

# Donairs, Shawarmas and Similar Products

## Guideline for the Safe Preparation and Serving of Donairs, Shawarmas and Similar Products

Prepared by:  
Food Protection Services  
BC Centre for Disease Control

In Collaboration with the:  
BC Ministry of Health and the  
Five Regional Health Authorities:  
Vancouver Coastal, Fraser, Interior,  
Northern and Vancouver Island

Contact: 604.707.2440

June 2012



**BC Centre for Disease Control**  
An agency of the Provincial Health Services Authority

## TABLE OF CONTENTS

|   |   |
|---|---|
| PURPOSE .....   | 1 |
| INTRODUCTION.....   | 1 |
| GUIDELINE.....  | 2 |
| REFERENCES.....   | 3 |
| DEVELOPING A FOOD SAFETY PLAN .....                             | 4 |
| I.    Questions to ask while meeting with Donair Operator ..... | 4 |
| II.   Sample Food Safety Plan.....                              | 5 |
| III.  Blank Food Safety PlanTemplate .....                      | 6 |

## PURPOSE

This guideline identifies:

1. procedures required to ensure that donairs are prepared safely in food service establishments, and
2. inclusion of a minimum 2-step (or secondary) cooking process and temperatures specified for donair cones.

## INTRODUCTION

In Canada, donairs, shawarmas and similar products are usually made from beef, though chicken and lamb donairs are also common. The first type of product (commonly referred to as donairs) is made from ground meat that is formed into a cone shape and frozen. The second type of product (commonly referred to as shawarmas) is made from thin or whole cuts of meat that are marinated before being stacked on a vertical skewer. For the purposes of this guideline, all of these products are collectively referred to as donairs.

The hazards associated with these types of products are considered similar because thin layers of sliced meats stacked on top of one another have increased surface areas resembling that of ground product. As a result of this type of preparation, pathogens may be introduced throughout all areas of the meat, and the unique slow, extended cooking process on the vertical broiler may further contribute to the potential microbial hazards of the raw product.

There have been at least 4 documented *E. coli* O157:H7 outbreaks associated with the consumption of donairs in Canada since 2004 (Health Canada, 2008). In these outbreaks, inadequate cooking led to the survival of pathogens in the sliced meat. Failure in the cooking process, insufficient cooking time or slicing too deeply into the meat cone, resulted in the serving of undercooked meat slices.

Under a risk-based food safety plan, the cooking step is typically the critical control point. This guideline identifies the procedures required to ensure that donairs are prepared safely in food service establishments.



Photos: (Left) Donair cone, (Centre) Chicken Shawarma, (Right) Donair

## GUIDELINE

1. All meat must be obtained from approved sources.
2. Freshly prepared meat cones should be frozen immediately after preparation and kept frozen until ready for cooking.
3. Frozen meat cones should be removed from the freezer, and placed directly on the rotating vertical broiler.
4. Once the exterior of the meat cone is cooked, this outside layer of meat (approximately ¼ inch or 0.6 centimeters) may be sliced off using a clean, sanitized knife.
5. The cone should be cooked continuously, even when slicing. **A food handler must not turn off the broiler to slow down the cooking of the cone.**
6. Portions of meat sliced from the meat cone **MUST** undergo a secondary cook step prior to serving to ensure that sliced meat has been fully cooked.

|               |                                      |          |                                      |
|---------------|--------------------------------------|----------|--------------------------------------|
| Beef or Lamb: | 71°C (160°F) for at least 15 seconds | Poultry: | 74°C (165°F) for at least 15 seconds |
|---------------|--------------------------------------|----------|--------------------------------------|

**Secondary cook steps can include:** the use of grills, ovens, or any other method approved by your district Environmental Health Officer.

7. The food establishment must have a suitable thermometer for confirming and measuring the effectiveness of the secondary cook step. For thinly sliced portions of food this means a probe thermometer with a thin tipped sensor designed for this application.
8. Following the secondary cooking step the sliced meat should be either:
  - a) used immediately to prepare donairs, or
  - b) stored in a hot holding unit at 60°C (140°F) or hotter, or
  - c) cooled quickly to 4°C (40°F) or colder for storage.

Cool from 60°C (140°F) to 20°C (68°F) or colder within 2 hours, and then from 20°C (68°F) to 4°C (40°F) or colder within 4 hours. (Canadian Food Inspection System, 2004)

9. At the end of the business day, partially cooked cones **MUST NOT** be kept intact for future use. Food handlers may:
  - a) Slice the cone down to the frozen layer, wrap the frozen portion of cone in food-grade material, and store in the freezer until the next day. Sliced portions of meat should then be fully cooked (as per step 6) and transferred into food-grade containers for cooling and storage in a cooler or freezer (as per step 8c). **If the leftover cone is not used up on the second day of cooking, then it must be discarded at the end of the second day; OR**

- b) Continue the cooking and slicing process on the vertical broiler until the entire cone has been sliced. A secondary cook step is used to ensure that the sliced portions have been fully cooked (as per step 6). Cooked product should then be transferred into food-grade containers for cooling and storage in a cooler or freezer (as per step 8c), OR
- c) Discard remaining cone.

**10.** The secondary cooking process and end of day requirements must be documented in the establishment's Food Safety Plan.

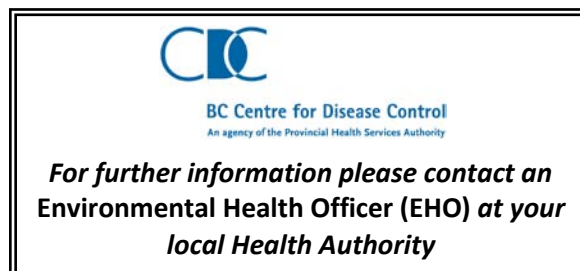
## REFERENCES

Health Canada. May 2008. *Management of the Risks Related to Consumption of Donairs and Similar Products (Gyros, Kebabs, Chawarmas and Shawarmas)*. Accessed on November 17, 2008 at:

[http://www.hc-sc.gc.ca/fn-an/legislation/guide-ld/manage\\_ris\\_donair-eng.php](http://www.hc-sc.gc.ca/fn-an/legislation/guide-ld/manage_ris_donair-eng.php)

Canadian Food Inspection System. 2004. *Food Retail and Food Services Code*. Accessed on March 31, 2010 at:

<http://www.cfis.agr.ca/english/regcode/frfsrc-amendmts/codeang-2004.pdf>



## DEVELOPING A FOOD SAFETY PLAN

### *1. Questions to ask while meeting with Donair Operator*

The answers will assist your operator in developing the food safety plan for their donair product.

1. Tell me about your donair cones (i.e. purchased from approved source? Frozen? Already fully cooked? Size of cones? Rate of use?
2. [skip this question if cones are purchased] Are cones made fresh on premise? Describe your process in making the cones (raw materials to storage to cooking; hand-formed or molded?).
3. Describe your cooking process?
4. How do you know when the donair is cooked? (Do you measure temperature? How? What temperature(s) do you cook the meat to?)
5. Do you use a secondary cook step for the sliced meat? If so, how do you heat the slices? Describe your process.
6. Describe how you established your secondary cook process. How often do you check that the process cooks the slices to the proper temperature?
7. Do you have leftovers at the end of the day? Describe how you handle and store the leftover cone. How many times is the leftover cone re-used?

**NOTE:**      *Template on last page can be used to document the Food Safety Plan for Donairs. The “.dot” format will allow text to be entered directly into the table.*

## II. Sample Food Safety Plan

Product Name: Delicious Donairs

Date: Jan.29/09

Approved by: J. Cookwell

| HAZARD DESCRIPTION                  | CCP? | REASON(S):                          | CRITICAL LIMITS:  | MONITORING PROCEDURES:  | CORRECTIVE ACTIONS:   | RECORDS   |
|-------------------------------------|------|-------------------------------------|---|---|---|---|
| Receiving                           | No   | Contamination<br>Pathogen<br>Growth | Approved Supplier<br>Refrigerated products: 4°C or less<br>Frozen products: 0°C or less (or hard frozen)                | Inspect product for signs of damage or thawing  | Reject product if damaged, or if it does not meet temperature limits.   | Record comments and lot code(s) on shipping invoice                           |
| Storage                             | No   | Pathogen<br>Growth                  | Coolers: Maintain temperature of 4°C or less.<br>Freezers: Maintain temperature of -18°C or less for best quality.      | Check cooler and freezer temperatures 4 times daily   | Lower temperature setting and recheck temperature after 1 hour.<br>Transfer food to another unit. Discard food if above 4°C for more than 2 hours<br>Call for service | Record on cooler / freezer log sheet<br>Record comments in daily comments log |
| Preparation                         | No   | Contamination                       | Clean and sanitized work surfaces and utensils  | Visual inspection   | Clean and sanitize as required  |   |
| Cooking                             | No   | Pathogen<br>Survival                | <u>Beef or Lamb</u> : 71°C for 15 sec<br><u>Chicken</u> : 74°C for 15 sec   | Cut thin slices of meat from the cone using a clean, sanitized knife. Slices should appear cooked; no raw juices. | Continue cooking before slicing cone.   |   |
| Secondary Cooking                   | Yes  | Pathogen<br>Survival                | <u>Beef or Lamb</u> : 71°C for 15 sec<br><u>Chicken</u> : 74°C for 15 sec   | Hourly: check internal temperature of grilled slices with clean and sanitized thermometer.                        | Continue cooking as required.<br>Increase grill temperature and/or cooking time to meet requirements  |   |
| Product Assembly                    | No   | Contamination                       | Clean utensils and good hygiene practices   | Ensure food preparation utensils and surfaces are clean   | Clean and sanitize as required  |   |
| Cooling Leftover Cone               | Yes  | Pathogen<br>Growth                  | <u>Cooling Rate</u> : 60°C to 20°C within 2 hours, then 20°C to 4°C within 4 hours (total cooling time 6 hours or less) | Follow end of day cooling procedure.  | Discard if time/temperature standards not met   | Record on cooling chart   |
| Cooking (2 <sup>nd</sup> day)       | No   | Pathogen<br>Survival                | <u>Beef or Lamb</u> : 71°C for 15 sec<br><u>Chicken</u> : 74°C for 15 sec   | Hourly: check internal temperature of grilled slices with clean and sanitized thermometer.                        | Continue cooking until cone is ready to slice   |   |
| Secondary Cooking                   | Yes  | Pathogen<br>Survival                | <u>Beef or Lamb</u> : 71°C for 15 sec<br><u>Chicken</u> : 74°C for 15 sec   | Ensure food preparation utensils and surfaces are clean   | Continue cooking as required.<br>Increase grill temperature and/or cooking time   |   |
| Leftover Cone (2 <sup>nd</sup> day) | No   | Pathogen<br>Growth                  | <u>Cone can be used for only 2 cooking cycles</u>   | Identify cones that are on second day of cooking.   | Discard cone after 2 <sup>nd</sup> cooking cycle  | Record on waste sheet   |

