## FINAL REPORT

Project: Survey of Recreational Fisheries in Escambia and Santa Rosa Counties, Florida
Project Period: September 29, 2002 to September 29, 2004
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As described in the IRB application, the above project was conducted by UWF-CEDB. A fish and shellfish consumption survey was conducted to assess seafood consumption patterns by the Pensacola Bay area population. Fish and shellfish consumption surveys were developed following guidelines provided by the US EPA (1998). Surveys (Appendix A) were designed to determine the level of fishing activity and seafood consumption (harvested, store bought, and restaurant seafood) over a two-week period. Fish and shellfish species were identified in the survey using widely and locally accepted common names. Portion sizes of fish and other seafood meals were estimated by reference to a widely recognized food article (a slice of bread $=\sim 120$ grams of fish filet). Socioeconomic and medical information was also requested in the surveys.

Self-addressed prepaid postage surveys were manually distributed to fishers residing in Escambia and Santa Rosa County FL, while they were fishing on the Pensacola Bay and Gulf Breeze FL fishing bridges in May 2002. Participation was completely voluntary and a thorough explanation of the purpose and voluntary nature of the survey was provided to each fisher. Complete confidentiality was maintained by assigning a number to each survey that represented the order in which the information was collected. Residency of potential respondents was determined from car license tags and verified by oral interview. A larger mail survey was conducted in August 2003. Unpublished historical revenue data from the Gulf Breeze and Pensacola Bay fishing bridges indicated that this period coincided with the annual peak in local fishing activity. A total of 9000 survey forms were mailed to registered voters in Escambia and Santa Rosa counties ( 4500 surveys in each county). Addresses were obtained at random within each zip code from each county. A letter describing the purpose, voluntary nature, and strict confidentiality of the survey was included with each mailing. The survey form, as approved by the IRB, does not request information on the name or residential address of the respondent so as to ensure privacy and confidentiality. Upon receipt of the completed surveys at UWF-CEDB, each survey was numbered consecutively and the information was entered into a database.

## Summary of Findings and Conclusions

Of the 9000 survey forms mailed to area residents, 1500 were completed and returned (16.6\%). The respondents included 768 females, 646 males, and 86 unspecified gender. The racial profile of the respondents was: 1376 white (92\%), 33 African-American (2.2\%), 24 Hispanic (1.6\%), 20 Asian-American (1.3\%), 7 other ( $0.47 \%$ ), 15 Native-American, and 25 no response (2.7\%). The mean age was 52.8 years (range 14 to 95 years). The health survey section was completed by 1483 of the respondents. Table 1 presents the reported incidences of various health parameters. Although the initial goal of the survey was to establish a consumption rate for fish in the

Table 1. Number of respondents reporting health issues.

| Health Issue | \# of respondents |
| :--- | :---: |
| Cancer | 160 |
| Heart Disease | 134 |
| High Blood Pressure | 405 |
| High Cholesterol | 410 |
| Lung disease | 104 |
| Brain disease | 42 |
| Eye disease | 311 |
| Kidney disease | 63 |
| Liver disease | 27 |
| Urinary disorders | 88 |
| Stomach disorders | 189 |
| Muscular disorders | 44 |
| Reproductive disorders | 50 |
| Tobacco use | 217 |
| Alcohol use | 739 |
|  |  |

Pensacola Bay region, a majority of the respondents did not provide amounts of fish consumed but instead they simply indicated whether or not the fish species had been caught, purchased, or consumed. Therefore, consumption rates could not be accurately determined.

Only 264 of the 1500 respondents had fished in the two weeks prior to completing the survey. The remaining 1236 respondents either were not fishers or were unable to fish due to poor weather conditions at the time of the survey. The average time spent fishing in the two weeks prior to completing the survey was 4.6 h , and 186 of the fishers ate their catch during the survey period. Four ate freshwater fish, 32 ate crab, 6 ate oysters, and 144 ate saltwater fish that they had caught. The results of the consumption survey confirmed that the species we selected in this initial screening were indeed among the most commonly consumed locally harvested species in the Pensacola Bay region. Table 2 presents a summary of the ten most commonly caught fish and the number of these fish that were consumed in the two weeks prior to completion of the survey. Although only a minority of the respondents had fished in the two weeks prior to the survey, 875 of the respondents reported eating seafood in a restaurant and 770 reported eating seafood purchased from a store. Of the 58 people surveyed through manual distribution at local fishing spots, 58 completed the surveys and 46 reported catching fish. Table 3 provides a summary of the most commonly caught fish as identified by the fisher survey.

Table 2. Ten of the most commonly caught and consumed fish as reported by respondents to fish consumption survey. A total of $\mathbf{1 5 0 0}$ persons responded to the survey.

| Fish | \# Caught | Fish | \# Ate |
| :--- | :---: | :--- | :---: |
| Spotted Sea Trout | 52 | Snapper | 41 |
| Mullet | 45 | Spotted Sea Trout | 38 |
| Snapper | 43 | Mullet | 37 |
| King Mackerel | 38 | Flounder | 22 |
| Red Drum | 37 | Grouper | 20 |
| Flounder | 30 | Spanish Mackerel | 19 |
| Spanish Mackerel | 30 | Amberjack | 18 |
| Grouper | 30 | Red Drum | 17 |
| Croaker | 29 | Croaker | 15 |
| White Trout | 25 | King Mackerel | 14 |
|  |  |  |  |

The results of these consumption surveys have been used in a separate study that is examining contaminant profiles in the most commonly caught and consumed fish species in the Pensacola Bay region.

Table 3. Number of fishers reporting catches of specific fish at Pensacola area fishing locations. A total of 58 persons were surveyed.

| Fish Name | \# Fishers | Fish Name | \# Fishers |
| :--- | :---: | :--- | :---: |
| Sand Sea Trout | 26 | Gafftopsail Catfish | 8 |
| Croaker | 25 | Spanish Mackerel | 8 |
| Speckled Sea Trout | 17 | Kingfish | 7 |
| Red Drum | 17 | Pigfish | 6 |
| Sheepshead | 11 | Eel | 6 |
| Pinfish | 11 | Largemouth Bass | 6 |
| Hardhead Catfish | 9 | Flounder | 5 |
| Bream | 9 | Mullet | 5 |
| Spot | 8 | Spadefish | 5 |
| Bluefish | 8 |  |  |

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## References

U.S. EPA, 1998. Guidance for Conducting Fish and Wildlife Consumption Surveys. Office of Science and Technology, Standards and Applied Science Division, Office of Water, United States Environmental Protection Agency. No. EPA-832-B-98-0

# Fishing and Seafood Consumption Survey 

## ALL SURVEYS FORMS ARE CONFIDENTIAL

What is your Zip Code? 32514-303, 32504-266, 32563-143, 32571-136, 32570-116, 32566-110, 32561-90, 32583-88, 32507-56, 32534-45, 32505-41, 32503-34, 32565-24, N/R-20, 32506-9, 32533-8, 32562-3, 32501-2, 32508-1, 32524-1, 32526-1, 32564-1, 32572-1, 32574-1

How old are you? Mean 52.8 y (range 14 to 95 y)
What is your race: (mark one)

| 1376 | White |
| :--- | :--- |
| 33 | African-American |
| 24 | Hispanic |
| 20 | Asian |
| 15 | Native-American |
| 7 | other |
| 25 | No Response |

Sex (circle one) 646 - Male
768 - Female: If female, please answer the following questions: (circle one)

| Are you pregnant? | $10-$ Yes | $813-$ No |
| :--- | :--- | :--- |
| Are you breastfeeding an infant? | $10-$ Yes | $807-$ No |

Do you plan to have a child this year? 16 - Yes 799 - No
How much do you weigh ? Mean $=172.5 \mathrm{lbs}$, range $=35-450 \mathrm{lbs}$
Did you weigh yourself on a scale? $\quad 1257$ - Yes $\quad 170$ - No 73 - No Response
How tall are you? Mean = 67.23 in., range $=53-82$ in.
How many times did you go fishing during the last two weeks? $\underline{\text { Mean }=2.7}$
How many hours did you fish each trip? Mean $=4.6 \mathrm{~h}$
How did you fish? (mark all methods used)
a. 252 rod and reel
b. 68 cast net
c. 37 crab trap
d. 14
gig or spear
e. 4 beach seine

Did you fish from shore, a bridge, a dock or a pier during the last two weeks?
160 - Yes
313- No
1027 - No Response

If you answered yes, where did you fish? (mark all the places you fished)
a. 24 - Pensacola Bay Fishing Bridge
b. 14-Gulf Breeze Fishing Bridge
c. 17 - Bob Sykes Bridge
d. 14 - Fort Pickens Fishing Pier
e. 12 - Pensacola Beach Fishing Pier
f. 2 - Bay Front Auditorium Pier
g. 2 - Bayou Texar
h. 1 - Bayou Chico
i. 44 - other Pensacola Bay shores
j. 1 - Bayou Grande
k. 14-Big Lagoon
l. 34 - Santa Rosa Sound shore
m. 25 - Gulf Beaches
n. 13 - Perdido Bay shores

Do you own a fishing boat? (circle one)
292 - Yes 994 - No 214 - No Response
How long is your boat? mean = 18.9 ft How big is your motor ? mean = 104 (horsepower)

Did you fish from a boat during the last two weeks? (circle one)
156 - Yes $\quad 370$ - No 974 - No Response
If you fished from a boat during the last two weeks, where did you fish? (mark all the places you fished)
a. 1-Three Mile Bridge
b. 11-Garcon Point Bridge
c. 4-Bob Sykes Bridge
d. 16-I-10 Bridge
e. 6 - Highway 90 Bridge
f. 25 - Escambia River
g. 15 - Fort Pickens
h. 33 - Pensacola Bay Pass
i. 33 - Pensacola Bay (holes and reefs)
j. 12 - East Bay
k. 12 - Blackwater River
l. 10 -Yellow River
m. 21 - Santa Rosa Sound
n. 3 - Bayou Texar
o. 1-Bayou Chico
p. 12 - Pensacola Naval Air Station
q. 4 - Bayou Grande
r. 10 - Big Lagoon
s. 10 - Perdido Bay
t. 34 - in the Gulf less than 3 miles from shore
u. 57 - in the Gulf more than 3 miles from shore
v. 10-Offshore charter boat
w. 32 - Other Where?

## If you have fished in the last two weeks (boat or shore) please answer the following questions.

How many fish did you keep?
a. 78-none
b. 60 - one quarter ( $25 \%$ )
c. 42 - one half ( $50 \%$ )
d. 35 - three quarters ( $75 \%$ )
e. 48 - all
f. 1237 - No Response

How did you clean your fish? (mark all methods used)
a. 1-did not clean, cooked and ate whole
b. 6 - removed guts only - left head and skin on, bones in
c. 39 - removed guts and head only - left skin on and bones in
d. 41 - filleted - removed bones - left skin on
e. 134 - filleted - no skin, no bones

Did you freeze or preserve the fish you caught? 128 - Yes 76 - No 1296 - No Response
If you answered yes, how much of your catch did use freeze or preserve after each fishing trip?
a. 8-none
b. 31 - one quarter ( $25 \%$ )
c. 38 - one half ( $50 \%$ )
d. 16 - three quarters ( $75 \%$ )
e. 41 - all (100\%)

How did you preserve your fish? (mark all methods used)
a. 128-freeze
b. 6-smoke
c. 1-can
d. 3-salt
e. 0 - pickle

Did you eat the fish and shellfish you caught or harvested? 174 - Yes 42 - No 1284 - No Response

Did you feed your children the fish and shellfish you caught or harvested? 87-Yes 107 No 1306 - No Response

If you answered "yes", how many children do you have in your household?
Number boys $\underline{96}$ Ages: Mean - 15.16, Range - 1-42
Number girls 56 Ages: Mean-12.07, Range - 1-39

## UNDER AGE 18:

Number boys 66 Ages: Mean - 10.54, Range - 1-18
Number girls 43 Ages: Mean - 8.26, Range - 1-18
How did you cook your fish? (mark all methods used)
a. 1-raw (including sushi)
b. 4-marinated or pickled (including seviche)
c. 17 - boiled
d. 18-soups, stews, chowders or gumbos
e. 136 - fried
f. 105 - baked, broiled or grilled
g. 7-other describe NA

How many of the following saltwater fish did you CATCH AND KEEP during the last two weeks. Other common names are listed beside each fish. If you can't answer "what kind" that's OK, just mark down how many you caught.
(Because many respondents simply checked whether they caught the fish, the numbers provided below represent number of persons who caught and not the number of each fish that were caught.)

| 22 | Amberjack |
| :---: | :---: |
| 3 | Black Drum |
| 4 | Black Tuna |
| 10 | Bluefish (also called "Blues" or "Schoolies") |
| 7 | Bonita (also called "Bonito" or "Bo Bo") |
| 7 | Cobia (also called "Ling", Lemonfish" or " Crabeater") |
| 0 | Crevalle Jack (also called "Jacks") |
| 29 | Croaker |
| 7 | Dolphin (also called "Dorado", "Mahi Mahi" or "Dolphinfish") |
| 4 | Eel |
| 30 | Flounder What kind? Bay, Florida, Left Eyed, Regular, Southern, Gulf, Summer |
| 9 | Gafftopsail catfish (also called "Sail Cat") |
| 30 | Grouper What kind? Black, gag, red, gray, scamp |
| 11 | Hardhead catfish (also called "Hardhead" or "Hardhead Cat") |
| 8 | Hardtail (also called "Blue Runner" or "Blue jack") |
| 7 | King Fish (also called "Whiting" or "Ground Mullet") |
| 38 | King Mackerel (also called "Kings") |
| 9 | Ladyfish (also called "Skipjacks" or "Skippies") |
| 0 | Marlin |
| 45 | Mullet |
| 4 | Other What kind? Brim, red fish, red snapper, whiting |
| 1 | Permit |
| 4 | Pigfish |
| 12 | Pinfish |
| 10 | Pompano |
| 4 | Porgy What kind? NA |
| 2 | Ray What kind? NA |
| 37 | Red Drum (also called "Reds", "Redfish" or "Channel Bass") |
| 0 | Sailfish |
| 1 | Sea Bass What kind? NA |
| 12 | Shark What kind? Blacktip, sand |
| 17 | Sheepshead |
| 2 | Silver Perch (also called "Silver Trout" or "Sugar Trout") |
| 43 | Snapper What kind? Black, gubera, red, Mingo, white |
| 5 | Spadefish |
| 30 | Spanish Mackerel (also called "Spanish" or "Spaniard") |
| 5 | Spot |
| 52 | Spotted Seatrout (also called, "Specks" or "Trout") |

2 Tripletail
4 Wahoo
25 White Trout (also called "White Seatrout")
3 Yellow Tuna

How many of the following freshwater fish did you CATCH AND KEEP during the last two weeks. Other common names are listed beside each fish.
(Because many respondents simply checked whether they caught the fish, the numbers provided below represent number of persons who caught and not the number of each fish that were caught.)

19 Largemouth Bass
35 Bream (also called " Brim", " Bluegill" or "Bluegill Sunfish")
2 Striped Bass (also called "Stripers")
14 Catfish What kind? Bumhead, channel, blue, flathead, fresh water, sail catfish
3 other fish What kinds? Garr-mudfish, shellcracker, White Bars

How much shrimp did you catch?
How many oysters did you harvest?
How many crabs did you catch?

Dozens 2.2 OR Pounds $6 \underline{6}$ and 4000
Dozens $\underline{0}$ OR Gallons $\underline{0}$
Dozens mean $=1.63$, range 0 to 7
OR Gallons $\underline{0}$

## THIS IS THE MOST IMPORTANT QUESTION TO ANSWER. Imagine a piece of cooked fish the size of a slice of bread. Call this a "fish slice". During the last two weeks, how many "slices" of the fish you caught did you eat? You can use $1 / 4,1 / 2$ or $3 / 4$ slices as well in you answers. Mark only what you actually ate.

(Because many respondents simply checked whether they ate the fish, the numbers provided below represent number of persons who ate a slice and not the number of slices that were eaten.)

18 Amberjack
3 Black Drum
3 Black Tuna
5 Bluefish (also called "Blues" or "Schoolies")
0 Bonita (also called "Bonito" or "Bo Bo")
5 Cobia (also called "Ling", Lemonfish" or " Crabeater")
1 Crevalle Jack (also called "Jacks")

15 Croaker
4 Dolphin (also called "Dorado", "Mahi Mahi" or "Dolphinfish")
1 Eel
22 Flounder What kind? Bay, Florida, Left Eyed, Regular, Southern, Gulf, Summer
1 Gafftopsail catfish (also called "Sail Cat")
20 Grouper What kind? Black, gag, red, gray, scamp
2 Hardhead catfish (also called "Hardhead" or "Hardhead Cat")
1 Hardtail (also called "Blue Runner" or "Blue jack")
1 King Fish (also called "Whiting" or "Ground Mullet")
14 King Mackerel (also called "Kings")
0 Ladyfish (also called "Skipjacks" or "Skippies")
0 Marlin
37 Mullet
3 Other What kind? Brim, red fish, red snapper, whiting
0 Permit
0 Pigfish
2 Pinfish
7 Pompano
$0 \quad$ Porgy What kind? NA
0 Ray What kind? NA
17 Red Drum (also called "Reds", "Redfish" or "Channel Bass")
0 Sailfish
$0 \quad$ Sea Bass What kind? NA
2 Shark What kind? Blacktip, sand
11 Sheepshead
2 Silver Perch (also called "Silver Trout" or "Sugar Trout")
41 Snapper What kind? Black, gubera, red, Mingo, white
1 Spadefish
19 Spanish Mackerel (also called "Spanish" or "Spaniard")
1 Spot
38 Spotted Seatrout (also called, "Specks" or "Trout")
14 Triggerfish What kind? Bay, common, gray, queen
1 Tripletail
0 Wahoo
13 White Trout (also called "White Seatrout")
3 Yellow Tuna

How many shrimp that you caught did you eat in the last two weeks?
dozens (12 shrimp) $\underline{0}$ or 9.5 pounds
How many oysters that you harvested did you eat in the last two weeks? dozens (12 oysters) $\underline{0}$

How many of the crabs you caught did you eat in the last two weeks?
$\underline{\text { Mean }}=6.3$, range $=0$ to 24

## Did you eat fish or shellfish bought at the store in the last two weeks?

(Circle one) 770 -Yes 492- No 238 - No Response
If you answered yes, what kind did you buy and how much? (Mark only what you actually bought and ate in the last two weeks.)
(Because many respondents simply checked whether or not they bought a particular fish and did not provide actual amounts purchased, the numbers below reflect the total number of people who bought a particular type of fish.)

| Alligator | 0 |
| :--- | :--- |
| Amberjack | 26 |
| BarJack | 0 |
| Basa | 4 |
| Bay Scallop | 22 |
| Bay Shrimp | 123 |
| Blue Crab | 29 |
| Bluefsh | 1 |
| Canned Clams | 11 |
| Canned Crab | 13 |
| Canned Mussels | 0 |
| Canned Oysters | 15 |
| Canned Shrimp | 6 |
| Catfish | 89 |
| Cobia | 3 |
| Cod | 21 |
| Crawfsh | 12 |
| Croaker | 1 |
| Eel | 0 |
| Florida Lobster | 2 |
| Flounder | 101 |
| Fresh Bream | 2 |
| Fresh Clams | 7 |
| Fresh Oysters | 56 |
| Frozen Fish | 33 |
| Grouper | 92 |
| Grunt | 0 |
| Gulf Shrimp | 231 |
| Haddock | 2 |
| Halibut | 7 |
| King Crab | 11 |
| King Fish | 1 |
| King Mackerel | 3 |
|  |  |


| Lake Victoria Perch | 0 |
| :---: | :---: |
| Mahi-Mahi | 35 |
| Maine Lobster | 14 |
| Monkfsh | 1 |
| Mullet | 56 |
| Mullet Roe | 2 |
| Mussels | 10 |
| Ocean Perch | 8 |
| Octopus | 1 |
| Orange Roughy | 12 |
| Other Fish | 5 |
| Other Shelfish | 19 |
| Other Snapper | 11 |
| Pollock | 10 |
| Pompano | 2 |
| Rainbow Trout | 2 |
| Red Snapper | 70 |
| Royal Red Shrimp | 39 |
| Salmon | 160 |
| Salmon Can | 62 |
| Sand Bream | 1 |
| Sardine | 61 |
| Scamp | 15 |
| Sea Bass | 2 |
| Sea Scallop | 25 |
| SeaTrout | 5 |
| Shad Roe | 0 |
| Shark | 4 |
| Sheepshead | 3 |
| Smelt | 0 |
| Snow Crab | 32 |
| Spanish mackerel | 6 |
| Spot | 0 |
| Squid | 4 |
| Stone Crab | 5 |
| Stripped Bass | 1 |
| Swordfish | 12 |
| Tilapia | 49 |
| Triggerfish | 8 |
| Tuna | 31 |
| Tuna Canned | 255 |
| Turbot | 0 |
| Turtle | 0 |

Did you eat fish or shellfish at a restaurant in the last two weeks? (circle one)

875 -Yes $\quad$ 517- No 108 - No Response
Where did you go?
569 Pensacola
87 Gulf Breeze
96 Pensacola Beach
45 Pace
96 Milton
31 Navarre
85 Other Florida city Which one? Apalachicola, Astor, Bagdad, Boca Raton, Brewton, Century, Chumukla, Crestview, Destin, Fort Walton Beach, Ft. Lauderdale, Gainesville, Homestead, Homosassa Springs, Jackson, MS, Jacksonville, Jay, Key West, Lady Lake, Midway, Naples, Niceville, Orlando, Panama City, Panama City Beach, Perdido Key, Gulf Beach, Port Charlotte, Port St Joe, St. Augustine, Tallahassee, Tampa 91 City in other state. Which one? Alabama, Alberta, AL, Anchorage, Alaska, Atlanta, Atmore, AL, New Orleans, LA, Auburn, AL, Albertville, AL, Baltimore, MD, Batesville, AK, Foley, AL, Biloxi, MS, Birmingham, AL, Boston, MA, Brewton, AL, Calgary (Alberta, Canada) Canada (Newfoundland), Colorado Springs, Corpus Christi, TX, Fairhope, AL, Gulf Shores, AL, Hamburg, NY, Harrisonburg, VA, Hawaii, Hyannis and Norwell, MA, Jackson, MS, Las Vegas, Georgia, Lexington, KY, Loxley, AL, Mendenhill, MS, Shelbyville, TN, Mesa, AZ, Minneapolis, MN, Mississippi, Mobile AL, Morehead City NC, Morgan City LA, Nevada, New York City, Pittsburgh, Norfolk VA, North Carolina, Omaha NE, Orange Beach AL, Pennsylvania, Raleigh, Snowshoe WV, Starkville MS, Toronto, Washington DC, Wilmington NC

What kinds of fish or shellfish did you eat at the restaurant? (Check only the ones you ate during the last two weeks. Circle how it was prepared)
fried broiled/grilled boiled chowder/stew/gumbo raw/sushi

| 45 | Amberjack | 1 | 17 | 0 | 0 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 47 | Blue Crab | 19 | 6 | 9 | 9 | 0 |
| 96 | Catfish | 83 | 9 | 0 | 0 | 0 |
| 32 | Clams | 15 | 2 | 1 | 9 | 0 |
| 2 | Cobia (Ling) | 0 | 2 | 0 | 0 | 0 |
| 16 | Cod | 14 | 1 | 0 | 0 | 0 |
| 0 | Conch | 0 | 0 | 0 | 0 | 0 |
| 42 | Crawfish | 11 | 8 | 10 | 4 | 1 |
| 6 | Eel | 0 | 0 | 0 | 0 | 6 |
| 3 | Fish Roe (eggs) | 1 | 0 | 1 | 0 | 2 |
| 13 | Florida Lobster | 2 | 7 | 3 | 0 | 1 |
| 61 | Flounder | 32 | 25 | 0 | 0 | 0 |
| 234 | Grouper | 91 | 122 | 0 | 7 | 0 |
| 5 | Haddock | 2 | 2 | 0 | 0 | 0 |


| 7 | Halibut | 1 | 5 | 0 | 0 | 0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 47 | Mahi Mahi | 4 | 38 | 0 | 0 | 1 |
| 24 | Maine Lobster | 0 | 11 | 9 | 1 | 0 |
| 1 | Monkfish | 0 | 1 | 0 | 0 | 0 |
| 121 | Mullet | 101 | 8 | 1 | 2 | 0 |
| 4 | Octopus | 0 | 0 | 0 | 0 | 4 |
| 68 | Other | 22 | 26 | 13 | 3 | 2 |
| 173 | Oysters | 98 | 24 | 6 | 12 | 25 |
| 4 | Rainbow Trout | 0 | 4 | 0 | 0 | 0 |
| 66 | Red Snapper | 20 | 36 | 1 | 2 | 3 |
| 24 | Salmon | 0 | 22 | 0 | 0 | 1 |
| 98 | Scallops | 45 | 31 | 2 | 6 | 2 |
| 3 | Shark | 2 | 1 | 1 | 0 | 0 |
| 471 | Shrimp | 258 | 130 | 79 | 33 | 9 |
| 38 | Squid / Calamari 25 | 4 | 0 | 2 | 4 |  |
| 19 | Stone Crab | 5 | 3 | 5 | 0 | 0 |
| 21 | Triggerfish | 8 | 9 | 0 | 1 | 1 |
| 49 | Tuna | 1 | 28 | 0 | 0 | 19 |
| 12 | Yellowfin | 1 | 3 | 0 | 0 | 6 |

Other_ What kind? Catfish, Clam, Dungeness Crab, Golden Crab, Hoki, Minnesota freshwater fish, Pollock, Prawns, Rock Fish, scamp, Sea Bass, Snapper, Snow Crab, Sockeye Salmon, softshell crab, sushi, swordfish, tilapia, unknown, wahoo, whitefish

Has a DOCTOR ever said you had the following medical problems?
160 - Cancer
Describe if you can: Skin, Bladder, Ovarian, Cervical, Breast, Uterine, Prostrate, Colon, Renal, Adrenal, Thyroid, Lung, Throat, Esophogus, Tongue, Brain, Leukemia, Non-Hodgkin’s Lymphoma, Multiple Myeloma, Diagnosis Unknown

## 134 - Heart disease

Describe if you can: atrial fibrillation, open heart surgeries, quadruple bypass, heart attack, arrhythmia, aneurism, angina, angioplasty, aortic valve atresia, aortic stents, aortic valve replacement, arterial blockage, atherosclerosis, pacemaker, congestive heart failure, blocked arteries, bypass, CAD Pat., cardiomyopathy, CHF, clogged arteries, coronary artery disease, coronary stenosis, double bypass, stent, enlarged heart, Tacky-Bradz syndrome, triple bypass, hereditary heart disease, high blood pressure, hypertrophic cardiomyopathy, heart transplant, leaking valve, mitral valve prolapse, murmur, non-specific blockage, cardiomeclea, replaced aortic calce, sick sinus syndrome, valve replacement

[^0]
## 410 - High Cholesterol

What is your cholesterol level? $\underline{\text { Mean }=215.2, ~ r a n g e ~}=110-370$

## 104 - Lung problems

Describe if you can $1 / 2$ diaphragm is paralyzed, use breathing machine and take medication 4 times a day, 2-nimothorax on right, 30 percent removed and emphysema, asbestosis, COPD, asthma, bronchitis, CUPD, hayfever, Breathing Difficulty, burned them with cleaning chemicals at work, cancer, congested nasal and throat passages reducing my oxygen intake, fibrosis, Hanta virus, polio, histoplasmosis, inflammation of r. lobe, mass in lung- benign, past TB, Pre-emphysema, problems caused by second-hand smoke, sarcoidosis, spot on lung, lobe removed, UIP, BOOP, weak/pneumonia

## 42 -Brain or other nervous system problems

Describe if you can acoustic neuroma, benign brain tumor, bilateral subdural hematomata, bipolar, brain damage, closed head injury, Browns saguod, demylinization of some cranial nerves, dysautonomia, orthostatic hypotension, essential tremors, forgetfulness, brain abscess, non-malignant tumor, seizures, I had mercury poisoning I do not eat seafood anymore, imbalance, MS, macroadrenoma, spondilosis, memory is bad, migraine headaches, nerves, nervous breakdown, neuropathy, Parkinson's Disease, stroke, positional vertigo, Reflex sympathetic dystrophy from injury, temporary memory loss-one day, undetermined

## 311 - Eye problems

Describe if you can laser surgery, cataract surgery, age related macula degeneration, allergies-infection, some glaucoma, astigmatism, nearsightedness, bad eye sight, beginning cataracts, bilateral glaucoma, cataracts, corneal dystrophy, blurred vision, burning, IOL implants, EPI, detached retinas, herpes virus in left eye, trifocals, chronic corneal inflammation, closed angle glaucoma, congenital conjunctivitis, glasses, diabetes - have eye problems, diabetic retinopathy, dry eyes, bifocals, farsighted, flashers and floaters (vitreous detachment-both eyes), Graves Disease, pterigiums, high ocular pressure, legally blind, lens implant, corneal transplant, low pressure glaucoma, double vision, occluded retinal blood veins, ocular migraines, wrinkle in retina, presbyopia, Retinal Arterial Occlusion, Retinitis Pigmentosa, sensitive to light, stroke

## 63 - Kidney problems

Describe if you can Brites disease, cancer, Chronic Kidney Infection, congenital, cyst, gall bladder stones, FSGS, kidney stones, lithoripsy, IGA nephropathy, high creatinine, high BUN, kidney failure, kidney infection, Kidney Transplant, one kidney, non-malignant cyst, urinary tract infection, pelvic kidney, dialysis, renal artery bypass, renal insufficiency, three kidneys

## 27 - Liver problems

Describe if you can Cysts, degenerate, elevated enzymes, fatty deposits in liver, hepatitis, Hepatitis C, hemochromotosis, inflamed, non-malignant cyst, primary billiary cirrhosis, spot on liver

## 88 - Urinary problems

Describe if you can Bacterial infection, bladder infection, bladder tumor, bladder urgency, cystitis, diabetes insipidus, neurogenic bladder, enlarged prostate, frequent urination, urinary tract infection, CWI, bladder suspension, incontinence, infection, kidney stones, obstructed urethra, prostate cancer, prostatitis, unable to completely empty bladder

## 193 - Stomach and Intestinal problems

Describe if you can Acid reflux, gastritis, adhesions, Ascending colonitis, bacteria H. pylori, bacteria problems in stomach, benign gastric ulcer, cancer, chronic diarrhea, Crohn's disease, colitis, colon polyps, diverticulosis, intestinal blockage, duodenal ulcer, esophageal reflux, frequent nausea, G.E.R.D., gall bladder, appendix, gallstones, gastric bypass, gastric hyperacidity, gastric ulcer, gastroenteritis, gastrointestinal flu, gastroparesis, not digesting food, colon resection, IBS, heart burn, hemorrhoids, hernia, hiatial hernia, dysautonomia, indigestion, lazy intestinal tract, loose bowels, pancreatitis, peptic ulcers, perforated ulcer, polyp, repaired bleeding ulcer, sensitive stomach, sensitive small intestine, swell all over when I eat shellfish, severe prolapse, spastic colon, ulcerative colitis, ulcer

## 44-Muscle problems

Describe if you can Aches, arthritic fibromyalgia, arthritis, back pain, back strain, fibromyalgia, clubbed feet, leg cramps, legs- low circulation cramps, limb muscle cramps (unknown cause), low potassium causing loss of muscle tone, lupus, rotator cuffs, shoulder and elbow, spasms, panhypopituitarism, spondylosis, weak muscles in the wrist, wheel chair/walker, whiplash, bad muscle spasms when I took medication for high cholesterol (Baycol)

## 51-Reproductive system problems

Describe if you can adhesions on fallopian tubes related to previous appendectomy surgerythis caused infertility problems, amenorrhea, Benign fibroid tumors in uterus, Bleeding - related to thickened uterine lining associated w/ menopause, diabetic, dysfunctional uterine bleeding, endometriosis, fibroid tumors, hysterectomy, ovarian cysts, pre-cancerous cells in uterus, uterus removed, enlarged prostate requiring a transurethral resection, erectile dysfunction, cysts, "hard to get pregnant", hyperthyroidism, impotence, infertility, no ovaries or uterus, Polycystic Ovarian Syndrome, retroverted and retroflexed uterus, cancer, sterile

Do you smoke? 218 - Yes 1241 -No 41 - No Response
If yes, how long have you smoked? $\underline{\text { Mean }=26 y \text { range }=\text { no response to } 60 \mathrm{y}}$
How many packs a day? Mean $=\underline{1.1} \mathrm{pks} / \mathrm{d}$, range $=$ no response to 10 pks

Do you drink alcohol? 739 - Yes 714 - No 47 - No Response

If yes, how many cans or bottles of beer, glasses of wine or shots of liquor do you drink each day? Mean $=1.6$, range $=0.01$ to 12

What is your annual income? (circle one))
a. 61-0 to $\$ 10,000$
b. $154-\$ 10,000$ to $\$ 20,000$
c. $215-\$ 20,000$ to $\$ 30,000$
d. $207-\$ 30,000$ to $\$ 40,000$
e. $214-\$ 40,000$ to $\$ 50,000$
f. $355-\$ 50,000$ to $\$ 100,000$
g. 121-more than $\$ 100,000$
h. 173 - No Response

Thank you for completing your survey. Your time and effort are greatly appreciated!


[^0]:    405 - High blood pressure
    What is you blood pressure? Mean systolic = 135, Range Systolic $=100$ to 200
    Mean Diastolic $=79$, Range diastolic $=27$ to 127

