$OFRKRO DQG +HDOWK LQ &DQDGD

$ 6XPPDU\ RI (YLGHQFH DQG *XLGHOLQ
/RZ 5LVN 'UL^ì„u ,!1vìÓU 'RXJ %HL

'U /RXLV *OLNVPDQ
&HQWUH IRU $GGLFWLRQ

'U &DWKHULQH 3DUDGLV
&DQDGLDQ &HQWUH RQ 6XEVWDQFH $EXVH

'U 7LP 6WRFNZHOO
&HQWUH IRU $GGLFWLRQV 5HVHDUFK RI % &

'LVFODLPHU YLHZV H[SUHVVHG LQ WKLV GRFXPHQW DUH WKRVH RI WK
EURDGHU DJUHHPHQW RU DSSURYDO E\ WKHLU HPSOR\LQJ RU KRVW L

&RPSOHWHG 1RYHPEHU DQG SXEOLVKHG 1RYHPEHU

$FNQRZOHGJHPHQWV

7KH DXWKRUV DUH LQGHEWHG WR WKH IROORZLQJ RUJDQL]DWL
IHHGEDFN UHFHLYHG LQ UHVSRQVH WR DQ HDUOLHU FRQVXOW

$OEHUWD +HDOWK DQG :HOOQHVV
%UHZHU $VVRFLDWLRQ RI &DQDGD
%ULWLVK &ROXPELD 0LQLVWU\ RI +HDOWK\ /LYLQJ DQG 6SRUW
&DQDGLDQ $VVRFLDWLRQ RI &KLHIV RI 3ROLFH
&DQDGLDQ $VVRFLDWLRQ RI /LTXRU -XULVGLFWLRQV
&DQDGLDQ &HQWUH RQ 6XEVWDQFH $EXVH
&DQDGLDQ 9LQWQHUV $VVRFLDWLRQ
&HQWUH IRU $GGLFWLRQ DQG 0HQWDO +HDOWK
&HQWUH IRU $GGLFWLRQV 5HVHDUFK RI %ULWLVK &ROXPELD
'U /RXLVH 1DGHDX
eGXF DOFRRO
+HDOWK &DQDGD
0$'' &DQDGD
1DWLRQDO 1DWLYH $GGLFWLRQ 3DUWQHUVKLS)RXQGDWLRQ
1RYD 6FRWLD 'HSDUWPHQW RI +HDOWK 3URPRWLRQ DQG 3URW
3XEOLF +HDOWK $JHQF\ RI &DQDGD
6SLULWV &DQDGD ± $VVRFLDWLRQ RI &DQDGLDQ 'LVWLOOHUV
7KH 6WXGHQW /LIH (GXFDWLRQ &RPSDQ\
<XNRQ /LTXRU &RUSRUDWLRQ

7KH DXWKRUV DOVR ZLVK WR WKDQN WKH &DQDGLDQ &HQWUH
SURYLGLQJ WUDYHO FRVWV H[SHQVHV D YHQXH DQG D ILUVW
ZRUN &DURO\Q)UDQNOLQ KRVWHG WKH PHHWLQJ DQG HKDOI
FRRUGLQDWHG IDFLOLWDWHG DQG SURYLGHG D VHFUHWDULDO
D SHULRG RI VHYHUDO PRQWKV 7KH DXWKRUV RZH KHU D KXJH
SURFHVV HQMR\DEOH FRQJHQLDO DQG FRQVWUXFWLYH :H WK
UHYLHZHUV HDFK GUDZQ IURP GLIIHUHQW FRQWLQHQWV RI WK
SHUVSHFWLYHV DQG VSHFLDO H[SHUWLVH LQ DOFRKRO HSLGHI
:RUNLQJ *URXS DOVR DFNQRZOHGJHV ZLWK WKDQNV WKH KHOS
SUHSDUDWLRQ DQG SUHVHQWDWLRQ RI VRPH RI WKH WDEOHV

5HFRPPHQGHG *XLGHOLQHV 'URSSLQJ

*XLGHOLQH 'R QRW GULQN LQ VLWXDWLRQV	:KHQ RSHUDWLQJ DQ\ NLQG RI PHGLFDO VSRUWV RU RWKHU SRWHQWLDOO\ GDQ PDNLQJ LPSRUWDQW SUHJQDQW EHIRUH VXSHUYLVLRQ RI RWKHUV LI VXIIHULQJ PHQWDO LOOQHVV RU DOFRKRO GHSHQ
*XLGHOLQH ,I \RX GULQN ***term*** KHDOWK ULVN ZLWKLQ	:RPHQ ± VWDQGDUG 1R PRUH WKDQ SHU ZHHN $OZD\V KDYH WROHUDQFH DQG KDELW XSSHUVO GD\R QRW H[FHHG WKH GDLO\ OLPLWV 0HQ ± VWDQGDUG 1R PRUH WKDQ GULQNV SHU ZHHN GD\V SHU ZHHN RU

7DEOH RI &RQWHQWV (continued)

7RZDUGV D &XOWXUH RI 0RGHUDWLRQ

&RPSDULVRQV ZLWK RWKHU *XLGHOLQHV

5HFRPPHQGDWLRQV IRU)XWXUH 5HVHDUFK

5HFRPPHQGDWLRQV IRU WKH &RPPXQLFDWLRQ RI WKH *XLGHOLQHV

5HIHUHQFHV

$SSHQGLFHV

In the sixth century AD, Saint Benedict (as cited by Verheyen, 1949) recommended that members of his order restrict themselves to "one hemina" of wine per day (about half a litre of wine with a lower alcohol content than is usual today). In modern times, guidelines for low-risk drinking have been published by different authorities in a number of countries and make a variety of recommendations. There is some evidence of a trend towards lower recommended limits over time (National Health and Medical Research Council, 2008). In Canada, there has also been diversity in the levels recommended between provinces, perhaps reflecting different cultural attitudes towards alcohol. Appendix 2 provides a summary of guidelines that have been adopted in Ontario, British Columbia, QuØbec and the Atlantic provinces in recent years. It is hoped that the guidelines established in this document will be adopted by all Canadian jurisdictions and that they will be reviewed periodically as new evidence emerges.

Dr. Jür gen Rehm and his colleagues at the Centre for Addiction and Mental Health and the University of Toronto have developed a comprehensive database of studies published worldwide. This database provides quantified estimates of the risk of suffering a variety of illnesses and injuries with a known causal connection to alcohol consumption. Employing alcoholic drink sizes applicable to Canada (13.45 g of pure alcohol in a standard drink, see next section), this database was used to prepare estimates of daily levels of average alcohol intake for the risk of one of these outcomes in comparison to t j

/HYHO RI DOFRKRO FRQVXPSWLRQ LV GHVFULEHG LQ WKLV GRF
&DQDGLDQ ***standard drinks*** FRQVXPHG LQ D GD\ 7KHVH UHIHU WR TXDQW
DOFRKROLF EHYHUDJHV WKDW DOO FRQWDLQ URXJKO\ WKH VD
RU PLOOLOLWUHV RI SXUH DOFRKRO VHH EHORZ ,Q SUDFW
DPRXQW RI DOFRKRO WKDW LV VHUYHG LQ GLIIHUHQW VLWXDW
DQG RQ OLFHQVHG SUHPLVHV .HUU HW DO EHFDXVH RI E
DQG DOFRKROLF VWUHQJWK $V ZLOO EH GLVFXVVHG ODWHU
XQGHUUHSRUWLQJ RI DOFRKRO FRQVXPSWLRQ ZKHQ DVVHVVH

'HILQLWLRQV RI KHDOWK RXWFRPHV
Short-term or ñacuteò effects IURP GULQNLQJ DUH DVVRFLDWHG RQH RFFDVLRQ DQG WKH GHJUHH RI LPSDLUPHQW
Long-term or ñchronic effectsò IURP GULQNLQJ DUH DVVRFLDWHG DOFRKRO FRQVXPSWLRQ WKHP DQG UHVXOW IURP LW QHUYRXV DQG GLJHVWLYH V\VWHPV
Mortality UHIHUV WR IDWDO RXWFRPHV WKDW PD\ EH FD
Morbidity UHIHUV WR LOOQHVVHV DQG LQMXULHV WK
All-cause mortality UHIHUV WR GHDWK IURP DOO FDXVHV L SURYHQ FDXVDO DVVRFLDWLRQ ZLWK GULQNLQJ
Lifetime abstainer LV D SHUVRQ ZKR KDV QHYHU KDG HYHQ

0RVW RI WKH VFLHQWLILF VWXGLHV FRQFHUQLQJ ULVN IURP G
DJDLQVW GLIIHUHQW NLQGV RI KHDOWK RXWFRPHV L H GLIIH
7KHVH FDQ EH EURDGO\ GLYLGHG LQWR VWXGLHV WKDW ORRN
GLIIHUHQW FDXVHV RI ***mortality*** RU GHDWK RU WKH OLQN EHWZHHQ GULQN
FDXVHV RI QRQ IDWDO ***morbidity*** XVXDOO\ QRW VR FDVH PRUWDO
PRUELGLW\ RXWFRPHV FDQ EH IXUWKHU GLYLGHG EURDGO\ LQ
short-term or acute HIIHFWV RI GULQNLQJ DVVRFLDWHG ZLWK LQWR[L
RYHUGRVHV DFXWH LQMXULHV DQG ***long-term or chronic*** HIIHFWV RI GULQNLQJ RYHU P
\HDUV H J OLYHU GLVHDVH FHUWDLQ FDQFHUV $ VPDOO QX
TXDQWLI\ WKH OHYHO RI FRQVXPSWLRQ DW ZKLFK VRFLDO FRQ
OLNHO\ WR RFFXU H J UHODWLRQVKLS ZRUN DQG OHJDO SU
FRQVLGHUHG WKRXJK LW LV KDUGHU WR TXDQWLI\ SUHFLVH O

WKHVH RXWFRPHV EHFDXVH RI WKH PDQ\ RWKHU IDFWRUV WKD
FRQVHTXHQFHV RI GULQNLQJ

$ NH\ FRQFHSW XVHG LQ WKLV VHFWLRQ LV *all-cause mortality*. LQ WKLV VWXGB WKLV IRUP DO
FDXVHV %HFDXVH WKH VDPH OHYHO RI GULQNLQJ KDV EHHQ I
EHQHILWV DQG KDUPV IRU PLGGOH DJHG DQG ROGHU DGXOWV
EHWZHHQ WKHVH LV WR DVVHVV ULVN RI G\LQJ IURP DQ\ FDXV
FRQVXPSWLRQ 0RVW EXWOOQHDXVHOPRVWXGLHV RULQG D µ- VKDS
VXFK WKDW OLJKW DQG PRGHUDWH GULQNHUV KDYH D ORZHU
DEVWDLQHUV DQG KHDY\ GULQNHUV WKH ODWWHU EHLQJ DW
7KHVH *XLGHOLQHV ZLOO DWWHPSW WR LGHQWLI\ OHYHOV RI
WKH VDPH ULVN RI SUHPDWXUH GHDWK DV WKDW RI OLIHWLPH

'ULQNLQJ 3DWWHUQV

7KH SHU FDSLWD FRQVXPSWLRQ RI DOFRKRO LQ &DQDGD KDV
DQG PRUH TXLFNO\ LQ VRPH SURYLQFHV WKDQ RWKHUV 6WDW
+LGGHQ EHKLQG WKHVH QDWLRQDO VWDWLVWLFV KRZHYHU D
SDWWHUQV RI GULQNLQJ HDFK RI ZKLFK KDYH GLIIHUHQW LPS
ZHOO EHLQJ²ERWK LQ WKH VKRUW DQG ORQJ WHUP 'LIIHUHQ
GLIIHUHQWLHQWLFHVQJZRQKHYDUHQFHV IRU WKHLU KHDOEH ð 'LDI

&DQDGLDQ $OFRKRO DQG 'UXJ 8VH 0RQLWRULQJ 6XUYH\ &$'80

DQQXDO LQWDNH)LQDOO\ LQ 4XpEHF 2QWDULR DQG %ULWLV
DOFRKRO KDYH D PRUH µ0HGLWHUUDQHDQ¶ VW\OH WKH\ GULQ
GULQN VSLULWV OHVV RIWHQ DQG GRQ¶W JURXS GULQNLQJ RHUVRQDOLWLHV RI WHQQHVVHH DQG &DQDGD $FURVV DOO DJH DQG JHQGHU JURXSV WKHUH ZDV
GULQNLQJ IUHTXHQF\ DQG GULQNLQJ H[SHFWDQF\ 3DUWLFLSDQWV H
PHQ ZKR GUDQN DW OHDVW ILYH GD\V D ZHHN ZHUH VHYHQ WL
GULQNLQJ DW OHDVW RQFH D ZHHN WKDQ WKRVH ZKR RQO\ GU
ORZ ULVN GULQNLQJ LV TXLWH UDUH LQ &DQDGD

:KHQ &RPSOHWH $EVWLQHQFH LV 8VXDOO\ 5HFRPPHQGHG

7KH *XLGHOLQHV IRU /RZ 5LVN 'ULQNLQJ DUH LQWHQGHG WR S
LQIRUPDWLRQ WKH\ UHTXLUH WR PLQLPL]H WKH ULVNV DVVRFL
EHYHUDJHV 7KHUH DUH PDQ\ ZKR FKRRVH WR DEVWDLQ IURP D
VSLULWXDO KHDOWK RU RWKHU UHDVRQV ZKHWKHU RU QRW WKRVH GHFLVLRQV DUH
DQG DUH QRW LQWHQGHG WR HQFRXUDJH SHRSOH ZKR GULQN
HQFRXUDJH SHRSOH0pX pp0@PHULVN DWP @0U
@ €@ÀV V R IQ€LQ H
L@ €@

$OFRKRO DQG GULYLQJ

'ULYLQJ D PRWRU YHKLFOH LV D FRPSOH[WDVN WKDW UHTXLU
DQG PRWRU VNLOOV DOO RI ZKLFK PXVW EH FRRUGLQDWHG $
WKH DELOLW\ WR SHUIRUP WKHVH VNLOOV DQG DELOLWLHV 7K
DQG WKH ULVN RI WUDIILF FUDVK²LQFUHDVHV DV JUHDWHU TX
DQG%$&ULVHV %ORPEHUJ HW DO +LJKHU RUGHU FRJQLWLY
PDNLQJ DQG GLYLGHG DWWHQWLRQ FDQ EH DIIHFWHG DW YHU
GULQNHU LV DZDUH RI WKHP 0RVNRZLW])LRUHQWLQR +
VDIHVW FRXUVH RI DFWLRQ LV WR DYRLG DOFRKRO FRPSOHWH
YHKLFOH LQFOXGLQJ SDVVHQJHU YHKLFOHV VQRZPRELOHV $

7KH &ULPLQDO &RGH RI &DQDGD VWDWHV LW LV DQ RIIHQFH W
LPSDLUHG RU ZLWK D %$& LQ H[FHVV RI PJ RI DOFRKRO SHU
VH[ZHLJKW DPRXQW RI IRRG FRQVXPHG DQG D YDULHW\ RI R
QXPEHU RI GULQNV SHU GD\ VWDWHG LQ WKHVH *XLGHOLQHV \
OLPLW +RZHYHU VRPH SHRSOH PD\ EH LPSDLUHG DW %$&V ZH
UHGXFH WKH DPRXQW RI DOFRKRO FRQVXPHG ,Q IDFW PRVW
OLPLW XVXDOO\ RU PJ/RRI DEORRKGRODQHULVVXH OLFHQFH V
WR GULYHUV IRXQG H[FHHGLQJ WKHVH OLPLWV (YHQ GULQNLQ
RYHU WKHVH ORZHU SURYLQFLDO %$& OLPLWV DQG DW ULVN R
LQYROYHPHQW $V LW LV H[WUHPHO\ GLIILFXOW IRU LQGLYLGXDOV
UHFRPPHQ

0RUHRYHU WKH FRPELQHG XVH RI FRFDLQH ZLWK DOFRKRO DS
NHHS GULQNLQJ IRU ORQJHU WKXV LQFUHDVLQJ ULVNV RI ERW
SRVVLEO\ GHSHQGHQFH %UDFKH HW DO 7KLV LV OLNHO\
VWLPXODQW GUXJV VXFK DV DPSKHWDPLQHV 0L[LQJ DOFRKRO
VXFK DV KHURLQ FDQ VHYHUHO\ GHSUHVV WKH QHUYRXV V\VW
IURP FRQIXVLRQ WR XQFRQVFLRXVQHVV WR GHDWK &RIILQ HW
K\GUR[\EXW\UDWH *+% KDV EHFRPH SRSXODU DPRQJ VRPH \R
HVSHFLDOO\ QLJKWFOXE DQG GDQFH S,DKDV DWWHQGHG\XII
GDQJHURXV VHGDWLYH HIIHFWV WKDW DUH H[DFHUEDWHG ZKH
DQRWKHU GUXJ ZKRVH VHGDWLYH HIIHFW LV HQKDQFHG ZKHQ
KDV VKRZQ WKLV SDUWLFXODU W\SH RI FRPELQDWLRQ PD\ EH
RI PRWRU YHKL\FOH FUDVKHV 5DPDHNHWV

$OFRKRO GHSHQGHQFH
5HJXODU DQG VXVWDLQHG GULQNLQJ DERYH OHYHOV UHFRPPH
XVXDOO\ EH DVVRFLDWHG ZLWK VRPH GHJUHH RI DOFRKRO GH
GHYHORSLQJ D VHYHUH GHJUHH RI GHSHQGHQFH FRPPRQO\ UH
µDGGLF¶WEHQR GHSHQGHQFH V\QGURPH¶ LV GHILQHG LQ WKH
RI 'LVHDVHV 9HUVLRQ :+2 DV

'LDJQRVWLF VLJQV RI DOFRKRO GHSHQGHQFH V\QGURPH H J
FRQWURO RYHU GULQNLQJ SV\FKRSK\VLRORJLFDO VLJQV RI ZL
GULQNLQJ FDQ RFFXU DW PLOG PRGHUDWH DV ZHOO DV VHYH
6WRFNZHOO HW DO :KHQ DQ LQGLYLGXDO KDV EHFRPH YL
FRPSOHWH DEVWLQHQFH LV JHQHUDOO\ FRQVLGHUHG DQ HVVH
WUHDWPHQW SURJUDP 5RVHQEHUJ ,QGLYLGXDOV ZKR DU
DQG KDYH RQO\ PLOG WR PRGHUDWH GHJUHHV RI GHSHQGHQF

FRQWUROOHG GULQNLQJ VRPHWLPHV DIWHU D SHULRG RI DEV
0HOYLOOH

,QGLYLGXDOV YDU\ LQ WKHLU VXVFHSWLELOLW\ WR WKH GHYH
WKHUH LV VWURQJ HYLGHQFH RI JHQHWLF SHUVRQDOLW\ DQG
LQFUHDVH ULVN RI WKLV RXWFRPH -DQRZVN\ HW DO LQ
LPSRUWDQW WKDW VXVFHSWLEOH LQGLYLGXDOV GR QRW H[FH
GULQNLQJ GXULQJ DGROHVFHQFH DV WKHUH LV VWURQJ HYLGH
GULQNLQJ SUHGLVSRVHV WR ODWHU SUREOHP %DUEHU HW DO
7RVVPDQQ

+DUPV DQG %HQHILWV RI $OFRKRO 8VH

6WDWLVWLFV RQ KDUPV FDXVHG E\ DOFRKRO XVH VXJJHVW WK
\RXQJHU DGHV HVSHFLDOO\ WKRVH UHODWHG WR LQMXU\ DQG
\RXQJHU SHRSOH RIWHQ VHHN WR IHHO HQKDQFHG VRFLDELOL
DFFRPSDQLHV OHLVXUH SXUVXLWV ZLWK SHHUV .XQWVFKH HW
EHQHILWV DVVRFLDWHG ZLWK ORZ ULVN GULQNLQJ DUH PRVWO
L H ZKHQ ULVN RI FDUGLDF LOOQHVV EHFRPHV VLJQLILFDQW
\RXQJ DGXOWV RIWHQ FRQVXPH DUH PRVWO\ IDU LQ H[FHVV RI
GULQNLQJ JXLGHOLQHV 6WRFNZHOO HW DO $GDI HW DO
\RXQJ SHRSOH VXFK D SDWWHUQ RI GULQNLQJ PD\ UHVXOW LQ
SK\VLFDO RU YHUEDO ILJKWV DFFLGHQWV PHPRU\ ORVV 6WH
DQG SRLVRQLQJ 5DPVWHG $OFRKROLF SDQFUHDWLWLV DOVR
VHULRXV FRQGLWLRQ FDXVLQJ D QXPEHU RI KRVSLWDOL]DWLR
\HDU 6\PSWRPV PD\ VWDUW ZLWK FRQIXVLRQ VKDOORZ EUHD
OHDGLQJ WR ORVV RI FRQVFLRXVQHVV :KLOH WKH\ E\ QR PHD
WKHVH NLQGV RI ULVNV GHFUHDVH DV WKH\ JHW ROGHU VXFK D
SURSHQVLW\ WR WDNH ULVNV DQG WR PL[VRFLDOO\ LQ EDUV

)URP \HDUV RI DJH DQG RQZDUGV ERWK EHQHILWV DQG KDU
GULQNLQJ /DSLGXV HW DO &DUOVVRQ HW DO 3HWHU
GULQNLQJ UHPDLQV ULVN\ 'L &DVWHOQXYR HW DO &DQ
DUH WKH WRS WZR OHDGLQJ FDXVHV RI GHDWK EHLQJ UHVSR
SHUFHQW RI DOO GHDWKV LQ &DQDGD LQ 6WDWLVWLFV &

7DEOH 3HUFHQWDJH FKDQJH LQ ORQJ WHUP UHODWLYH ULVN SHU GD\ IRU ILYH LOOQHVVHV IRU ZRPHQ DJHG EHORZ \HDUV

7\SH RI ,OOQHVV RU ' LVHDVH	3URSRU RI $OO 'HDWKV ±	3HUFHQWDJH ,QFUHDVH LQ 5LVN =HUR RU 'HFUHDVHG 5LVN WR WR ,QFUHDVHG 5LVN 8S WR WR WR 2YHU 'ULQN 'ULQN ± 'ULQN ± 'ULQN 'ULQN
%UHDVW FDQF +HPRUUKDJLF PURE LGLW	LQ	

RYHUHVWLPDWHG GXH WR XQGHU UHSRUWLQJ RI GULQNLQJ ,Q
DFWXDOO\ GULQN PRUH WKDQ WKH\ DUH UHSRUWLQJ WKH KDU
FRXOG FRQFHLYDEO\ RFFXU DW KLJKHU OHYHOV RI XVH WKDQ
UHOHYDQW VWXGLHV

)DLOXUH WR WDNH DFFRXQW RI KHDY\ GULQNLQJ HSLVRGHV
7KH IUHTXHQF\ RI KHDY\ FRQVXPSWLRQ RFFDVLRQV LQYROYLQ
KDV EHHQ DVVRFLDWHG ZLWK HQKDQFHG ULVN RI DOFRKRO UH
3DO € HW DO 0RUH UHFHQW VWXGLHV UHODWLQJ OHYHO RI DOF

KRZHYHU WKDW WKH JXLGHOLQH OHYHOV UHFRPPHQGHG KHUH
ZLWKLQ WKRVH HVWLPDWHG E\ 'L &DVWHOQXRYR HW DO

,PSRUWDQFH RI 'ULQNLQJ)UHTXHQF\

7KH GLVFXVVLRQ VR IDU KDV FRQFHQWUDWHG RQ WKH DFXWH FRQVXPLQJ D SDUWLFXODU GRVH RI DOFRKRO ZKHWKHU RQ R WLPH 7KHUH DUH D QXPEHU RI LPSRUWDQW UHDVRQV ZK\ WKH FRQVXPSWLRQ QHHGV WR EH WDNHQ LQWR DFFRXQW LQ WKH V WKH JUHDWHU WKH IUHTXHQF\ RI GULQNLQJ WKH TXLFNHU DQ HIIHFWV RI DOFRKRO L H PRUH DOFRKRO QHHGV WR EH FRQ %$& DQG D SDUWLFXODU VXEMHFWLYH VHQVH RI LQWR[LFDWLR RI DOFRKRO KDV EHHQ GHPRQVWUDWHG DPRQJ VRFLDO GULQN LQ WHUPV RI %$& DFKLHYHG IRU D JLYHQ GRVH VXEMHFWLYH SDUWLFXODU %$& +LOWXQHQ DQG DFWXDO EHKDYLRXU 6SURWW $W KLJKHU OHYHOV RI FRQVXPSWLRQ D FRQWL EH IROORZHG E\ VRPH GHJUHH RI µZLWKGUDZDO¶ ZKHQ D SHU GHYHORSPHQW RI ERWK WROHUDQFH DQG ZLWKGUDZDO V\PSW WKH DOFRKRO GHSHQGHQFH V\QGURPH FRPPRQO\ NQRZQ DV D

6HFRQGO\ DW WKH JHQHUDO SRSXODWLRQ OHYHO WKHUH LV IUHTXHQWO\ D SHUVRQ GULQNV DQG WKHLU OLNHOLKRRG ERW

4HS$dPÖRQGÀÐðÍ PHt„PÖRÍ6H DPÖRQ ÀKR P pHÀ À^ BP0

GD\V WKHUHIRUH UHGXFHV WKH RYHUDOO ULVN &ROOHFWLYH
JHQHUDO UHFRPPHQGDWLRQ RI DW OHDVW WZR QRQ GULQNLQJ

$Q LPSRUWDQW IRRWQRWH RQ WKH WRSLF RI GULQNLQJ IUHTX
UDUH JURXS ZKR GULQN MXVW RQH RU WZR GULQNV HYHU\ GD\
HVWDEOLVKHG DQG PDQDJHDEOH GULQNLQJ SDWWHUQ WKHUH
DVVRFLDWHG ZLWK GULQNLQJ DQG LQGHHG D SUREDELOLW\ RI
VXUYH\V KDYH VKRZQ WKDW ZKLOH WKLV SDWWHUQ RI GULQNL

FDQFHO HDFK RWKHU RXW DW WKH JHQHUDO SRSXODWLRQ OHY
DFFHSWDEOH DYHUDJH GDLO\ OHYHO IRU ORZ ULVN DOFRKRO

$Q LPSRUWDQW LPSOLFDWLRQ RI WKH GLIIHUHQW DSSURDFKH
WKH HSLGHPLRORJLFDO GDWD DUH FRQVLGHUHG ,Q WHUPV RI
ULVN RI PRVW IRUPV RI LQMXU\ DQG LOOQHVV WKDQ IHPDOHV
WKHUH LV HYLGHQFH WKDW ZRPHQ KDYH KLJKHU UHODWLYH UI
IURP GULQNLQJ DW SDUWLFXODU FRQVXPSWLRQ OHYHOV WKH
H[WUD ULVN IRU ZRPHQ LV EDODQFHG RXW E\ WKH KLJKHU DEV
DUJXPHQWV UHFHQWO\ HVSRXVHG E\ 'DZVRQ WKH SRVLW
LQFUHDVH RU GHFUHDVH LQ ULVN RI VHULRXV RXWFRPH
FRQVXPSWLRQ LV PRUH LPSRUWDQW WKDQ WKH XQUHODWHG WR
FRQVXPSWLRQ ,Q HVVHQFH LW ZDV MXGJHG WKDW DQ LQGLYL
PRUH LQWHUHVWHG LQ ZKHWKHU WKHLU GULQNLQJ GRXEOHV R
WKDQ ZKHWKHU WKH\ DUH PRUH RU OHVV DW ULVN DV D FRQVH

$ IXUWKHU LPSRUWDQW GLIIHUHQFH LV WKDW ZKLOH 7D\ORU D
XVLQJ D VPDOO QXPEHU RI IDWDO FRQGLWLRQV ZKHUH FDXVDO
EHHQ PRVW VWURQJO\ HVWDEOLVKHG WKH SUHVHQW DSSURDF
7KH DOO FDXVH PRUWDOLW\ DSSURDFK KDV EHHQ FULWLFL]HG
DGGLWLRQDO FRQIRXQGLQJ DV PDQ\ FDXVHV RI GHDWK PD\ EH
FRQVXPSWLRQ EXW QRW FDXVDOO\ 6RPH FRXQWHUDUJXPHQW
DGGLWLRQDO IDWDO FRQGLWLRQV VXFK DV SURVWDWH FDQFH
IXWXUH ZLOO EH VKRZQ WR EH FDXVDOO\ UHODWHG WR DOFR
LQFRUSRUDWHG LQ WKH DOO FDXVH DSSURDFK LL WKHUH LV
SK\VLFLDQV WR VSHFLI\ DOFRKRO DV D FDXVH RI GHDWK ZKLF
VSHFLILF DSSURDFK GRZQZDUGV LLL FDWHJRULHV DVVRFLDWHG ZLWK
SORWWLQJ UHODWLYH ULVN RI DOO FDXVH PRUWDOLW\ DJDLQV
SUREDELOLWLHV RI ERWK KDUP DQG EHQHILW DQG LY DQ DS
QXPEHU RI FRQGLWLRQV ZLWK D KLJK FDXVDO DVVRFLDWLRQ Z
FRQIRXQGLQJ $V DQ LOOXVWUDWLRQ RI WKH ODWWHU SRLQW
DQG OLYHU FLUUKRVLV ,UYLQJ HW DO LQ SUHVV ILQGV WKDW
PHQ DSSHDUV WR EH SURWHFWLYH D UHVXOW WKDW LV KDUG

$OFRKRO DQG +HDOWK LQ &DQDGD $ 6XPPDU\ RI (YLGHQFH DQG *XLGHOLQH

'DZVRQ ' $ /RZ ULVN GULQNLQJ OLPLWV $EVROXWH YHUVXV
±

'DZVRQ ' $ /L 7 . *UDGHG 5HVSRQVH VWXG\ RI ULVN GUL
IRU ZKDW" ±

'D\ 1 /HHFK 6 5LFKDUGVRQ * &RUQHOLXV 0 5REOHV 1
3UHQDWDO DOFRKRO H[SRVXUH SUHGLFWV FRQWLQXHG GHI
RI DJH ±

'HPHUV $ .DLURX] 6 $GODI (*OLNVPDQ / 1HZWRQ 7D\O
0XOWLOHYHO DQDO\VLV RI VLWXDWLRQDO GULQNLQJ
±

'HPHUV $ 4XHVQHO 9DOOpH $
4XpE&RPLWp SHUPDQHQW GH OXWWH j OD WR[LFR

'L &DVWHOQXRYR $ &RVWDQ]R 6 %DJQDUGL 9 'RQDWL 0
* ± $OFRKRO GRVLQJ DQG WRWDO5G P ‡04X 5R

.DLURX] 6 *OLNVPDQ / 'HPHUV)RU DGGLWLRQ DO DXWKRUV ,
GULQN $ PXOWLOHYHO DQDO\VLV RI FRQWH[WXDO UHDVRQ
XQGHUJUDGXDWH ±

.HQGDOO 3

9LFWRULD %& 2IILFH RI WKH 3URYLQFLD
'RZQORDGHG RQ 6HSWHPEHU IURP
KWWS ZZZ KHDOWK JRY EF FD OLEUDU\ SXEOLFDWLRQV \H

SS
± 6WRFNKROP 6ZHGHQ $OFRKRO DQG WKH OLYHU LQ WKH DGXOW SRSXODWLRQ

5HKP - %DOOXQDV ' %URVFKX 6)LVFKHU %D *QDP : 3
,6%1 &'520
2WWDZD &DQDGLDQ &HQWUH RQ 6XEVWDQFH $EXVH

5HKP - %DOLXQDV ' %RUJHV * *UDKDP . ,UYLQJ + .H
- 3RSRYD 6 3R]Q\DN 9 5RHUHFNH 0 5RRP 5 6DPRN
% ,Q SUHVV D 7KH UHODWLRQ EHWZHHQ GLIIHUHQW GLP
DQG EXUGHQ RI GLVHDVH $Q RYHUYLHZ

5HKP - *UHHQILHOG 7 . .HUU : & E 3DWWHUQV RI GU
GLIIHUHQW GLVHDVHV $Q RYHUYLHZ ±

5HKP - *XWMDKU (*PHO * $OFRKRO DQG DOO FDXV
DQDO\VLV ±

5HKP - 5RRP 5 *UDKDP . 0RQWHLUR 0 *PHO * 6HPSR
UHODWLRQVKLS RI DYHUDJH YROXPH RI DOFRKRO FRQVXPS
EXUGHQ RI GLVHDVH $Q RYHUYLHZ

5HKP - 6HPSRV & 7 7UHYLVDQ 0 E $YHUDJH YROXPH
FRQVXPSWLRQ SDWWHUQV RI GULQNLQJ DQG ULVN RI FRUR
±

5HKP - 5RRP 5 0RQWHLUR 0 HW DO $OFRKRO XVH
$ 5RGJHUV & - / 0XUUD\ (GV

SS ± *HQHYD 6ZLW]HUODQG :RUOG +HDOW

5HKP - 2Q WKH OLPLWDWLRQV RI REVHUYDWLRQDO VWXG
DO SS±

5HKP - ,UYLQJ + <H < .HUU : & %RQG - *UHHQILHOG
DEVWDLQHUV WKH EHVW FRQWURO JURXS LQ DOFRKRO HSL
YDOLGLW\ RI UHSRUWHG OLIHWLPH DEVWHQWLRQ
±

5HKP - 0DWKHUV & 3RSRYD 6 7KDYRUQFKDURHQVDS 0
3DWUD - $OFRKRO DQG JOREDO KHDOWK *OREDO E
DQG HFRQRPLF FRVW DWWULEXWDEOH WR DOFRKRO XVH DQ
±

5HKP - 6DPRNKYDORY $ 9 1HXPDQ 0 * 5RRP 5 3DUU\ &
- 3R]Q\DN 9 3RSRYD 6 7KH DVVRFLDWLRQ EHWZH
XVH GLVRUGHUV DQG WXEHUFXORVLV $ V\VWHPDWLF UHYL

5HKP - 7D\ORU % 0RKDSDWUD 6 ,UYLQJ + %DOLXQDV '
SUHVV E $OFRKRO DV D ULVN IDFWRU IRU OLYHU FLUUKR
DQDO\VLV

5RRP 5 %RQG\ 6)HUULV - 7KH ULVN RI KDUP WR R
&DQDGD t

5RVHQEHUJ + 3UHGLFWLRQ RI FRQWURROHG GULQNLQJ
GULQNHUV ±

5RVHQEHUJ + 0HOYLOOH - &RQWURROHG GULQNLQJ I
RXWFRPH JRDOV LQ %ULWLVK WUHDWPHQW VHUYLFHV
±

5R\DO &ROOHJH RI 2EVWHWULFLDQV DQG *\QDHFRORJLVWV
RXWFRPHV RI SUHJQDQF\ /RQGRQ 8QLWHG .LQJGRP 5R
&ROOHJH RI 2EVWHWULFLDQV DQG *\QDHFRORJLVWV

6FKQLW]HU 6 %HOOLV 0 $ $QGHUVRQ = +XJKHV . &DOD
1LJKWOLIH YLROHQFH $ JHQGHU VSHFLILF YLHZ RQ U
QLJKWOLIH VHWWLQJV $ FURVV VHFWLRQDO VWXG\ LQ QLQ
2QOLQH SXEOLFDWLRQ GRL

6HJDO ' 6WRFNZHOO 7 /RZ DOFRKRO DOWHUQDWLYHV
UHGXFLQJ DOFRKRO UHODWHG KDUP ±

6HLW] +6WLFNHO) $FHWDOGHK\GH DV DQ XQGHUHVWLPDWHG
FDQFHU GHYHORSPHQW UROH RI JHQHWLFV LQ HWKDQRO P
2QOLQH SXEOLFDWLRQ

6HSSDOD 7 /LQQRLOD 0 0DWWLOD 0 'UXJV DOFRKP
±

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6KQHHV ÁHD P'Æ'ÂÔ[ÀÀ[ÀÀ[ÀÀ

Alcohol and Health in Canada: A Summary

Appendix 2: Provincial Drinking Guidelines in Canada

Source	Men	Women	Standard Drink
CAMH*	x Maximum 2 standard drinks/day x Maximum 14 standard drinks/ week	x Maximum 2 standard drinks/day x Maximum 9 standard drinks/ week	x 142 mL (5 oz.) wine (12% alcohol) x 341 mL (12 oz.) beer (5% alcohol) x 85 mL (3 oz.) fortified wine (16–18% alcohol) x 43 mL (1.5 oz.) liquor (40% alcohol)
CARBC (2007)	x Maximum 4 standard drinks/day; x Maximum 20 standard drinks/ week	x Maximum 3 standard drinks/day x Maximum 10 standard drinks/ week	x 150 mL (5 oz.) wine (12% alcohol) x 355 mL (12 oz.) beer (5% alcohol) x 50 mL (1.5 oz.) spirits (40% alcohol) x 85 mL (3 oz.) fortified wine/sherry/port (18% alcohol)

Appendix 3 : Details of the Q uantitative Meta-Analyses from which the Information on D ose-Response Relationships was Extracted

Disease	Articles from Main Search	Articles in Analysis	% Agreement for D