
TABLE OF CONTENTS

PREFACE	1
LIST OF PUBLICATIONS	3
SUMMARY	5
SAMMENDRAG (DANISH SUMMARY)	7
LIST OF ABBREVIATIONS	9
TABLE OF CONTENTS	11
1. INTRODUCTION	13
1.1 THESIS DELIMITATION	14
2. BACKGROUND	15
2.1 ATHEROSCLEROSIS, LIPID METABOLISM AND CVD RISK MARKERS	15
2.1.1 Atherosclerosis	15
2.1.2 Lipoproteins	16
2.1.3 Lipoprotein metabolism	17
2.1.4 CVD risk markers	20
Lipoproteins as CVD risk markers	20
2.1.5 Other CVD risk markers	22
Blood pressure	22
PAI-1	23
hcCRP	23
2.2 INSULIN RESISTANCE, HYPERGLYCEMIA AND T2D	24
2.2.1 T2D risk markers	25
2.3 DIETARY FAT AND TYPE OF FATTY ACIDS AND EFFECT ON RISK OF CVD AND T2D	25
2.4 BUTTER AND MILK AND THE NUTRITIONAL COMPOSITION	27
2.4.1 Butter intake and production	28
2.4.2 Milk intake and production	29
2.5 INTAKE OF BUTTER AND RISK OF CVD AND T2D	30
2.5.1 Human intervention studies on butter intake and risk markers of CVD and T2D	30
2.5.2 Prospective cohort studies on butter consumption and CVD risk	31
2.5.3 Prospective cohort studies on butter consumption and risk of T2D	35
2.6 INTAKE OF MILK AND RISK OF CVD AND T2D	37
2.6.1 Human intervention studies on milk intake and risk markers of CVD and T2D	37
2.6.2 Prospective cohort studies on milk intake and CVD risk	38
2.6.3 Prospective cohort studies on milk intake and risk of T2D	42
3. OVERALL AIM, RESEARCH QUESTIONS AND HYPOTHESES	47
4. METHODS AND RESULTS	49
4.1 SUMMARY	49

5. DISCUSSION.....	53
5.1 EFFECT OF BUTTER AND MILK ON RISK MARKERS OF CVD AND T2D	53
5.1.1 Fasting blood lipids	53
5.1.2 Insulin sensitivity.....	56
5.1.3 Dairy and hypertension and PAI-1 levels.....	58
5.1.4 Dairy and the inflammatory marker hsCRP.....	59
5.2 DAIRY MATRIX	59
5.3 FAT-SOLUBLE VITAMINS AND DAIRY FAT.....	61
5.4 EFFECT OF DAIRY EXAMINED AS WHOLE FOODS OR AS CHANGES IN MACRONUTRIENTS.....	62
5.5 METHODOLOGICAL CONSIDERATIONS	63
5.5.1 Study design	63
5.5.2 Study subjects.....	64
5.5.3 Test foods.....	65
5.5.4 Dietary records.....	65
5.5.5 Dietary compliance	66
6. CONCLUSIONS AND PERSPECTIVES	67
7. ACKNOWLEDGEMENTS.....	71
8. REFERENCES	73
APPENDIX PAPER I-III.....	103