



# ***Module 3***

# ***Navy Operational Fitness***

# ***& Fueling System***

# ***(NOFFS)***

UNCLASSIFIED



# NOFFS



## NAVY OPERATIONAL FUELING



Visit NOFFS on the Navy Fitness website for more information and applications.



[WWW.NAVYFITNESS.ORG](http://WWW.NAVYFITNESS.ORG)



UNCLASSIFIED



# Why the Meal Builder System?



- Gives guidance and individualization without exact “diet plan”
  - Fills the gap between the general nutrition recommendation and clinical prescription
- Teaches the different categories of foods in addition to portion sizes
- Allows for flexibility and versatility

## Protein: “The Less Legs the Better” • Protein = Building blocks for our bodies

- Protein builds muscle and maintains the immune system.
- Main sources are: Lean Meats, Low Fat Dairy, Eggs, and Beans/Legumes.
- What to look for: Lean protein sources. Typically the less legs on the animal the protein came from, the better it is for you.
- Try to include a lean protein source with every meal.
- Protein needs increase with activity. Intake ranges from 0.5g (recreational exerciser) to 0.8g (building muscle mass) of protein per pound of body weight. You will never need more than 1g per pound for health or muscle mass gains. The palm of your hand equals about 30-40g of protein.

### The Top 5 Proteins



Tuna/Fish



Chicken/Turkey Breast



Lean Red Meat



Low Fat Dairy



Eggs



1 Serving Size  
= The Palm of Your Hand



# The Meal Builder



## 4 Steps

### 1. Identify your Goal

Lose, maintain, or gain weight

### 2. Find Your Fuel Zones

Based on current weight, age, & gender

### 3. Nutrition Blueprint

### 4. Build Your Meals

#### BUILD YOUR MEAL IN 4 SIMPLE STEPS

STEP 1

##### IDENTIFY YOUR GOAL

- I will lose weight
- I will maintain weight
- I will gain weight

STEP 2

##### FIND YOUR FUEL ZONE

- Find your gender and weight in the tables below and map across to find your Fuel Zone

STEP 3

##### LOCATE YOUR NUTRITION BLUEPRINT

- Using your Fuel Zone, locate your Nutritional Blueprint. This will guide you to building meals and snacks that are right for you.

STEP 4

##### BUILD YOUR MEALS & SNACKS

- Go to the Meal Builder Food List
- With your Nutritional Blueprint, use the Meal Builder Food List to build your meals and snacks

#### SET YOUR GOAL, FIND YOUR FUEL ZONE

I WILL FUEL TO...

STEP 1

LOSE WEIGHT

MAINTAIN WEIGHT

GAIN WEIGHT

	CURRENT WEIGHT	FUEL ZONE	CURRENT WEIGHT	FUEL ZONE	CURRENT WEIGHT	FUEL ZONE
FEMALE	100 - 125	1400 - 1600	100 - 115	1800 - 2000	100 - 125	2400 - 2600
	125 - 160	1600 - 1800	115 - 145	2000 - 2200	125 - 155	2600 - 2800
	160 - 185	1800 - 2000	145 - 170	2200 - 2400	155 - 180	2800 - 3000
	185 - 200	2000 - 2200	170 - 200	2400 - 2600		
	200 - 220	2200 - 2400				
	220 - 240	2400 - 2600				

STEP 2

	CURRENT WEIGHT	FUEL ZONE	CURRENT WEIGHT	FUEL ZONE	CURRENT WEIGHT	FUEL ZONE
MALE	Under 145	1800 - 2000	Under 140	2200 - 2400	Under 145	2800 - 3000
	145 - 165	2000 - 2200	140 - 155	2400 - 2600	145 - 165	3000 - 3200
	165 - 185	2200 - 2400	155 - 175	2600 - 2800	165 - 185	3200 - 3400
	185 - 210	2400 - 2600	175 - 200	2800 - 3000	185 - 205	3400 - 3600
	210 - 230	2600 - 2800	200 - 220	3000 - 3200	205 - 225	3600 - 3800
	230 - 250	2800 - 3000	220 - 240	3200 - 3400	225 - 245	3800 - 4000
	250 - 270	3000 - 3200	240 - 260	3400 - 3600		
	270 - 295	3200 - 3400				

UNCLASSIFIED





# Nutrition Blueprint



## STEP 3

### Locate Your Nutrition - Operational Series

Using the Fuel Zone you identified in Steps 1 & 2, locate your personal Nutritional Blueprint to fit your caloric needs. Your blueprint has six columns across the top that represent meal times, or "fueling times". The food groups are represented along the left hand side, and the numbers located within the zone are the recommended number of servings from each food group at each fueling time.

1400 - 1600	BREAKFAST	SNACK	LUNCH	SNACK	DINNER	SNACK
Grains	2		2		2	
Proteins	1	1	1	1	1	1
Fruits	1	1	0 to 1	1	0 to 1	
Vegetables	∞	∞	∞	∞	∞	∞
Fats	1	0 to 1	1	0 to 1	1	1
Calorie Range	350 - 400	175-200	280 - 320	175-200	280 - 320	140 - 160
*Meal Replacement Shake or Bar		1		1+ fruit		1

1600 - 1800	BREAKFAST	SNACK	LUNCH	SNACK	DINNER	SNACK
Grains	2		2		2	
Proteins	1	1	1	1	1 to 2	1
Fruits	1 to 2	1	0 to 1	1		1
Vegetables	∞	∞	∞	∞	∞	∞
Fats	1	1	1	1	1	1
Calorie Range	400 - 450	200-225	320 - 360	200-225	320 - 360	160 - 180
*Meal Replacement Shake or Bar		1		1+ fruit		1

1800 - 2000	BREAKFAST	SNACK	LUNCH	SNACK	DINNER	SNACK
Grains	2		2		2	
Proteins	1	1	1	1	2	1
Fruits	2	1 to 2	1	1 to 2		1
Vegetables	∞	∞	∞	∞	∞	∞
Fats	1	1	1	1	1 to 2	1
Calorie Range	450 - 500	225-250	360 - 400	225-250	360 - 400	180 - 200
*Meal Replacement Shake or Bar		1+ fruit		1+ 2 fruit		1

2000 - 2200	BREAKFAST	SNACK	LUNCH	SNACK	DINNER	SNACK
Grains	2	0 to 1	2 to 3	0 to 1	2	
Proteins	1 to 2	1	1 to 2	1	2	1
Fruits	1 to 2	1	1	1		1
Vegetables	∞	∞	∞	∞	∞	∞
Fats	1	1	1	1	1 to 2	1
Calorie Range	500 - 550	250-275	400 - 440	250-275	400 - 440	200 - 220
*Meal Replacement Shake or Bar		1+ fruit		1+ 2 fruit		1+ fruit

2200 - 2400	BREAKFAST	SNACK	LUNCH	SNACK	DINNER	SNACK
Grains	2	1	3	1	2 to 3	
Proteins	2	1	1 to 2	1	2	1
Fruits	2	1	1	1		1
Vegetables	∞	∞	∞	∞	∞	∞
Fats	1 to 2	1	1	1	1 to 2	1
Calorie Range	550 - 600	275 - 300	440 - 480	275 - 300	400 - 440	200 - 220
*Meal Replacement Shake or Bar		1+ fruit		1+ 2 fruit		1+ fruit

2400 - 2600	BREAKFAST	SNACK	LUNCH	SNACK	DINNER	SNACK
Grains	2 to 3	1	3	1	3	0 to 1
Proteins	2	1	2	1	2	1
Fruits	2	1	1	1		1
Vegetables	∞	∞	∞	∞	∞	∞
Fats	2	1 to 2	1	1 to 2	2	1
Calorie Range	600 - 650	300 - 325	480 - 520	300 - 325	480 - 520	240 - 260
*Meal Replacement Shake or Bar		1+ fruit + 1 fat		1+ 2 fruit + 1 fat		1+ fruit + 1 fat

2600 - 2800	BREAKFAST	SNACK	LUNCH	SNACK	DINNER	SNACK
Grains	3	1 to 2	3	1 to 2	3	1
Proteins	2	1	2	1	2	1
Fruits	2	1	1	1	0 to 1	1
Vegetables	∞	∞	∞	∞	∞	∞
Fats	2	1	2	1	2	2
Calorie Range	650 - 700	325 - 350	520 - 560	325 - 350	520 - 560	280 - 280
*Meal Replacement Shake or Bar		1+ fruit + 1 fat		1+ 2 fruit + 1 fat		1+ fruit + 1 fat

2800 - 3000	BREAKFAST	SNACK	LUNCH	SNACK	DINNER	SNACK
Grains	3	2	3	2	3	1
Proteins	2	1	2	1	2	1
Fruits	2 to 3	1	1	1	1	1
Vegetables	∞	∞	∞	∞	∞	∞
Fats	2	1	2	1	2	2
Calorie Range	700 - 750	350 - 375	560 - 600	350-375	560 - 600	280 - 300
*Meal Replacement Shake or Bar		1+ fruit + 1 fat		1+ 2 fruit + 1 fat		1+ fruit + 1 fat

UNCLASSIFIED



# Build Your Meals



## FUELING SERIES



### MEAL BUILDER

#### STEP 4

#### Build Your Meals & Snacks

Using your Nutritional Blueprint, follow the directions below to start filling your day with meals and snacks designed to help you with your goals.

##### Map Your Blueprint

The food list below has foods from each of the categories found in your Nutrition Blueprint.

##### Size Up Your Servings

The number to the left of each food item equals one serving (eg. 1 slice of whole wheat bread = 1 grain serving).

##### Mix It Up

Each serving may be used interchangeably. For example, if you tire of whole wheat toast at breakfast you can replace it with any of the foods listed in the grain column. If you have more than one serving suggested, you can double up on the same food (eg. 2 slices of whole wheat toast) or mix and match (eg. 1 slice of whole wheat toast and 3/4c Multi grain Cheerios). You are limited only by your creativity!

You are now prepared to build customized meals and snacks to help you meet your goals. These meals and snacks will provide you with sustainable fuel throughout the day as well as the energy you need for your workouts. Remember, to maximize your energy and reach your body composition goals, think about both quality and quantity of your food choices.

##### GRAINS/STARCHES:

1c Pasta/Rice (cooked)  
1/2c Brown Rice (cooked)  
1/2c Whole Wheat Cous Cous (cooked)  
1/2c Whole Wheat Pasta (cooked)  
1/2c Risoletto, Quinoa (cooked)

##### Breads/Tortillas/Rolls

1slice Bread (100% Whole Wheat)  
1/2c Ritz Bread (6" diameter each)  
1/2c Whole Wheat Bagel  
1/2c English Muffin  
1/2c Whole Wheat Hamburger/  
Hot dog Bun  
1/2c Sub Bread (6" each)  
1 Whole Wheat Tortilla  
2 Corn Tortillas  
1sm. Whole Wheat Roll (10c each)

##### Cold Cereals

1/2c All Bran Cereal  
1/2c Cheerios Cereal  
1/2c Cheerios Multigrain Cereal  
1/2c Cracklin Oat Bran Cereal  
1/2c Frosted Mini Wheats Cereal  
1/2c Grape Nuts Cereal  
1/2c Kashi Go Lean Cereal  
1/2c Kashi Go Lean Crunch Cereal  
1/2c Kashi Go Lean Honey  
Almond Flax  
1/2c Muesli Cereal  
1/2c Raisin Bran Cereal  
1/2c Smart Start Cereal  
1/2c Special K Cereal  
1/2c Whole Wheat Total Cereal

##### Hot Cereals

1/2c Cream of Wheat (cooked)  
1 Instant Grits  
1 Packet Kashi Instant Oatmeal  
1 Packet Quaker Instant Oatmeal  
1 Slow Cooked Oatmeal

##### Veggies, Beans, Potatoes

1/2c Soy Beans (cooked)  
1/2c Split Peas (cooked)  
1c Squash (winter, acorn, butternut)  
1/2c Peas (cooked)  
1sm. Baked Potato  
1/2c Beans: Black, Kidney, Pinto, Lima, Lentils (cooked/canned)  
1/2c Corn (cooked)  
1 Ear of corn  
1/2c Sweet Potato (cooked)  
1 Yam (cooked)  
1 Mashd Potatoes

##### Snacks/Crackers/Granola Bars

1 Kashi Granola Bar  
1 Graham Crackers  
1 Whole Wheat Crackers (baked)  
1 Whole Wheat Melba Toast  
1 Nature Valley Granola Bar  
1 Animal Crackers  
1c Light Popcorn (popped)

3/4c Pretzels  
2 Rice Cakes (4" diameter each)  
4 Reduced Fat Triscuits  
1 Whole Grain Fig Newton

##### PROTEINS/DAIRY:

##### Fish/Seafood

3oz Fish  
3oz Cod  
3oz Flounder  
3oz Haddock  
3oz Halibut  
3oz Salmon  
3oz Shrimp  
3oz Trout  
3oz Tuna

##### Poultry

3oz Chicken (chunch meat)  
3oz Chicken breast  
3oz Ground turkey (cooked)  
3oz Turkey (chunch meat)  
3oz Turkey Breast

##### Beef/Pork

1.5oz Beef (96% lean ground chuck)  
1.5oz Beef jerky  
3oz Beef tenderloin  
3oz London broil  
3oz Pork (igilad)  
3oz Roast beef (3oz each meat)

##### Dairy

1/2c 1% or non-fat regular milk  
or chocolate milk  
1/2c Non-fat or low fat cottage cheese  
1/2c Non-fat frozen yogurt  
1/2c Non-fat or low fat greek yogurt  
1/2c Reduced-fat soy milk  
1 2% String cheese

##### Eggs

3c Egg Substitute  
4 Egg Whites  
2 Eggs  
2 Omega-3 Eggs

##### Legumes

1/2c Beans: Black, Kidney, Pinto, Lima, Lentils (cooked/canned)  
1/2c Calcium-fortified light soy milk  
1/2c Hummus  
1/2c Soy beans (cooked)  
1/2c Split peas  
1/2c Almond butter  
1 Peanut butter (natural)  
10-15 Raw nuts

##### MEAL REPLACEMENTS/PROTEIN

##### POWDERS:

1-2 scoop Whey Protein\*  
1 Bar  
1 Shake

\*Make sure to choose protein powders that are certified safe and reliable. Check out [www.dailysport.com](http://www.dailysport.com) for a complete list.

Meal replacement considerations:  
• Make sure it fits within your calorie recommendations  
• Should have at least 3g of fiber  
• Double check the protein level  
- Women need 16-30g  
- Men need 18-42g

##### VEGETABLES:

##### Green

1c Arugula  
1/2c Asparagus (cooked)  
1c Asparagus (raw)  
1c Broccoli (cooked)  
1c Broccoli (raw)  
1c Brussel sprouts  
1c Celery (cooked)  
1c Celery (raw)  
1c Cabbage (cooked)  
1c Cucumber (raw)  
1c Green beans (cooked)  
1c Green beans (raw)  
1c Green veggie salad  
1c Kale (raw)  
1c Lettuce (cup)  
1c Spinach (raw)

##### White

1/2c Cabbage (cooked)  
1c Cabbage (raw)  
1c Cauliflower (cooked)  
1c Cauliflower (raw)  
1c Onions (cooked)  
1c Onions (raw)  
1c Water chestnuts (cooked)  
1c Water chestnuts (raw)

##### Red

1/2c Tomato, beats  
1/2c Salsa, tomato sauce

##### Orange

1/2c Carrots (cooked)  
1c Carrots (raw)

##### Mixed Colors

1/2c Peppers (cooked)  
1c Peppers (raw)  
1/2c Stir fry vegetables (cooked)  
1c Stir fry vegetables (raw/boiled)  
1/2c Vegetable juice  
1/2c Zucchini (cooked)  
1c Zucchini (raw)

##### FRUITS:

##### Red

1sm. Apple  
1/2c Applesauce (unsweetened)  
1c Cherries  
1c Raspberries  
1/2c Strawberries (whole)  
1/2c Watermelon (cubed)  
1sm. Grapefruit

##### Orange

1c Cantaloupe (cubed)  
1sm. Orange, nectarine or peach  
1sm. Tangerine

##### Yellow

1/2c Banana(s)  
1/2c Pineapple chunks (in own juice)

##### Blue/Purple

1c Blackberries or boysenberries  
1/2c Blueberries  
1c Grapes  
2sm. Plums  
1c Prunes (dried plums)  
2c Raisins

##### Green

1c Honeydew melon (cubed)  
1sm. Kiwi fruit  
1sm. Pear

##### Mixed Colors

2c Dried fruit  
1/2c Fresh fruit salad  
1/2c Fruit cocktail (own juice)  
1/2c Fruit juice (100% juice)  
1c Mixed berries (fresh/frozen)

##### FATS (CHOOSE OFTEN):

1 Nut butters: Almond, peanut, etc...  
10-15 Nuts: Almonds, walnuts, pecans  
1c Avocado  
1.5c Black or green olives  
1.5c Plant oils: olive, canola, flax  
2c Flax seeds  
1c Hummus  
2c Seeds: Pumpkin, sesame, sunflower  
2c Quia comole  
2c Smart Balance, Benecol

##### FATS (CHOOSE LESS OFTEN):

2c Butter (stick)  
1c Cheese  
1c Cheese  
2c Cream cheese  
4c Half & Half  
2c Mayonnaise  
2c Reduced-fat cream cheese  
4c Reduced-fat sour cream  
2c Sour cream  
2c String cheese  
2 Turkey bacon slice  
1 Turkey sausage link  
1 Commercial salad dressings

1t = 1 Teaspoon  
1T = 1 Tablespoon  
1c = 1 Cup  
1oz = 1 Ounce

sm. = Small  
med. = Medium  
lg. = Large

atCleanEatOftenHydrateRecoverMindset

UNCLASSIFIED



# How Do the Numbers Add Up?



## Modified Exchange System

Nutrient	Grains/ Starches	Proteins	Fruits	Vegetables	Fats
Carbs (g)	15	Trace	15	5	Trace
Protein (g)	3	21	Trace	~2	Depends
Fat (g)	Trace	1-5	0	Trace	5-7
CALORIES	80	~115	60	~25	~65

**Carbohydrate = 4 kcal/gram**

**Protein = 4 kcal/gram**

**Fat = 9 kcal/gram**

UNCLASSIFIED



# ***Now It's Your Turn to Practice...***



## **Attached:**

- **Navy Operational Fueling Workbook**
- **Entire NOFFs program available online and free downloadable mobile App:**

**<http://www.navyfitness.org/fitness/noffs/>**



UNCLASSIFIED