

DHYG 210: Nutrition

Chicken Fried Rice

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History of Fried Rice and How it Relates to Us

- ★ We are all of East-Asian descent
- ★ Cooked rice (stir-fried) in a wok/frying pan
- ★ Mixed with other ingredients such as eggs, vegetables, and meat.
- ★ Place of origin: various
- ★ Most popular in East and Southeast Asian (China, Taiwan, Japan, Korea, Indonesia, Malaysia, Thailand, and Singapore).



Why Chicken Fried Rice



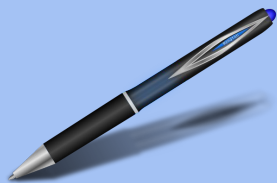
Compared to beef and pork, chicken has:

- ★ Less calories
- ★ Less fat
- ★ Less cholesterol
- ★ More acceptable

	Chicken (breast)	Beef (sirloin)	Pork (tenderloin)
Calories	142	170	160
Fat	3g	7g	5g
Cholesterol	73mg	76mg	80mg

*per 3-oz serving

Original Recipe



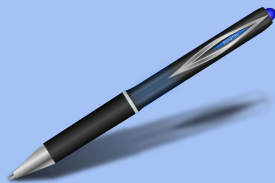
- ★ 2 eggs
- ★ 2 tablespoons water
- ★ 2 tablespoons butter
- ★ 2 tablespoons vegetable oil
- ★ 2 onion, chopped
- ★ 4 cups cooked white rice, cold
- ★ 4 tablespoons soy sauce
- ★ 2 teaspoon ground black pepper
- ★ 2 cup cooked, chopped chicken meat



Table 1: Comparison of Recipes

	Chicken Fried Rice	Modified Chicken Fried Rice
Number of Servings	8	8
Ingredients	2 cups Chicken breast	2 cups white long-grain rice
	4 cups white rice	2 tbsps sesame oil
	2 tbsps sesame oil	1 large raw onion
	2 large raw onion	2 raw egg whites
	4 tbsp soy sauce	2 tbsp soy sauce
	2 raw eggs	1 cup chicken breast
	2 tbsps water	1 cup raw cauliflower
	2 tbsps butter	1 cup grated cheddar cheese
	2 tsps black pepper	1 cup green beans
		1 cup raw carrot

Recipe Modifications



Additions and Reductions

★ Increased vegetables

- Cauliflower → Vitamin B6/C, protein, thiamin, folate
- Green beans → Vitamin A/B6,, protein, calcium, minerals (Mg/Cr)
- Carrots → Vitamin A (beta-carotene)/B6/E, folate, biotin



★ Less chicken breast

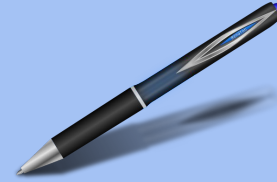
- Less fat and cholesterol

★ Milk and alternatives

- Cheddar and mozzarella cheese → Calcium



Recipe Modifications cont.



Substitutions

- ★ Eggs → Egg whites
 - Lower fat and cholesterol
 - Maintains protein, calcium, magnesium, folate
- ★ Low-sodium soy sauce
 - Less sodium
- ★ Long-grain white rice
 - Increased fibre
- ★ Butter → Sesame oil
 - Less saturated fat, no trans fat



Table 2: Nutrient Comparison

Original Modified

Calories (kcal)	252.1	163.8
Fat (g)	8.6	5.1
Saturated Fat (g)	3.1	1.3
Trans Fat (g)	0.2	0.0
Cholesterol (mg)	84.8	17.8
Sodium (mg)	514.8	276.7
Potassium (mg)	257.9	254.5
Carbohydrate (g)	26.8	16.7
Fibre (g)	1.2	1.5
Sugar (g)	1.9	2.5
Protein (g)	15.8	12.5

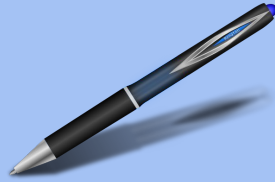
Original Modified

Vitamin A (RAE)	52.6	149.3
Vitamin C (mg)	2.9	10.0
Calcium (mg)	29.1	92.1
Iron (mg)	0.9	0.6
Vitamin D (ug)	0.3	0.1
Vitamin E (mg)	0.6	0.3
Thiamin (mg)	0.1	0.1
Riboflavin (mg)	0.1	0.1
Niacin (NE)	8.4	5.5
Folate (DFE)	21.6	22.6
Vitamin B6 (mg)	0.3	0.2
Vitamin B12 (ug)	0.4	0.1

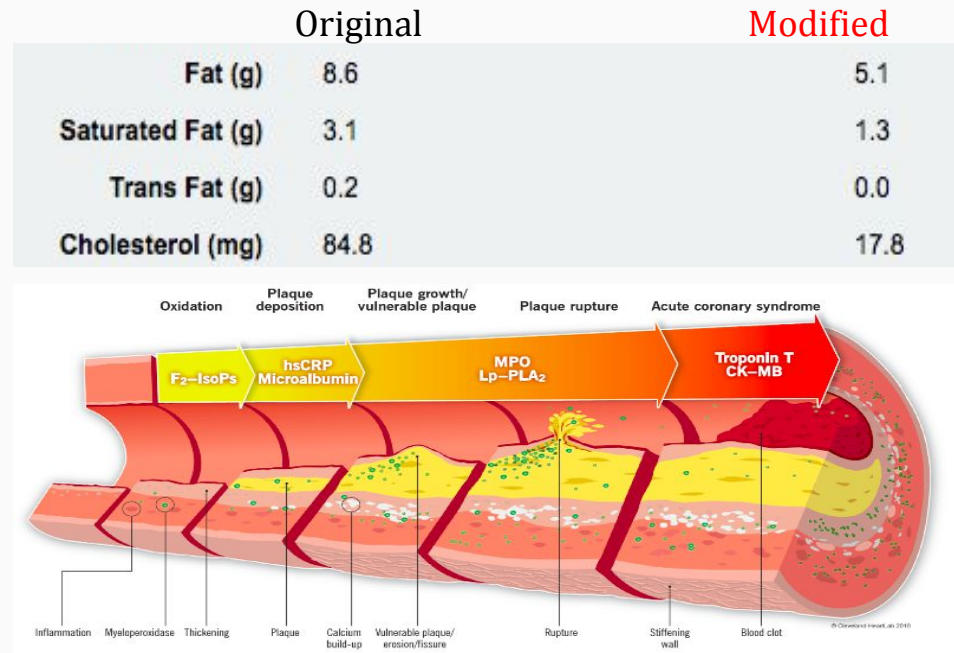
Table 3: Food Groups per Serving

	Original	Modified
Vegetables and Fruit	0.4	0.9
Grain Products	0.9	0.5
Meat and Alternatives	0.6	0.3
Milk and Alternatives	0.0	0.3

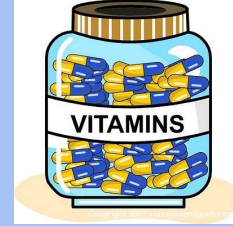
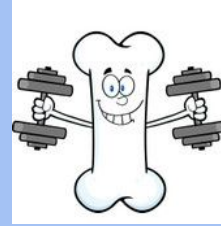
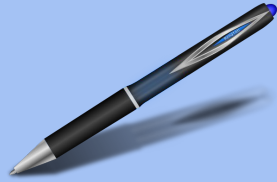
Macronutrient



- ★ Saturated Fat:
 - Increase drives up total cholesterol
 - Higher LDL cholesterol blocks arteries
- ★ Trans Fat:
 - Higher LDL and lower HDL
 - Creates inflammation related to heart disease, stroke, diabetes, heart disease
 - Insulin resistance (Diabetes type 2)
- ★ Cholesterol:
 - High LDL prompts plaque build-up in arteries (blockages)



Micronutrients



- ★ Vitamin A:
 - Functioning of eyes, immune system, reproduction, heart, lungs, kidneys and other organs

- ★ Vitamin C:
 - Collagen: connective tissue (essential part of oral cavity; wound healing)
 - → Deficiency will cause scurvy

- ★ Calcium:
 - Mostly stored in bones and teeth to support structure and function.
 - → bone continuously resorbed and reformed, imbalance = osteoporosis

	Original	Modified
Vitamin A (RAE)	52.6	149.3
Vitamin C (mg)	2.9	10.0
Calcium (mg)	29.1	92.1

- ★ Biosynthesis of collagen and other neurotransmitters, protein metabolism, physiological antioxidants
 - Helps regen other antioxidants, improves immune function
 - Absorption of nonheme iron (plant-based foods)

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THANK YOU