



Concept developed by: Center for Science in the Public Interest



EVENT: Go Low Taste Test

INTENDED AUDIENCE: Women 18-49 and kids 2-11

LOCATION OF EVENT: Could be conducted in individual classrooms, in school cafeterias at lunchtime, at meetings of student organizations, at sporting events, as part of a school assembly, at health fairs or community events, in child care centers, health centers, grocery stores, etc.

EVENT LEADER: AzNN Partner with help from teachers, food service workers or other students.

LENGTH: Resources are best spent conducting taste tests in settings where many students can be tested in a one-to-two hour period.

GOAL: Milk taste tests provide people with the opportunity to taste 1% low fat and fat free milk and for most, discover they like it.



The perceived taste of low fat milk is a barrier to consumption. Although many people think they do not like the taste of fat free and 1% milk, in blind taste tests conducted in previous campaigns, almost all consumers liked the taste of fat free milk – 80% of consumers liked the taste of fat free milk, and 94% liked the taste of either 1% or fat free milk. In addition, when consumers are presented with whole, 2%, 1% and fat free in blind taste tests, few can taste the difference between them. In previous campaigns,

more than a quarter of consumers confused whole and fat free milk and more than a third mistook whole and 1% milk. Milk taste tests provide students the opportunity to taste 1% and fat free milk and most will discover that they like it. Taste tests are an interactive and fun way to promote healthy eating.

Some of the AzNN staff at the Arizona Department of Health Services conducted a 1% or Less Taste test on co-workers and were amazed by the results. You will be, too!



Introduction

The perceived taste of low fat milk is a barrier to consumption. In a national survey, 47% responded that they do not drink fat free milk because they do not like the taste (Caravan Opinion Research Corporation, 1994). However, in blind taste tests conducted by the Center for Science in the Public Interest (CSPI), almost all consumers liked the taste of fat free milk and 94% liked the taste of either 1% or fat free milk.

Surprisingly, when consumers are presented with whole, 2%, 1% and fat free milk in a blind taste test, few can taste the difference

between those types of milk. In previous campaigns, more than a quarter of consumers confused whole and fat free milk and more than a third mistook whole and 1% milk.

The results show that the negative attitudes about low fat milk are more in the mind of the consumers than in their taste buds. Blind taste tests are an important way of overcoming those negative attitudes. These taste tests provide consumers with the opportunity to taste low fat milk and for most, realize that they like it.

Materials needed to conduct milk taste tests*

TABLE: 6 x 2 1/2 feet is ideal.

BOX: to make it more difficult to see into the cups, a box or other raised surface, about 18 inches high, will be placed on top of the table. Tasting cups will be set in a muffin tin and placed on top of the box.

TWO MUFFIN TINS: for serving the tasting cups. Use a 12-cup tin, 4 cups by 3 cups. The center row should be marked A, B, C and D from right to left to keep track of the milk samples. One tin at a time is placed on top of the box when the samples are presented to the taster. The second tin can be used to prepare samples for the next taster in line.

MASKING TAPE: to mark muffin tins and hang signs.

SMALL CUPS: 3 oz. white (not clear) paper cups are ideal.

SMALL COOLER: to keep the cartons of milk that you are currently pouring cold.

LARGE COOLER: or refrigerator to store back-up milk. (In supermarkets, this is not required. Milk can be left in the dairy case until needed.)

ICE: to keep the cartons of milk that you are pouring cold.

PAPER TOWELS: handy for clean up.

MILK: fat free, 1%, 2% and whole milk. Choose a carton size that is easy to pour, such as a quart. Plan on at least 1 oz. of milk per person for each type of milk. For example, less than a half gallon of each type of milk (whole, 2%, 1% and fat free) would be needed to taste test 50 people in four hours of taste testing. Be sure there is enough of each type of milk on hand.

GARBAGE CAN: with liner for used cups and other trash.

DATA SHEETS: Pre-Test Questionnaires to record the characteristics of the tasters. Tasting Response Data Sheets to record tasters' responses. Tasting Preparation Sheet to be used as a guide for preparing samples.

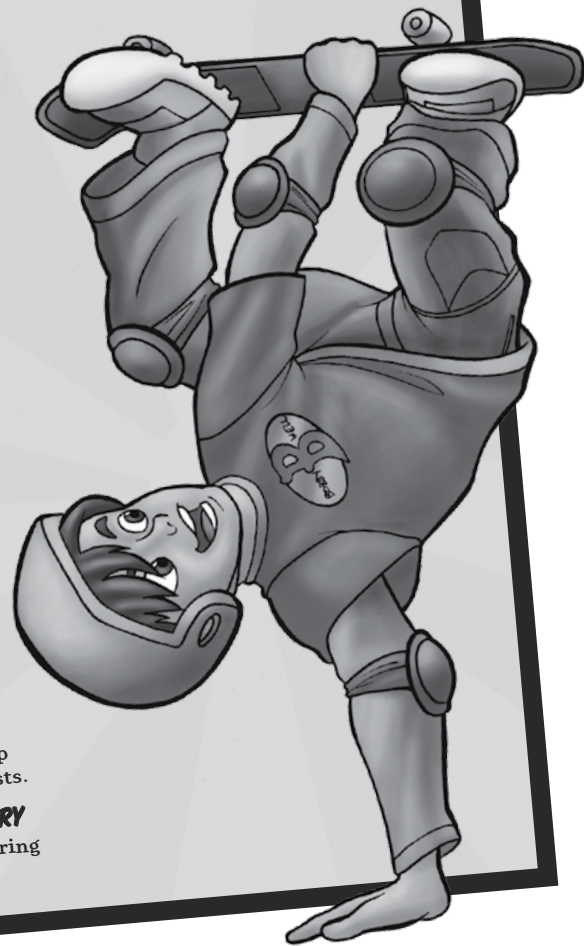
THREE CLIP BOARDS: to hold the questionnaires and data sheets (optional).

PENS: to record responses.

DARK GLASSES: to cover the tasters' eyes and mask the appearance of the milk for tasters who do not wish to close their eyes.

THREE TASTE TEST PROTOCOLS: to help guide volunteers during the taste tests.

THREE TASTE TEST PROTOCOL SUMMARY SHEETS: to help guide volunteers during the taste tests.



Personnel

Three volunteers are needed to run each taste test.

Volunteer A:

Completes Pre-Test Questionnaire and presents tasting cups to each participant.

Volunteer B:

Prepares milk samples and, if necessary, recruits participants to take taste tests.

Volunteer C:

Records taster's responses on Tasting Response Data Sheets and reviews results with each taster.



Step-by-step instructions for taste tests

1. Volunteers should encourage consumers to participate in taste tests. Challenge them to take the test to see if they can taste the difference between whole, 2%, 1% and fat free milk. The test will only take a few minutes but could help them cut a lot of fat and cholesterol from their diet.

2. Volunteer A will begin by asking participants the questions on the Pre-Test Questionnaire and recording their responses. Note that whole milk may also be called Vitamin D or regular milk; fat free milk used to be called skim or nonfat; buttermilk can be whole or 1% fat; evaporated milk can be whole or fat free; and lactose-reduced milk comes in whole, 1%, and fat free. If the tasters drink a milk not listed on the questionnaire, determine the fat content of that milk and check the corresponding response. For example, if tasters drink 1% buttermilk, check "Low Fat (1%)" and write that they drink buttermilk on the "other" line.

Step-by-step instructions for taste tests cont.*

3. While Volunteer A carries out step 2, Volunteer B will prepare milk samples for the participants. The volunteer should first put four empty cups into cups A, B, C and D of the muffin tin. Then the volunteer should pour the appropriate type of milk into each cup as indicated on the Tasting Preparation Sheet for that subject number. It is very important to double check the subject number with volunteer A for each new taster to ensure that you are both on the same subject number. Place the muffin tin on top of the box with cup A to your left. Do not put the milk samples in front of the tasters until they have either closed their eyes or put on the dark glasses.

The test should be double blind (ie: both Volunteer A and the taster should be unaware of which type of milk is being offered). Therefore, Volunteer B should fill the milk cups out of sight of the waiting participants and volunteer A. The cups can be filled at the same table, but behind the cooler, out of view of the waiting tasters.

For the best taste, milk should be very cold and freshly poured for each taster. Be careful not to drip water from the outside of the milk carton into the sample cups—even one drop of water could change the flavor. Volunteer B should also keep track of the total amount of milk used, especially if the taste test is conducted in a supermarket, and the milk must be purchased from the participating supermarket.

4. After completing the Pre-Test Questionnaire, Volunteer A will serve the milk samples. She will tell the taster:

"I'd like you to taste four kinds of milk. One is fat free, which has virtually no fat; one is 1% fat, which has very little fat; one is 2% fat, which is fattier; and one is whole milk, which has the most fat. You'll taste them in random order and I'll hand you one cup at a time. After tasting each sample, I'll ask you to identify it and tell me if you liked it. This is not a comparison test; we want you to guess based on the taste of each milk individually and not in

comparison to the others. We also want you to determine the type of milk from the taste and not from the appearance, so please close your eyes or put on these dark glasses."

After the tasters have closed their eyes or put on dark glasses, Volunteer A should place the milk samples before the tasters.

Hand the tasters milk cup A. After they taste it, ask, "What type of milk was that? Fat free? 1%? 2%? Whole? Did you like it?" Make the tasters guess before you offer them the next milk sample. Don't remind them of their previous guesses. It is okay for the tasters to make the same guess more than once. Volunteer C will record the response. Repeat for cup B, cup C, and cup D. To ensure accurate results, Volunteer A should always present the cups in the order A to D (from left to right in the muffin tin).

5. While Volunteer A carries out step 4, Volunteer C will record the tasters' responses on the Tasting Response Data Sheet. Be sure to record the taster number. Only the original guess will be counted. Again, this is not a comparison test. If the tasters insist that you change a guess after tasting subsequent samples, write their second guess in the comments column followed by the letter of the sample. Do not change the original response. Any comments such as "They all taste the same" or "I like them all," should also be noted in the comments column.

After the tasters finish tasting all the milk samples, Volunteer C should briefly discuss the results with them. This is a terrific opportunity to talk to participants about the importance of good nutrition and encourage them to switch to either 1% or fat free milk. Focus first on the taste of the milk. Determine the lowest fat milk the tasters liked and encourage them to switch to it if it is 1% or fat free milk. If the lowest fat milk that the tasters liked was 2% or whole, suggest that they wean themselves to a lower fat milk to decrease their chance of developing heart disease. Stress that switching the type of milk they drink is one of the easiest things they can do to take control of their health.



Examples of responses follow*

* If the tasters could not tell the difference between the milks or said they liked the taste of fat free:

Suggest that they switch to fat free milk. It has all the vitamins and calcium of whole or 2% milk without all the artery-clogging saturated fat. If it is the appearance of fat free milk that bothers them, point out that getting past the appearance would allow them to make this simple change that would significantly improve their health.

* If that tasters liked the taste of 1% milk:

Point out that 1% and fat free milk are the only low fat milks. 2% milk is not low fat as it does not meet the government's definition of low fat (less than 3 grams of fat per serving, 2% has 5 grams of fat per serving).

Suggest that they switch to 1% milk. It is much lower in fat and cholesterol than whole or 2% milk. Note: fat free milk is even better. 1% milk still gets 20% of its calories from fat, while fat free milk has virtually no fat (fat free milk contains less than half a gram of fat per serving).

* For those concerned about weight:

Point out that whole milk is one of the top 5 sources of calories for adults. Fat free milk has 40% fewer calories than

whole milk. (Whole milk has 160 calories per cup and fat free milk only has 90).

* If the tasters only like 2% or whole milk:

Use the food label to point out that one cup of whole milk has one quarter of their day's budget for artery-clogging saturated fat and that saturated fat is major contributor to heart disease.

Recommend that they gradually work their way down by first switching to 2% milk for a month. Once they become used to 2% milk, then they should switch to 1%.

Point out that 2% milk is not low fat—it does not meet the government's definition of a low fat product (less than 3 grams of fat per serving; one cup of 2% milk has 5 grams of fat).

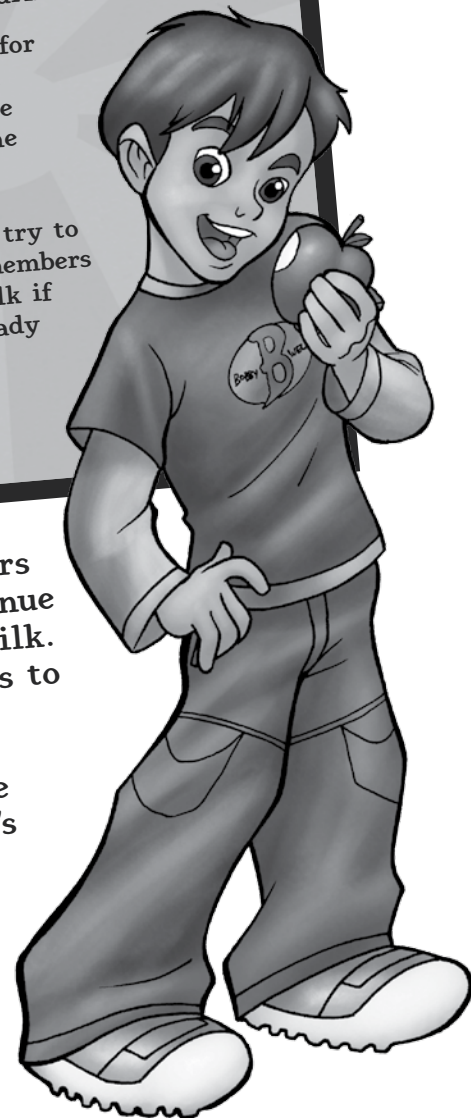
* If the tasters already drink fat free milk:

Congratulate them for doing their heart a favor and encourage them to keep up the good work.

Suggest that they try to get other family members to try fat free milk if they are not already drinking it.

Finally, Volunteer C should ask the tasters if they are willing to switch to (or continue drinking) either 1% low fat or fat free milk. Record their responses as "Taster pledges to switch to: ..."

Volunteers should carefully clean up the testing site upon completion of the day's taste tests. Be sure not to leave any garbage lying around. Stop by the school office or other site's manager's office to let them know when you are finished and to thank them for letting you conduct a taste test in their facility.



Pre-Test Questionnaire

Taster # _____

Age of taster: _____

Milk taster usually drinks:

- Fat Free (Skim) Low Fat (1%)
- Reduced Fat (2%) Whole (Regular)
- Other _____

How often?

- Daily Weekly
- Monthly Never

If daily, cups per day: _____



Tasting Preparation Sheet

Volunteer B

| Taster # | Sample A | Sample B | Sample C | Sample D |
|----------|------------------|------------------|------------------|------------------|
| 1 | Fat Free (Skim) | Reduced Fat (2%) | Low Fat (1%) | Whole (Regular) |
| 2 | Reduced Fat (2%) | Low Fat (1%) | Whole (Regular) | Fat Free (Skim) |
| 3 | Whole (Regular) | Low Fat (1%) | Reduced Fat (2%) | Fat Free (Skim) |
| 4 | Low Fat (1%) | Reduced Fat (2%) | Fat Free (Skim) | Whole (Regular) |
| 5 | Whole (Regular) | Fat Free (Skim) | Low Fat (1%) | Reduced Fat (2%) |
| 6 | Reduced Fat (2%) | Low Fat (1%) | Whole (Regular) | Fat Free (Skim) |
| 7 | Fat Free (Skim) | Low Fat (1%) | Reduced Fat (2%) | Whole (Regular) |
| 8 | Low Fat (1%) | Reduced Fat (2%) | Whole (Regular) | Fat Free (Skim) |
| 9 | Reduced Fat (2%) | Whole (Regular) | Fat Free (Skim) | Low Fat (1%) |
| 10 | Low Fat (1%) | Fat Free (Skim) | Reduced Fat (2%) | Whole (Regular) |
| 11 | Fat Free (Skim) | Whole (Regular) | Low Fat (1%) | Reduced Fat (2%) |
| 12 | Whole (Regular) | Reduced Fat (2%) | Low Fat (1%) | Fat Free (Skim) |
| 13 | Reduced Fat (2%) | Whole (Regular) | Fat Free (Skim) | Low Fat (1%) |
| 14 | Whole (Regular) | Reduced Fat (2%) | Low Fat (1%) | Fat Free (Skim) |
| 15 | Low Fat (1%) | Whole (Regular) | Fat Free (Skim) | Reduced Fat (2%) |
| 16 | Fat Free (Skim) | Reduced Fat (2%) | Low Fat (1%) | Whole (Regular) |
| 17 | Fat Free (Skim) | Whole (Regular) | Low Fat (1%) | Reduced Fat (2%) |
| 18 | Whole (Regular) | Low Fat (1%) | Reduced Fat (2%) | Fat Free (Skim) |
| 19 | Low Fat (1%) | Fat Free (Skim) | Whole (Regular) | Low Fat (1%) |
| 20 | Fat Free (Skim) | Reduced Fat (2%) | Whole (Regular) | Whole (Regular) |
| 21 | Low Fat (1%) | Reduced Fat (2%) | Fat Free (Skim) | Whole (Regular) |
| 22 | Fat Free (Skim) | Reduced Fat (2%) | Low Fat (1%) | Fat Free (Skim) |
| 23 | Low Fat (1%) | Reduced Fat (2%) | Whole (Regular) | Whole (Regular) |
| 24 | Fat Free (Skim) | Reduced Fat (2%) | Low Fat (1%) | Reduced Fat (2%) |
| 25 | Fat Free (Skim) | Whole (Regular) | Low Fat (1%) | Whole (Regular) |
| 26 | Low Fat (1%) | Fat Free (Skim) | Reduced Fat (2%) | Reduced Fat (2%) |
| 27 | Low Fat (1%) | Whole (Regular) | Fat Free (Skim) | Fat Free (Skim) |
| 28 | Reduced Fat (2%) | Low Fat (1%) | Whole (Regular) | Fat Free (Skim) |
| 29 | Low Fat (1%) | Reduced Fat (2%) | Reduced Fat (2%) | Fat Free (Skim) |
| 30 | Whole (Regular) | Low Fat (1%) | Fat Free (Skim) | Low Fat (1%) |
| 31 | Reduced Fat (2%) | Whole (Regular) | Reduced Fat (2%) | Whole (Regular) |
| 32 | Fat Free (Skim) | Low Fat (1%) | Whole (Regular) | Reduced Fat (2%) |
| 33 | Low Fat (1%) | Fat Free (Skim) | Low Fat (1%) | Fat Free (Skim) |
| 34 | Fat Free (Skim) | Whole (Regular) | Whole (Regular) | Reduced Fat (2%) |
| 35 | Reduced Fat (2%) | Low Fat (1%) | Low Fat (1%) | Fat Free (Skim) |
| 36 | Whole (Regular) | Reduced Fat (2%) | Low Fat (1%) | Fat Free (Skim) |
| 37 | Whole (Regular) | Low Fat (1%) | Reduced Fat (2%) | Low Fat (1%) |
| 38 | Fat Free (Skim) | Reduced Fat (2%) | Whole (Regular) | Reduced Fat (2%) |
| 39 | Low Fat (1%) | Whole (Regular) | Fat Free (Skim) | Fat Free (Skim) |
| 40 | Low Fat (1%) | Reduced Fat (2%) | Whole (Regular) | Fat Free (Skim) |



Volunteer C

Tasting Response Data Sheet



| | | | |
|--|--|--|--|
| Taster # _____ | | | |
| <p>Sample A</p> <p><input type="checkbox"/> Liked <input type="checkbox"/> Disliked</p> <p>Taster thinks sample is:</p> <p><input type="checkbox"/> Fat Free (Skim) <input type="checkbox"/> Low Fat (1%) <input type="checkbox"/> Reduced Fat (2%) <input type="checkbox"/> Whole (Regular)</p> | <p>Sample B</p> <p><input type="checkbox"/> Liked <input type="checkbox"/> Disliked</p> <p>Taster thinks sample is:</p> <p><input type="checkbox"/> Fat Free (Skim) <input type="checkbox"/> Low Fat (1%) <input type="checkbox"/> Reduced Fat (2%) <input type="checkbox"/> Whole (Regular)</p> | <p>Sample C</p> <p><input type="checkbox"/> Liked <input type="checkbox"/> Disliked</p> <p>Taster thinks sample is:</p> <p><input type="checkbox"/> Fat Free (Skim) <input type="checkbox"/> Low Fat (1%) <input type="checkbox"/> Reduced Fat (2%) <input type="checkbox"/> Whole (Regular)</p> | <p>Sample D</p> <p><input type="checkbox"/> Liked <input type="checkbox"/> Disliked</p> <p>Taster thinks sample is:</p> <p><input type="checkbox"/> Fat Free (Skim) <input type="checkbox"/> Low Fat (1%) <input type="checkbox"/> Reduced Fat (2%) <input type="checkbox"/> Whole (Regular)</p> |
| Comments: | Comments: | Comments: | Comments: |
| Taster pledges to switch to: | | | |

Modified from the Centers for Science in the Public Interest - 1% or Less campaign.

Concept developed by: Center for Science in the Public Interest

This material was funded by USDA's Food Stamp Program. The Food Stamp Program provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. To find out more, contact 1-800-352-8401.

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Arizona Nutrition Network



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