

Prescribing shrimp



Dr. Sarah Crane, DO



Scope of the problem

- < 20% Americans are getting recommended seafood per dietary guidelines for Americans.
- Misinformation among medical professionals regarding safety and benefits of seafood.
- Lack of priority in conveying importance of nutrition in variety of patient conditions



Scope of the problem

Reasons indicated for decreased or increased seafood intake during the early stages of the COVID-19 pandemic (March 2020–March 2021) among U.S. residents who eat seafood (n = 1077) (weighted data).

Decreased Seafood Intake
U.S. Residents
n = 151 (13.9%)

Usually eat seafood at restaurants	45.8%
Seafood was more expensive	29.4%
Eating more frequently at home	29.2%
Had less money available	24.7%
Lack of available seafood	15.6%
Difficult to prepare seafood	10.6%
Other	9.0%
Don't know how to prepare seafood	6.1%
Don't want seafood in grocery delivery	4.7%
Sustainability reasons	2.6%
Hosting fewer guests	1.6%

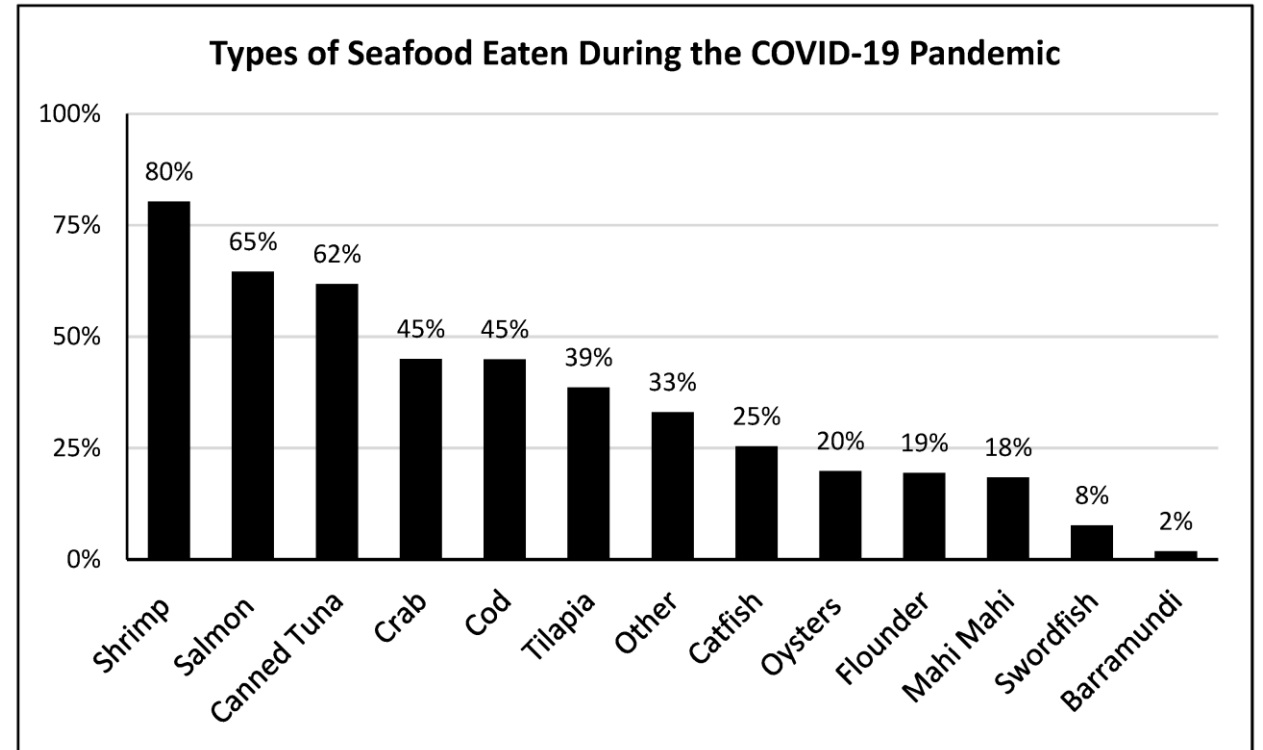
Increased Seafood Intake
U.S. Residents
n = 140 (12.9%)

Health reasons	44.5%
Seafood is easy to prepare	40.0%
Adding variety to diet	35.1%
Eating more frequently at home	32.7%
Eating more protein	30.7%
Eating more often with seafood eaters	25.6%
Increased availability of seafood	19.5%
Had more money available	18.4%
Found a good seafood recipe	13.0%
Seafood was less expensive	12.3%
Typical meat/poultry was less available	8.1%
Ate at restaurants more frequently	7.4%
Other	6.5%



Scope of the problem

Percentage of seafood consumers eating various selections during the pandemic (weighted data; n = 1077).





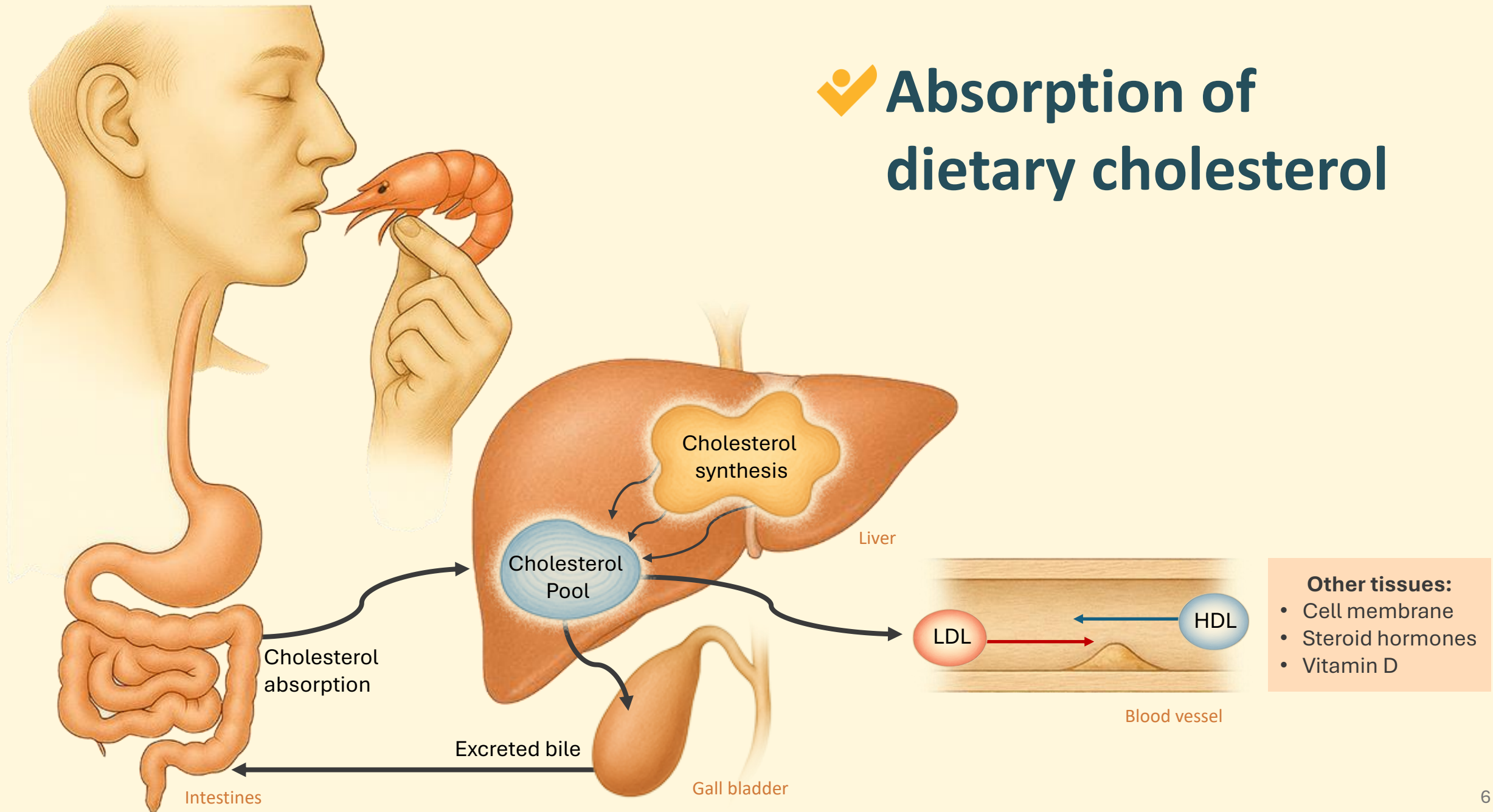
Vitals	Result	Goal
Blood Pressure	145/90	<120/80
BMI	33	<25

Labs	Result	Goal
Hb A1C	5.9%	<5.6%
Total Cholesterol	235	<200
LDL	160	<100
HDL	35	>40
Triglycerides	200	<150

John, a 56 year old male with high cholesterol, pre-diabetes, and heart disease.

"I thought seafood was high in cholesterol. How is that going to help my numbers?"

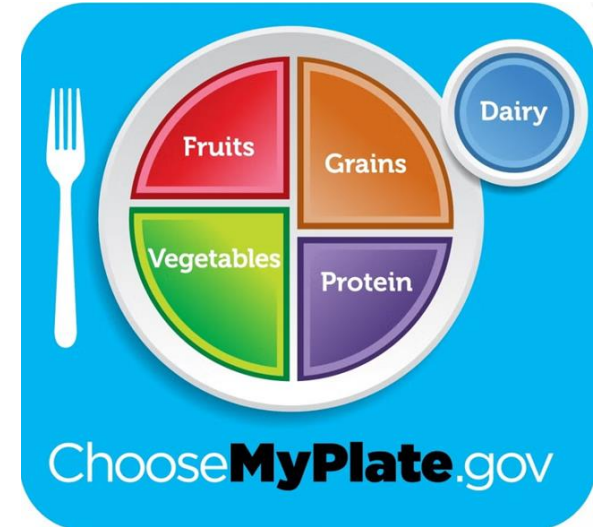
✔ Absorption of dietary cholesterol





Healthy proteins

- Improve satiety
- Decrease fat mass
- Preserve lean body mass during weight loss



Macronutrient Ratios

Protein: 10-35%

Carbohydrates: 45-65%

Fats: 20-35%

Prescription

Diet: low in saturated fats and processed carbohydrates, focusing on intake of healthy proteins

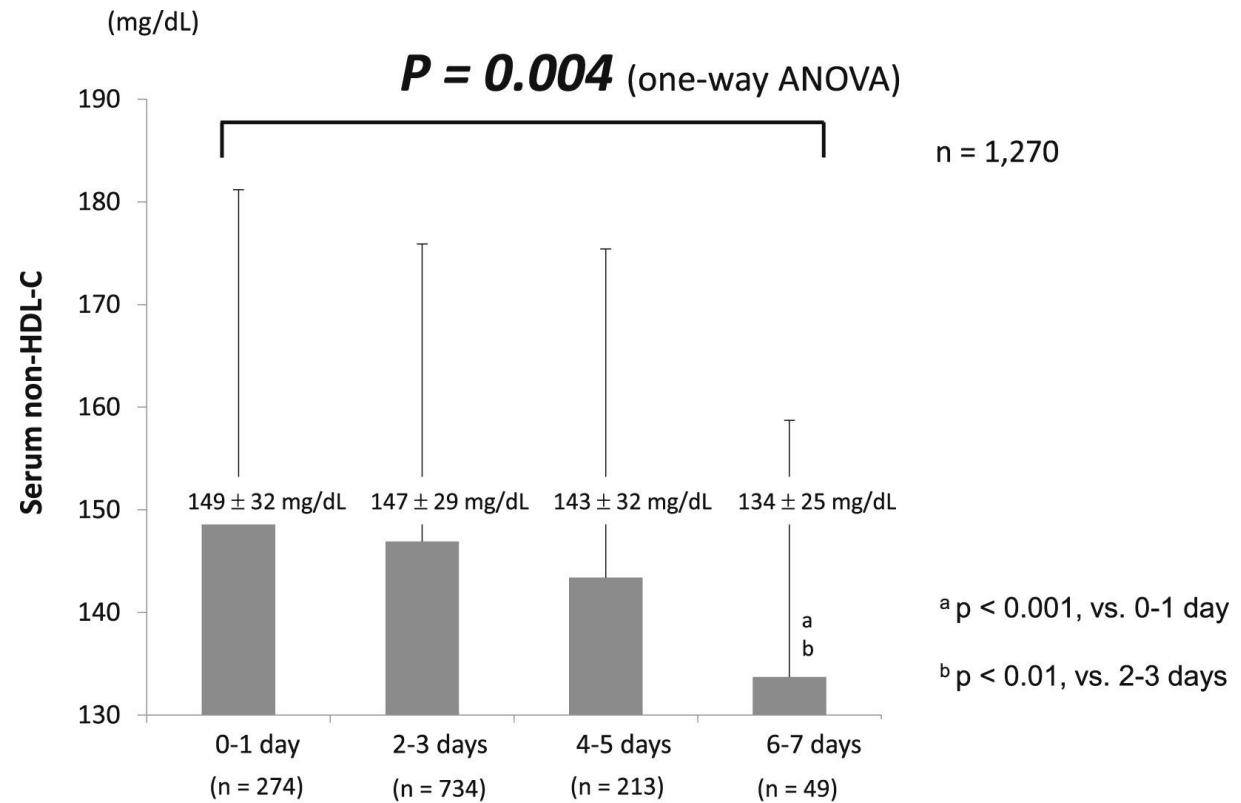
- Consume at least 2 servings of seafood per week
- Reassure patient regarding dietary cholesterol consumption from healthy sources

Regular physical exercise.

Recheck labs in 3-6 months



Prescription



Average Frequency of Fish Intake per Week

Comparison of the serum non-HDL-C Level According to the weekly frequency of fish intake.





Tamara, 29 year old pregnant female in the first trimester of her second pregnancy.

- First pregnancy complicated by gestational diabetes
- First child has Autism/Attention deficit hyperactivity disorder

"I'm worried about mercury exposure if I consume seafood in pregnancy."



The knowledge, attitudes, and behaviours of pregnant women regarding seafood consumption during the antenatal period: a qualitative study

- “The only kind of diet advice I got from my doctor was specific things to avoid, and she didn’t mention seafood (as important).”
- “I avoid it (fish/seafood) during pregnancy because it comes with more risks ... there’s a lot of things regarding the buildup of mercury in certain fish.”
- “I googled ... general sort of articles that say what fish to avoid, the main thing I probably looked up was whether I was supposed to eat canned tuna or not.”
- “I can’t remember if they provided me advice about fish in my last pregnancy, but I know I haven’t been provided advice this pregnancy.”

Benefits of seafood in pregnancy

- ✓ Source of vital nutrients (EPA/DHA, protein, B6, B12, D, Iron, Niacin, Potassium, Selenium, Thiamin)
- ✓ Foster healthy fetal, infant, and childhood development-increase in cognitive scores and decrease in symptoms of autistic spectrum
- ✓ Decrease in preterm birth, increase in mean duration of gestation.
- ✓ Decrease risk of preeclampsia
- ✓ May decrease risk of maternal depression
- ✓ May reduce risk of allergies in infants

Best Choices

EAT 2 TO 3 SERVINGS A WEEK

Anchovy	Herring	Scallop
Atlantic croaker	Lobster, American and spiny	Shad
Atlantic mackerel	Mullet	Shrimp
Black sea bass	Oyster	Skate
Butterfish	Pacific chub mackerel	Smelt
Catfish	Perch, freshwater and ocean	Sole
Clam	Pickering	Squid
Cod	Plaice	Tilapia
Crab	Pollock	Trout, freshwater
Crawfish	Salmon	Tuna, canned light (includes skipjack)
Flounder	Sardine	White fish
Haddock		Whiting
Hake		

OR

Good Choices

EAT 1 SERVING A WEEK

Bluefish	Monkfish	Tuna, albacore/white tuna, canned and fresh/frozen
Buffalofish	Rockfish	Tuna, yellowfin
Carp	Sablefish	Weakfish/seatrout
Chilean sea bass/Patagonian toothfish	Sheepshead	White croaker/Pacific croaker
Grouper	Snapper	
Halibut	Spanish mackerel	
Mahi mahi/dolphinfish	Striped bass (ocean)	
	Tilefish (Atlantic Ocean)	

Choices to Avoid

HIGHEST MERCURY LEVELS

King mackerel	Shark	Tilefish (Gulf of Mexico)
Marlin	Swordfish	Tuna, bigeye
Orange roughy		

* Some fish caught by family and friends, such as larger carp, catfish, trout and perch, are more likely to have fish advisories due to mercury or other contaminants. State advisories will tell you how often you can safely eat those fish.

www.FDA.gov/fishadvice

www.EPA.gov/fishadvice



Prescription

Eat two-three servings of fish or shellfish per week before getting pregnant, while pregnant, and while breast feeding.

Reassure patient regarding intake of seafood while pregnant





Timmy, a 4-year-old male with Autism and ADHD.

"Is it too late to see benefit in my son from adding seafood to his diet?"

Prescription

Eat two-three servings of fish or shellfish per week.

Servings in children:

- 1 oz for age 1-3
- 2 oz for age 4-7
- 3 oz for age 8-10
- 4 oz for age 11+



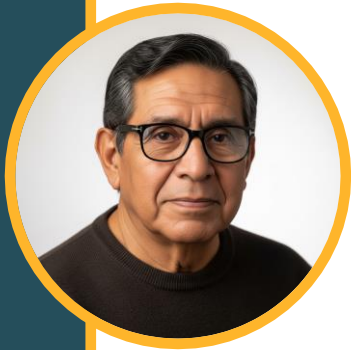


Regina and Walter



Regina, 40 year old woman with dry eye, dry skin, and lip cracking after starting Accutane for acne.

"What can I do to help with eye side effects from my medication?"



Walter, 65 year old male with dry eye who is at risk for age related macular degeneration.

"What can I do to help prevent worsening in my vision?"

Prescription

Eat two-three servings of fish or shellfish per week.



Thank you

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