pom Dabtsi

### TXHAUS HLAU

Cov neeg laus mus kov tau txhuas hlau thaum lawv kho tej tsev uas qub qub lawm uas muaj tej xim tha tsev muaj txhuas hlau nyob rau hauv, tej txhia haujlwm (jobs) thiab tej yam nyiam ua thaum muaj sijhawm (hobbies), thiab tej khoom uas xua av nplaum puab uas muaj txhuas hlau nyob rau hauv.

Peb kuaj 395 tus pojniam seb puas pom muaj txhuas hlau nyob rau hauv tus mos ab cov ntshav ntawm txoj hlab ntaws. Tau nrhiav pom tias ntau tus pojniam cov mos ab txoj hlab ntaws muaj txhuas hlau tsawg nyob rau hauv. Muab piv rau cov pojniam Esxias, Mev thiab cov Afikas nyob sab hnuv tuaj, cov pojniam Tawv Dawb yog cov uas muaj txhuas hlau tsawg tshaj nyob rau hauv tus mos ab txoj hlab ntaws. Cov pojniam uas tus mos ab muaj txhuas hlau ntau dua nyob rau hauv txoj hlab ntaws yog cov mos ab uas tsis yog yug hauv tebchaws Mekas no, hais lwm yam lus uas tsis yog lus Askiv raws li thaum muaj cov lus nug teb tsev neeg khwv tau nyiaj tsawg dua thiab tsis kawm ntaub ntawv siab.

Muaj ob tus pojniam thiaj muaj txhuas hlau ntau nyob rau hauv cov ntshav ntawm txoj hlab ntaws, ntau tshaj li 5 micrograms txhuas hlau rau ib deciliter ntshav. Rau cov pojniam uas muaj txhuas hlau siab nyob rau hauv cov ntshav, muaj neeg nyob ntawm tej koom haum pab xyuas mob hauv ib tsoom zej pab lawv txo kom txhuas hlau qis.

### TXHUAS HLAU DAWB

Kev haus luam yeeb yog yam uas cov neeg laus mus kov raug txhuas hlau dawb. Peb kuaj 395 tus pojniam seb puas pom muaj txhuas hlau dawb nyob rau hauv tus mos ab cov ntshav ntawm txoj hlab ntaws. Tsuas nrhiav pom muaj txhuas hlau dawb nyob rau hauv peb tus pojniam xwb. Tsuas muaj 4% tus pojniam thiaj li hais tias lawv haus luam yeeb xwb.

### TSHUAJ KUA HLAU NYAUM HEEV

Peb kuaj seb puas pom muaj cov tshuaj kua hlau nyaum heev nyob rau tus mos ab cov ntshav ntawm txoj hlab ntaws. Tej kev kuaj no tau qhia pom ntau yam txog ntawm seb cov

pojnim no ho mus kov raug cov kua hlau nyaum heev no ntawm qhov twg vim tias cov kua hlau nyaum heev no muaj ntau hom.

- Tej kua hlau uas nyaum heev uas yog inorganic nrhiav pom muaj nyob ntau heev rau tej tshuaj pleev kom tawv nqaij dawb tuaj, tej lub teeb thiab tej twj ntsuas kub ntsuas no. Cov kua hlau nyaum heev uas nyob hauv zis feem ntau yog cov kua hlau nyaum heev uas yog inorganic.
- Cov kua hlau nyaum heev uas yog organic nrhiav pom muaj nyob ntau heev rau hauv ntses. Cov kua hlau nyaum heev uas nyob hauv cov ntshav ntawm txoj hlab ntaws feem ntau yog cov kua hlau nyaum heev uas yog organic.

### **Tshuaj kua hlau nyaum heev ntawm tej tshuaj pleev kom tawv nqaij dawb tuaj**

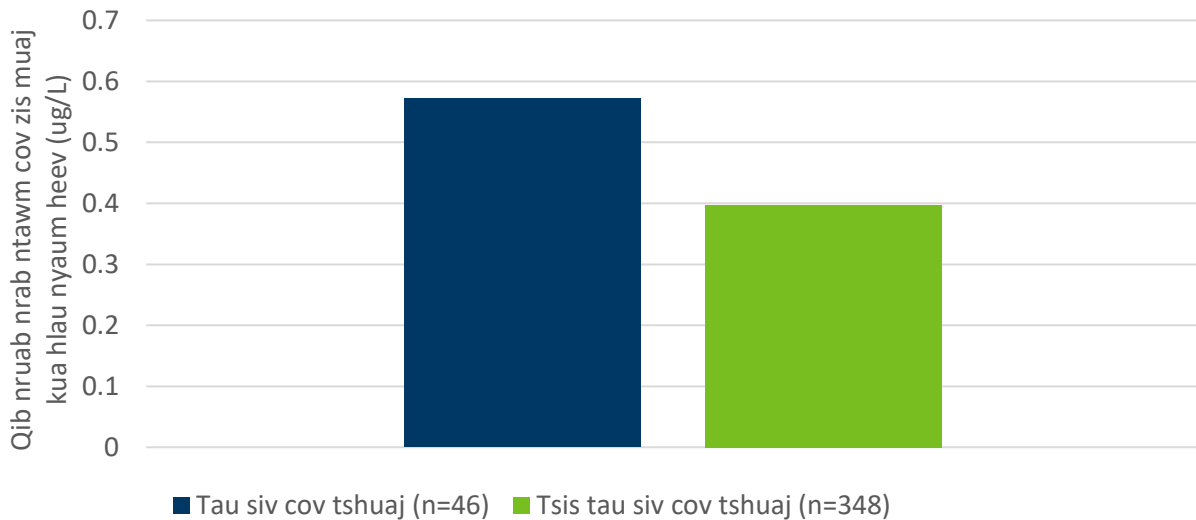


Tej tshuaj pleev kom tawv nqaij dawb tuaj tej zaum yuav muaj tshuaj kua hlau nyaum heev nyob rau hauv. Nrhiav tsis pom, chwv tsis taw, hnia tsis tau ntxhiab thiab sim noj tsis tau cov tshuaj kua hlau nyaum heev no. Feem ntau yog tias muaj tshuaj kua hlau nyaum heev nyob rau ib poom tshuaj twg los, lawv yeej tsis muab sau qhia tawm ntawm lub thawv ntim poom tshuaj ntawd. Muag tej tshuaj pleev kom tawv nqaij dawb tuaj uas muaj tshuaj kua hlau nyaum heev nyob rau hauv yogi b yam txhaum cai nyob rau hauv

tebchaws Mekas.

Peb kuaj 396 tus pojnim cov zis seb puas pom muaj cov tshuaj kua hlau nyaum heev nyob rau hauv. Cov pojnim uas tau siv tej tshuaj pleev kom tawv nqaij dawb tuaj yav tas los lawm, nrhiav pom muaj kua hlau nyaum heev nyob rau hauv lawv cov zis ntau dua li cov pojnim uas tsis tau siv tej tshuaj muaj kua hlau nyaum heev nyob rau hauv (said Daim Duab 1). Qhov no muaj tseeb nyob rau cov pojnim Esxias thiab pojnim Afikas nyob sab hnuv tuaj uas tau koom tes nrog kev tshawb fawb.

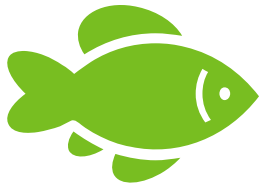
Daim Duab 1. Zis muaj kua hlau nyaum heev thiab six tej tshuaj ua kom tawv nqaij dawb tuaj



Muaj cuaj tus pojniam thiaj muaj kua hlau nyaum heev ntau nyob rau hauv lawv cov zis, ntau tshaj li 5 micrograms cov txhuas hlau raw sib liter zis. Peb hu rau cob pojniam no los mu snug seb kom paub meej tias lawv ho mus kov raug tej tshuaj kua hlau nyaum heev no li cas. Peb kuj tau co jib co neeg ua haujlwm tom tsev kuaj mob St. Paul-Ramsey County Public Health thiab koom haum tswj khoom vuab tsuab Minnesota Pollution Control Agency mus ntsib kiag 6 tus pojniam no tom lawv tsev. Peb tau nrhiav pom tias cov pojniam no, feem ntau, mus kov raug cov tshuaj kua hlau nyaum heev no los ntawm kev siv tej tshuaj pleev tawv nqaij kom dawb tuaj. Kev mus ntsib kiag tom lawv tsev pab tau mus nrhiav pom thiab rhuav tshem tau tej tshuaj pleev kom tawv nqaij dawb tuaj ntawd uas tso tau tej pa kua hlau mus rau lawv tsev neeg nqus. Ntawm 9 tus pojniam no, 6 tus yog Hmoob thiab 3 tus yog Mev. Tag nrho 9 tus pojniam no hais lus Hmoob lossis Mev thaum lawv teb cov lus nug, thiab yog yug txawv tebchaws.

Tus nab npawb ntawm cov pojniam Afikas nyob sab hub tuaj hauv MN FEET tsawg heev ces peb thiaj li tsis paub txog kev mus kov raug tshuaj kua hlau nyaum heev nyob rau pawg neeg no. Tiamsis, tag nrho cov pojniam uas koom tes nrog kev tshawb fawb, cov pojniam Afikas nyob sab hnuv tuaj yog pab thib ob kiag ntawm cov pojniam Hmoob uas muaj tshuaj kua hlau nyaum heev nyob hauv lawv cov zis. Peb paub los ntawm txoj kev tshawb fawb no thiab los ntawm kev sib tham nrog tej neeg zej zog tias kev siv tshuaj pleev kom tawv nqaij dawb tuaj yogi b yam uas neeg nyiam ua heev thiab kuj ua tau rau cov pojniam Afikas nyob sab hnuv tuaj raug kev phom sij los ntawm qhov muaj cov kua hlau nyaum heev no nyob rau hauv lawv.

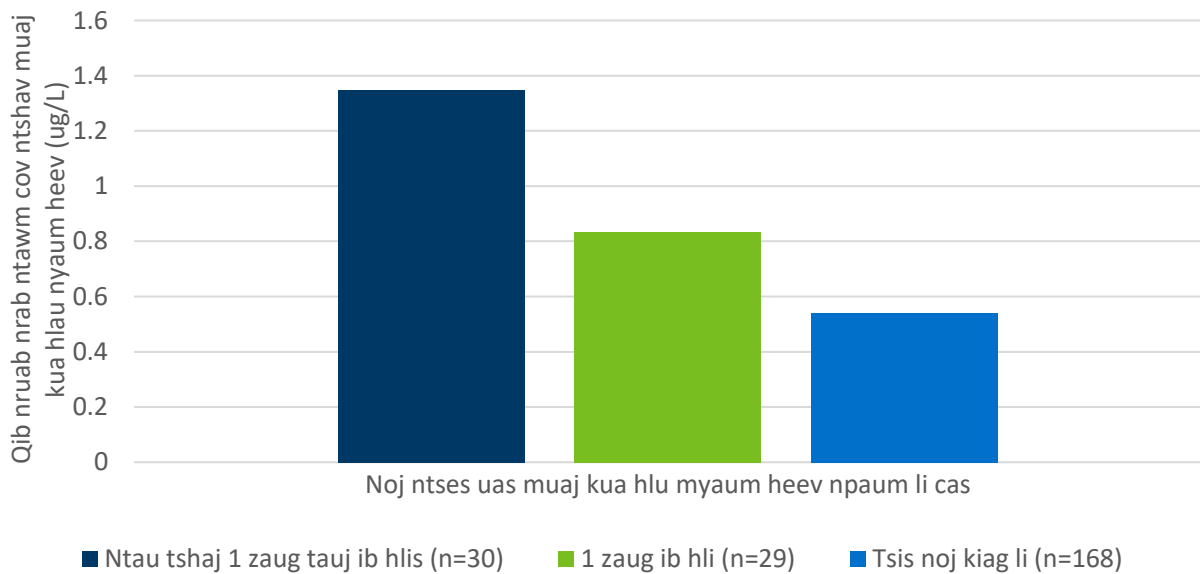
## Tshuaj kua hlau nyaum heev los ntawm noj tej hom ntses



Kev noj ntses yogi b yam zoo yogi as peb xaiv noj tej ntses uas tsis muaj kua hlau nyaum heev ntau nyob rau hauv thiab lwm yam tshuaj khes mis nyob rau hauv. Xaiv seb yuav noj hom ntses twg thiab noj ntau npaum cas yogi b yam tseem ceeb. Ua raws li MDH cov lus hais txog kev noj hom ntses uas muaj kua hlau nyaum heev tsawg.

Peb kuaj 395 tus pojniam seb puas pom muaj kua hlau nyaum heev nyob rau hauv tus mos ab cov ntshav ntawm txoj hlab ntaws. Cov pojniam uas noj ntses ntau dua nrhiav pom muaj kua hlau nyaum heev nyob rau lawv tus mos ab cov ntshav ntawm txoj hlab ntaws ntau dua li cov pojniam uas tsis tshuam noj ntses. Hais tsi ntsees, yog cov pojniam uas noj tej ntses uas muaj cov tshuaj kua hlau nyaum heev ntau xws li tej – ntses Walleye, ntses Northern Pike, ntses Bass, ntses White Bass lossis ntses King Fish – yog cov uas muaj tshuaj kua hlau nyaum heev ntau tshaj nyob rau tus mos ab cov ntshav ntawm txoj hlab ntaws (saib Daim Duab 2). Qhov no muaj tseeb nyob rau cov pojniam Esxias uas tau koom tes nrog kev tshawb fawb.

Daim Duab 2. Tshuaj kua hlau nyaum heev ntawm cov ntshav nyob hauv txoj hlab ntaws thaib kev noj tej ntses muaj kua hlau nyaum heev nyob hauv



Muab piv mus rau lwm haiv neeg, cov pojniam Esxias, tshwj xeeb yog cov pojniam Hmoob, yog xov muaj tshuaj kua hlau nyaum heev nyob rau tus mos ab xov ntshav ntawm txoj hlab ntaws. Cov pojniam ntawm lwm hom neeg Esxias kuj muaj tshuaj kua hlau nyaum heev nyob rau cov ntshav ntawm txoj hlab ntaws ntau dua li lwm haiv neeg thiab.

Muaj 9 tus pojniam thiaj muaj kua hlau nyaum heev ntau nyob rau hauv cov ntshav ntawm txoj hlab ntaws, ntau tshaj li 5.8 micrograms cov tshuaj kua hlau nyaum heev raw sib liter ntshav.

Peb hu rau cov pojniam no thiab xav kawm txoj kev lawv noj ntses yog li cas tiag. Peb pab lawv paub txog MDH cov lus hais txog kev xaiv ntses noj. Cov pojniam no, feem ntau, hais tias lawv yeej noj tej ntses uas muaj kua hlau nyaum heev ntau dua – ntses Walleye, ntses Northern pike, ntses Bass, Ntses White bass lossis ntses King Fish – ntau tshaj ib hlis ib zaug. Cov lus qhia hauv MDH pab taw kom cov pojniam cov xeeb menyuum thiab tej menyuum yaus noj tej ntses no ib hlis ib zaug lossis tsawg tshaj ntawd. Tag nrho 9 tus pojniam uas muaj tshuaj kua hlau nyaum heev nyob rau hauv lawv tus mos ab txoj hlab ntaws yog cov pojniam Hmoob. 5 leej hais lus Hmoob hauv lawv cov lus nug teb, thiab 7 leej yug txawv tebchaws.

## Tej Tshawb Fawb Pom Uas Tseem Ceeb

- Cov pojniam uas siv tej tshuaj pleev kom tawv nqaij dawb tuaj yav tas los muaj tshuaj kua hlau nyaum heev ntau dua nyob rau hauv lawv cov zis. Kev soj qab cov pojniam uas muaj tshuaj kua hlau nyaum heev nyob rau hauv lawv cov zis tau nrhiav pom tias lawv siv tej tshuaj pleev kom tawv nqaij dawb tuaj. Kev mus ntsib kiag tom lawv tsev pab tau mus nrhiav pom tau tej tshuaj pleev kom tawv nqaij dawb tuaj ntawd tso tau tej pa kua hlau mus rau lawv tsev neeg nqus.
- Cov pojniam uas noj tej ntses Walleye, ntses Northern Pike, ntses Bass, ntses White Bass lossis ntses King Fish muaj cov tshuaj kua hlau nyaum heev nyob rau hauv tus mos ab cov ntshav ntawm txoj hlab ntaws. Kev soj qab cov pojniam uas muaj tshuaj kua hlau nyaum heev nyob rau hauv cov ntshav ntawm txoj hlab ntaws nrhiav pom tias lawv noj tej ntses no ntau tshaj ib zaug tau jib lub hlis twg.
- Cov pojniam Esxias, tshwj xeeb yog cov pojniam Hmoob uas koom tes rau kev tshawb fawb no, tau nrhiav pom tias lawv yog cov uas muaj tshuaj kua hlau nyaum heev nyob rau hauv lawv ntau dua li lwm haiv neeg. Qhov no muaj tseeb rau tshuaj kua hlau nyaum heev nyob rau hauv zis thiab cov ntsha ntawm txoj hlab ntaws. Ib txhia cov pojniam Hmoob nyob hauv Minnesota kuj muaj tshuaj kua hlau nyaum heev los ntawm kev siv tej tshuaj pleev kom tawv nqaij dawb tuaj *thiab* los ntawm kev noj tej ntses uas muaj tshuaj kua hlau nyaum heev nyob rau hauv.
- Kev siv tej tshuaj pleev kom tawv nqaij dawb tuaj kuj ua rau cov pojniam Mev thiab pojniam Afikas nyob rau sab hnuv tuaj muaj kev phom sij tau cov tshuaj kua nyaum heev ntawd.
  - Ib txhia cov pojniam Mev uas koom tes nrog MN FEET kuj muaj tshuaj kua hlau nyaum heev ntau nyob rau lawv cov zis thiab. Tsawg kawg lo sib tug uas muaj tshuaj kua hlau nyaum heev yeej yog siv cov tshuaj pleev kom tawv nqaij dawb tuaj.
  - Cov pojniam Afikas uas nyob sab hnuv tuaj uas koom tes nrog MN FEET yog pab thib ob kiag ntawm cov pojniam Hmoob uas muaj tshuaj kua hlau nyaum heev nyob rau hauv lawv cov zis. Tiamsis, vim muaj tsawg tus pojniam Afikas nyob sab hnuv tuaj thiaj koom



tes nrog kev tshawb fawb, peb kuj tsis paub tseeb txog ntawm lawv ho mus kov raug cov tshuaj kua hlau nyaum heev no li cas hauv lawv zej lawv zos thiab.

- Kev mus kov rau txhuas hlau thiab txhuas hlau dawb kuj tsis siab npaum li cas rau cov pojniam uas koom tes nrog txoj kev tshawb fawb no.

## **Peb Yuav Siv Tej Uas Peb Tshawb Nrhiav Pom Mus Ua Dabtsi thiab Kauj Ruam Ntxiv**

Tej uas peb tshawb nrhiav pom hauv MN FEET yuav pab peb nqes tes lost sim tej kev pab cuam thiab pab tiv thaiv pojniam menyuam ntawm kev mus kov raug tshuaj kua hlau nyaum heev, txhuas hlau thiab txhuas hlau dawb. Tej tsev neeg, tej zej zos, tej kws kho mob, tej koom haum kuaj mob thiab cov tsim tej kev cai yuav siv cov ntaub ntawv no los rau ntau txoj kev:

- Kev tshawb fawb MN FEET tau qhia pom tias ib txhia pojniam uas nyob rau hauv Minnesota muaj tej tshuaj kua hlau nyaum heev uas nyob rau hauv lawv uas mus raug tau rau lawv tus mos ab txoj kev loj hlob. Peb yuav ua haujlwm txuas ntxiv mus pab cov zej cov zos no kom lawv thiaj li tsis mus raug cov tshuaj kua hlau nyaum no heev.
- Txoj kev tshawb fawb no pab peb pom txog tej yam tseem ceeb uas cov tshuaj kua hlau nyaum heev no ho nkag tau mus rau pojniam lub cev li cas. Tej kev pab cuam uas muaj tam sim no yog kev pab taw qhia txog noj tej ntses uas muaj kua hlau nyaum heev uas tsawg. Peb yuav tau ua mus ntxiv kom cov pojniam paub txog cov tshuaj kua hlau nyaum heev nyob rau tej txhia tshuaj pleev kom tawv nqaij dawb.
- Kev tshawb fawb MN FEET tau qhia pom tias peb yuav tau rau siab ntso koom tes ua haujlwm nrog cov pojniam uas hais lwm yam lus uas tsis yog lus. Askiv thiab pab cov uas tsis yog yug hauv tebchaws Mekas no. Kev paub txog cov pojniam uas muaj cov pojniam ua muaj cov tshuaj kua hlau nyaum heev no ntau dua ntxiv yuav pab peb nrhiav txoj hauv kev uas zoo tshaj plaws los pab kom lawv txav deb ntawm cov tshuaj kua hlau nyaum heev ntawd.

Koom haum MDH yuav npaj noj qab ua haujlwm koom tes nrog cov pojniam Afikas uas nyob sab hnuv tuaj thiab seb lwm cov pojniam uas nyob hauv Minnesota pua mus kov raug tej tshuaj khes mis uas ua mob tau rau lawv tej menyuam txoj kev noj qab nyob zoo.

## Koj Nqis Tes Ua Tau

### TSIS TXHOB SIV TEJ TSHUAI PLEEV KOM TAWB NQAIJ DAWB TUAI

- **Ntaub ntawv txog Xaiv Kev Noj Qab Nyob Zoo, Caiv Tej Tshuai Ua Kom Tawv Nqaij Dawb Tuai**  
(<https://www.health.state.mn.us/communities/environment/skin/docs/gpfs.pdf>)
- **Npe ntawm cov tshuai pleev tawb nqaij dawb tuai uas tau los muab kuaj**  
(<https://www.health.state.mn.us/communities/environment/skin/docs/testedprds.pdf>)

### MDH COV LUS QHIA TXOG NOJ TEJ NTSES UAS MUAJ KUA HLAU NYAUM HEEV TSAWG

- **MDH Fish Consumption Guidance**  
(<https://www.health.state.mn.us/fish/>)
- **Xaiv hom ntse koj yuav noj**  
([ChooseYourFish.org](http://ChooseYourFish.org))
- **Ntaub ntawv thaib yeeb yaj kiab ua lus Hmoob thiab lwm yam lus uas tsis yog lus Askiv**  
(<https://health.state.mn.us/communities/environment/fish/nonenglish.html>)

### COJ KOJ TUS MENYUAM MUS KUAJ SEB NWS PUASMUAI TXHUAS HLAU NYOB RAO HAUV NWS

- **Minnesota Department of Health, Lead**  
(<https://www.health.state.mn.us/lead>)

***Thov qhia txog tej no rau koj tej phoojywg thiab koj tsev neeg!***

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3/18/2019

*Xav tau cov ntaub ntawv no ua lwm hom, hu rau: 800-205-4987. Luam tawm rau ntawm daim ntawv uas raug tsim rov qab loss iv dua.*