

# Ko te Otago Exercise Programme

hei kaupare atu i te takanga i  
waenga i te hunga kaumātua

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He kaupapa whakapakari tinana,  
whakarauora anō i te tū tautika  
mā te tangata takitahi ki tōna anō kāinga

Poutūterangi 2003



**He Kaupare. He Manaaki.  
He Whakaora.**  
*prevention. care. recovery.*



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# Kupu whakataki

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Nā te nui o ngā takanga ki waenga i te hunga kaumātua, ka pahure noa i te nuinga te kino o te pānga ki te tangata me te utu nui ki te motu whānui. I te mea he mahi noa te takanga, tērā ka pōhēhētia he ngāwari noa iho te rongoā. Engari anō mō tērā. Ka pā mai te takanga nā te hekenga o te kaha me te tautika o te tinana. Ka pai ake te tū tautika mēnā ka pūmau te kaumātua ki tētahi kaupapa whakakorikori motuhake, kua oti kē te whakamātau, ā, he mea whakahere anō i raro i ngā tikanga haumaru.

Kei tēnei aratohu ngā whakamārama mō ngā tūmahi a tētahi kaupapa whakapakari tinana, hei whakarauora anō i te tū tautika. He mea āta whakamātautau tēnei ki ētahi aromatawai matapōkere, ā, kua kitea, ka heke te nui o ngā takanga i tētahi hautoru nā ēnei tūmahi korikori. Me whai ngā tūmahi korikori hei kaupapa motuhake, me whai rānei i te taha o ētahi atu mahi hei kaupare atu i ngā takanga, pērā i te hekenga o te nui o ngā pire whakamoe tangata, i te whakapainga ake o ngā kitenga ā-karu, o ngā tūrama me ngā tohutohu e pā ana ki te noho haumaru i te kāinga.

Kua takea mai tēnei kaupapa i tētahi rangahau e hia tau nei te roa. Kua tautohua ngā take ka tūpono pā te takanga, ā, kātahi ka whakamātauria ngā tūmomo mahi whakatikatika. Kei te mihi mātou ki te katoa o ngā mema o ngā rōpū rangahau, ki ā mātou kaihāpai ā-pūtea hoki, arā, ki a ACC, ki te Health Research Council of New Zealand me Te Puna Tahua. Otirā, me mihi anō i te hunga kaumātua – neke atu i te 2000 te tokomaha – i ngā whakapaunga o te wā me te werawera ki ngā rangahau mātai tahumaero me ngā rangahau mō ngā tūmahi whakatikatika.

E mārama ana ki a mātou ngā hua o tēnei aratohu ki te hunga kaumātua o Aotearoa, o rāwāhi anō, ā, mā konā anō, ka āta kitea ngā hua o ngā mahi a ngā kaiuru, a ngā kairangahau, a ngā kaihāpai ā-pūtea hoki.

A John Campbell MD, FRACP  
Ahorangi, Rongoā Kaumātua

M Clare Robertson PhD  
Kairangahau Matua

# He whakarāpopoto o ngā kōrero matua

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## Te aukati i ngā takanga i waenga i te hunga kaumātua

- He nui ngā takanga o te hunga e 65, neke atu te pakeke, ā, koia anō te pūtake o te nuinga o ngā wharanga i tēnei reanga. He kino hoki ngā hua, arā, ka ngaukinotia te wairua, ka mamae, ka raruraru ngā mahi a te tinana, ka heke tōna māia ki te whakatutuki i ngā mahi o ia rā, ka heke anō tōna kaha ki te tū motuhake, ki te mahi motuhake, otirā, ka mate hoki pea te tangata i tēnei āhuatanga.
- Ka piki haere te nui o ngā takanga, ka piki ake hoki te nui o te utu, ā, he tohu motuhake ngā takanga mō te kuhunga atu ki ngā whare tiaki. Ki te heke te nui o ngā takanga, ka heke te nui o ngā utu e kawea ana e te ao hauora.
- Ko te pakari me te tāwariwari o te tinana, ko te tū tautika me te wawe o te urupare ā-tinana ngā take mōrearea matua e taka ai te tangata, heoi, he māmā anō hoki ki te whakapakari ake i ēnei āhuatanga.
- Ka taea e te katoa – ko te hunga e 90 tau neke atu anō hoki – te whakapiki ake i te kaha o ō rātou tinana, o tō rātou tū tautika e tau ai te tū, kia kore ai rātou e taka.

## Otago home exercise programme

- He mea āta waihangā tēnei kaupapa hei aukati i ngā takanga. He tūmahi ēnei hei whakapakari i ngā uaua o te waewae, hei whakapai ake anō i te tū tautika. Ka piki haere te taumata o ngā tūmahi, ā, kua whakatakotohia hoki tētahi mahere hīkoi.

- E hāngai pū ana ngā tūmahi ki te tangata tonu, ā, ka piki ake te uaua i te roanga o ngā hui whakangungu e rima i te taha o tētahi kaiwhakangungu.
- Ka whiwhi ia tangata ki tētahi puka ārahi e mau ana i ngā tohutohu mō ia tūmahi me ētahi maitai hei whakamau ki ngā rekereke (1 kg te taumaha i te tuatahi).
- Ka tutuki ngā mahi whakapakari i te takiwā o te 30 meneti. Me whai ngā tāngata ēnei tūmahi korikori kia toru ngā wā i te wiki, ā, kia rua ngā putanga ki te hīkoi.
- Ka tuhituhi ngā tāngata i ngā rā e otia ana i a rātou ngā tūmahi, ā, ka waea atu te kaiwhakangungu ki a rātou i ia marama, i waengau i ngā hui whakangungu ki tō rātou kāinga. Ko te painga atu mēnā ka hoki anō te kaiwhakangungu ki te kāinga o te tangata i ia ono marama.

## Ngā kōrero taunakia a ngā rangahau

- Kua whakawhanakehia, kua whakamātauria te Otago Exercise Programme e tētahi rōpū rangahau o Te Kura Hauora o Te Whare Wānanga o Otāgo ki Aotearoa. E whā ngā tikanga whakamātautau, ā, he mea ārahi te kaupapa nā Ahorangi John Campbell.
- Kua arotakehia tēnei hōtaka e ngā ratonga rangahau me ngā ratonga hauora i te taha o ngā tāngata 1016 te nui, mai i te 65 ki te 97 tau, e noho ana i ūrātou ake kāinga.
- Otirā, nā tēnei kaupapa ka heke te nui o ngā takanga me te nui o ngā wharanga nā te takanga i te 35%. He rite tonu ngā hua ki te tāne me te wāhine.

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- Nā tēnei hōtaka ka piki ake te kaha me te tū tautika o ngā tāngata, ka māia anō rātou ki te whakatutuki i ngā mahi o ia rā, kāore he takanga.
  - He mea whakahaere tēnei kaupapa e te kairomiromi me ngā nēhi kua whakangungua, kua arahina anō e te kairomiromi.
  - Kua puta mai ngā whakatau e pā ana ki ngā hua mō te utu o te kaupapa i ngā whare hauora e rua.
  - I tino whai hua te kaupapa i waenganui i ngā rōpū e kaha pāngia ana e te takanga, arā, ko rātou neke atu i te 80 te pakeke me ērā kua pāngia kētia e tētahi takanga.
  - Me whakangungu, me ārahi ngā mātanga hauora kāore anō kia whakarite i ngā mahi korikori mā te hunga pakeke.
  - Kua whakamātauria te hōtaka hei kaupapa motuhake, heoi, ka taea anō te whakahaere tēnei kaupapa i te taha o ētahi atu hōtaka e hāngai ana ki te kauparenga atu o ngā takanga.

## Ngā hua o te rangahau

- I te mea ko te tino take o te pūtea a ngā ratonga hauora ko te āraitanga atu o te mate, kei te kitea ngā taunakitanga tōtika mō te whakatutukinga o tēnei hōtaka hei kaupare atu i ngā takanga me ngā wharanga.
- Mēnā he iti ngā rauemi, me tono atu ki te hunga kua pāngia kētia e te takanga i te tau kua pahure, e 80 tau neke atu te pakeke, kia kuhu mai ai rātou ki tēnei hōtaka tūmahi korikori i te tuatahi.

## Te kaupapa o tēnei puka ārahi

Kei tēnei puka ārahi:

- Ngā kōrero mā ngā mātanga hauora rātou ko te hunga e whakahaere ana i ngā ratonga hauora mā te hunga kaumātua.
- Ngā putanga a ngā rangahau mō te Otago Exercise Programme.
- Ngā whakamārama tōtika hei āwhina i te mātanga hauora ki te whakarite i te hōtaka.

# Kupu whakataki

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## Te mate o ngā takanga

He mate nui ngā takanga e pā kaha ana ki te hauora o te iwi whānui, i te mea ka kaha pā tēnei āhuatanga ki te hunga e 65 tau neke atu te pakeke, koia anō te pūtake o te nuinga o ngā wharanga o tēnei reanga. He nui ngā hua kino o te takanga: ko te ngaukino, ko te mamae, ka raruraru ngā mahi ā-tinana, ka heke te māia ki te whakatutuki i ngā mahi o ia rā, ka ngaro te hoki te kaha ki te tū motuhake, ki te mahi motuhake, ā, ka mate hoki pea te tangata.

Ahakoa te pakari o te nuinga, kotahi neke atu rānei te takanga o tētahi hautoru o ngā tāngata e 65 tau neke atu te pakeke, i ia tau. Ko te mate nui, ka kaumātua haere te tangata, ka tere piki ake te maha me te kino o ngā takanga.(12) Ka ara mai te nuinga o ngā takanga i te pānga mai o ngā āhuatanga maha, heoi, ko te pūtake o te nuinga, ko te ngoikore o ngā uua o te waewae me te hē o te tū tautika.

Ka piki haere te nui o ngā takanga, ka piki ake hoki te nui o te utu, ā, he tohu motuhake ngā takanga mō te kuhunga atu ki ngā whare tiaki.(34) Nō reira, ki te heke te nui o ngā takanga, ka heke hoki te utu mō ngā mahi tiaki tūroro kua pāngia e ngā mate ohorere me ngā mate roa.

## Ngā tūmahi korikori hei kaupare atu i ngā takanga

Nā te nui me te kino o ngā takanga i waenganui i te hunga kaumātua, kua whakawhanake, kua whakamātau hoki te New Zealand Falls Prevention Research Group i ngā momo kaupapa e arotahi ana ki te kauparenga atu o ngā takanga.

Ko tētahi o ngā kaupapa whaihua, ko te Otago Exercise Programme. He hōtaka tēnei hei

whakapakari i ngā uua, hei whakarauora anō i te tū tautika. He mea whakahaere tēnei nā tētahi kaiwhakangungu motuhake, ki roto tonu i te kāinga. Ko te pūtake o ngā mahi, ko te arotahi ki ngā take māmā e noho mōrearea ana te tangata i te takanga, pērā i te pakari o ngā uua, i te tāwariwari o te tinana, i te tū tautika me te wawe o te urupare ā-tinana.

Ka tautika te tū o te tangata mēnā ka pūmau te kaha o ngā waewae me te tū tautika ki te taumata e tika ana. Ka taea e te reanga kei ngā tau go te whakapakari ake i tō rātou kaha me tō rātou tū tautika kia kore ai rātou e whara.

Ko ētahi atu hua ka puta mai i ngā tūmahi korikori māmā, ko te hekenga o te nui o ngā mate, ko te whakapainga ake o te hauora ā-tinana, o ngā mahi ā-tinana, o te kounga o te hauora, o te moe me te waiora hoki. (5-7)

## Te pūtake o tēnei puka ārahi

He mea waihangā tēnei puka ārahi mā ngā mātanga hauora me te hunga e mahi ana i te taha o ngā kaumātu, e whakarite ana, e whakahaere ana hoki rānei i ngā ratonga hauora.

Tuatahi, ka whakatakotoria ngā taunakitanga e pā ana ki te pai o te Otago Exercise Programme ki te whakaheke i te nui o ngā takanga me ngā wharanga o te hunga kaumātua e noho ana ki te kāinga.

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Kua puta ngā taunaki rangahau pai e  
mea ana ka heke te nui o ngā takanga  
me ngā wharanga o te hunga kaumātua  
e noho ana i te hapori i te Otago  
Exercise Programme.

Kua rite te hōtaka me te puka ārahi hei  
whakamahinga mā ngā kaiwhakahaere.

# He whakarāpopoto o ngā rangahau

Hei tā ngā rangahau o mua (1) ko te ngoikore me te tū tautika ētahi o ngā take e tūpono pā ana te takanga me te wharanga ki te hunga kaumātua. (2) ka taea te whakapiki ake i te tū tautika me te kaha o te tangata mā ngā tūmahi korikori.

## Ngā pātai

Ka taea e tētahi hōtaka e whakahaerehia ana ki te kāinga te whakapakari ake i te kaha me te tū tautika o te tangata kia heke te nui o ngā takanga me ngā wharanga o te hunga kaumātua? Ka whai hua te hōtaka nei mēnā ka whakahaerehia mai i tētahi whare hauora?

## Ko te Otago Exercise Programme

tētahi huinga tūmahi korikori e whakakaha ana i ngā uua o te waewae, e whakarauora ana hoki i te tū tautika hei kaupare atu i ngā takanga. He kaupapa takitahi tēnei e whakahaerehia ana i te kāinga e ngā kaiwhakangungu motuhake.

E whā ngā whakamātautau motuhake e aromatawai ana i te pai o te hōtaka ki te whakaheke i te nui o ngā takanga me ngā wharanga i roto tonu i te hapori i waenganui i te hunga kaumātua. Kotahi mano, tekau mā ono ngā wāhine me ngā tāne, e 65 ki te 97 tau te pakeke, i tonoa e ō rātou tākuta ki te kuhu mai ki te kaupapa.

I te roanga o te kaupapa, nā tēnei hōtaka ka heke te nui o ngā takanga me ngā wharanga e hua mai ana i ngā takanga, i te 35%. Ka whakahaerehia te kaupapa e tētahi kairomiromi rangahau rāua ko ngā nēhi mai i tētahi ratonga hauora e aronui ana ki te kāinga me ngā whare hauora matua.

## Ko wai te hunga e pāngia ana e ēnei kitenga?

Ngā kaumātua katoa e noho ana ki waenga i te hapori.

## Kupu whakatūpato

Kāore i te mōhiotia mēnā ka heke te nui o ngā takanga mēnā ka rerekē ngā tūmahi korikori, ka heke iho te nui o ngā hui i te kāinga i te whā, Ka whakahaerehia ā-rōpūtia rānei te hōtaka, e tētahi atu momo whakahaere rānei.

## I te mutunga iho

Ka ea te utu o te kaupapa mēnā ka tukuna te hōtaka ki te hunga i pāngia e te wharanga i te tau kua pahure, e 80 tau neke atu tō rātou pakeke.

## RAPUA ĒNEI RANGAHAU

- Whakamātautau 1: Campbell AJ et al. BMJ 1997;315:1065-1069; Campbell AJ et al. Age Ageing 1999;28:513-518.
- Whakamātautau 2: Campbell AJ et al. J Am Geriatr Soc 1999;47:850-853.
- Whakamātautau 3: Robertson MC et al. BMJ 2001;322:697-701.
- Whakamātautau 4: Robertson MC et al. BMJ 2001;322:701-704.
- He arotake o te tūkanga me ngā hua: Gardner MM et al. Prev Med 2002;34:546-553.
- He tātaritaringa o te meta a ngā whakamātautau e whā: Robertson MC et al. J Am Geriatr Soc 2002;50:905-911.
- “How to do it”: Gardner MM et al. Age Ageing 2001;30:77-83.

# Ngā putanga a ngā rangahau

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Kua whakamātauria te Otago Exercise Programme ki ngā aromatawai motuhake e whā, i te taha o ngā tāngata e noho ana i roto i ngā hapori o ngā tāone e iwa ki Aotearoa (tirohia Tūtohi 1). (8-12) Kotahi mano tekau mā iwa ngā tāngata (he tāne te 23%), mai i te 65 ki te 97 tau te pakeke, ā, e 80 tau neke atu rānei te pakeke o e 810 o ngā tāngata (arā, e 80%). He mea tono rātou nā ngā whare hauore matua e 64, ā, i whakaae te nuinga nā runga i te whakahau o tō rātou tākuta.

He whānui anō ngā āheinga o te nuinga, ā-tinana, ā-hauora hoki, ā, kua taka kē e 434 o rātou (e 43%) i te tau o mua mai. Kāore i tonoa te hunga kāore i āhei ki te hīkoi i ō rātou ake kāinga, waihoki te hunga kei raro kē i tētahi kaupapa romiroki me te hunga kāore e āta mārama ana ki ngā here o te whakamātautau.

Ko ngā takanga te aronga matua o ngā whakamātautau, ā, ka kīia ko te takanga “te tau pokerehū noa ki te papa, ki tētahi taumata ki raro iho o te tangata rānei”. Ka aroturukina ngā takanga i ia marama mā te kāri pōhi. Ka whakakiā ngā kāri e te tangata i ia rangi, ā, ka tīhaea tētahi wāhi, ka whakahokia mā te pōhi utu-kore.

He whakarāpopoto tēnei o ngā otinga matua a ngā whakamātautau e whā, ā, ka tātarihia ngā otinga ki te tautohu i ngā rōpū ka tino whaihua i te hōtaka. Waihoki, kei te whārikihia ngā arotakenga mai i te taha pūtea. Kua āta whakamāramahia ngā kōrero a te Otago Exercise Programme i te roanga o tēnei pukapuka, ā, kei te Āpitihanga 3 ngā kōrero me ngā tūmahi korikori mā ngā kaikorikori.

Kei ngā pūrongo e pā ana ki ngā hua (8-12) o tēnei hōtaka ngā taipitopito mō ngā whakamātautau, mō ngā arotakenga e pā ana ki te tukanga me te pānga (13), mō te taha pūtea (11, 12, 14) me tētahi arotakenga mō ngā raraunga meta (15). E tautokona ana ngā painga o te hōtaka e tētahi arotake whai tikanga nā Cochrane Collaboration. (16)

## Whakamātautau 1

He whakamātautau matapōkere te aromatawai motuhake tuatahi o te Otago Exercise Programme mā ngā wāhine e 80 tau, neke atu.(8)

Ka whakatauritehia ngā hua o te hōtaka korikori ki ngā toronga noa ki te hunga nei, ā, ka kitea ka heke te tūpono pā o te takanga ki a rātou i te 32%, ā, ka heke te tūpono pā o te wharanga i te takanga i te 39% i te tau kotahi. Ka whakaroatia te whakamātautau ki te tau tuarua, heoi, ka kōrero ā-waea kē ngā kaiwhakamātautau ki te hunga nei, kāore i tae ā-tinana atu ki ngā kāinga; ka heke tonu ngā takanga me ngā wharanga nā te takanga.(9)

## Whakamātautau 2

Ka whakatūria te whakamātautau matapōkere motuhake tuarua, ā, ka aromatawaitia ngā wawaonga e rua hei kaupare atu i te takanga i waenga i te hunga e 65 te tau neke atu, e kai ana i ngā rongoā moe. (10) Arā, ka āta whakahekeia iho ngā rongoā, ā, ka whai hoki rātou i ngā tūmahi a te Otago Exercise Programme.

Ka heke te nui o ngā takanga i te 66% i waenga i te hunga i mutu i te kai rongoā, hāunga anō ērā i kai tonu i ngā rongoā rā. Heoi, nō te paunga o te

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marama kotahi i muri i te mutunga o te aromatawai, ka tīmata ano tētahi 47% (arā e 8 o te 17) ki te kai rongoā; me uaua ka ū te tangata ki te aukati i te kai rongoā moe.

I waenga i te rōpū nō tēnei reanga, kāore he putanga e mea ana ka heke te nui o ngā takanga i te Otago Exercise Programme.

- I te Whakamātautau 1 me te Whakamātautau 2, ka whakahaerehia te hōtaka korikori e tētahi kairomiromi i tētahi wāhi rangahau motuhake.

Kia kitea ngā otinga o te hōtaka korikori i raro i ngā āhuatanga “tūturu”, ka whakahaerehia ngā whakamātautau e rua anō mai i ngā ratonga whare hauora.

### Whakamātautau 3

I tēnei whakamātautau matapōkere motuhake, ka whakangungua tētahi nēhi ā-hapori nō roto i tētahi ratonga hauora mō ngā kāinga ki te whakahaere i te Otago Exercise Programme. (11) He tāne, he wāhine hoki ngā kaiuru, e 75 tau neke atu te pakeke.

I te paunga o te tau kotahi, ki te tauritehia ngā otinga ki ērā o ngā mahi tiaki noa, ka heke te nui o ngā takanga i te 46%, ā, he iti ake ngā wharanga kino i te takanga (arā, ko te whatinga o te kōiwi, ko te kuhunga ki te hōhipera, ko ngā tuituinga ā-kiri rānei). Ko tētahi o ngā putanga ohorere, ka heke te nui o ngā takanga i waenga i te hunga e 80 tau neke atu, heoi kāore ēnei hua i tino kitea i waenga i te hunga e 75 ki te 79 tau.

### Whakamātautau 4

Ka whakamātauria anō te Otago Exercise Programme i waenga i ngā tāngata e 80 tau, neke atu i roto i tētahi whakamātautau ā-hapori. (12) Ka whakangungua tētahi nēhi ki te whakahaere i te hōtaka ki ngā whare korikori e toru, ā, e 4 ngā whare whakamātautau motuhake.

I te paunga o te tau kotahi, ki te tauritehia ngā hua ki ērā o tētahi kaupapa tiaki hauora noa, ka kitea kua heke te nui o ngā wharanga (āhua kino, tino kino hoki) i te 28%.

Hei tā tētahi arotake mō te tukanga me te pānga o te kaupapa, ka paingia te kaupapa e ngā kaumātua rātou ko ū rātou tākuta. (13) Kei te takiwā o te 70% te nui o ngā kaikorikori e korikori tonu ana i te mutunga o te tau, ā, e whai ana e 43% o rātou i ngā tohutohu a te hōtaka. Kei taua taumata anō te nui o te pikinga ake o te tū tautika me te kaha o ngā kaiuru kei ia whare korikori.

- Kei te whakaatu mai ngā whakamātautau e rua, ki te whakangungua, ki te āta aratakina hoki e tētahi kairomiromi mōhio, ka āhei ngā nēhi ki te whakahaere i te hōtaka.

## Ngā arotakenga ā-pūtea

Kua whakaherehia ngā arotake tōtika e pā ana ki te taha pūtea o te hōtaka tūmahi korikori ki ngā wāhi e toru.(11, 12, 14)

Kei te takiwā o te NZ\$420 te utu ki te pūnaha hauora o te whakapuakitanga ake o te hōtaka ki tētahi ratonga hauora mā te tangata takitahi, i te tau kotahi.\* Ko ngā utu ko ngā mahi whakangungu, ko te utu mō te wā me ngā waka mō te toronga atu o ngā nēhi ki ngā kāinga, ko te whakaratonga o te hōtaka, ko ngā maitai rekereke hei whakapakari i ngā uua me ngā toronga motuhake a te kairomiromi e arataki ana i te kaupapa.

He mea nui te utu o tētahi hōtaka e kaupare atu ana i ngā takanga, heoi, kei reira anō ētahi atu take hei whakaarotanga ake. He mea nui anō ngā hua o te hōtaka – pērā i te pikinga, i te hekenga rānei o te toronga atu ki ētahi atu rauemi hauora – me ngā painga, pērā i te nui o ngā takanga me ngā wharanga e kauparehia ana. Ki te whakakotahihia ngā utu, ngā hua me ngā painga ki te tohu ine kotahi, arā, ko te ōwehenga o te utu ki ngā hua, ka taea te whakataurite i te nui o ngā hua e whakawhiwhia ana i runga i te nui o te pūtea e whakapaua ana ki te kaupapa.

I te Whakamātautau 3, e NZ\$1,803 te utu o te hōtaka korikori mā ia kauparenga atu o te takanga, ā, i te Whakamātautau 4, NZ\$1,519 te utu mā ia kauparetanga atu o te takanga. Ko te utu mō te whakatinanatanga o te hōtaka ki ia kauparenga atu o te wharanga i te Whakamātautau 3 me te Whakamātautau 4, ko te NZ\$3,404 me te NZ\$7,471.

\* Te nui o te utu i te tau 1998, kāore he tāke rawa a te kāwanatanga I te tau 1998 NZ\$1 = US\$0.54, ā, UK€ 0.32

I te Whakamātautau 3, he iti ake ngā tāngata nō roto i te rōpū korikori i kuhuna ki te hōhipera nā te wharanga i te takanga. I te mea, he nui ake ngā hua o te hōtaka ki te hunga e 80 tau, neke atu, nō te tāpiriringa atu o te hekenga o te utu ki ngā hōhipera, ka heke te utu mā ia kauparenga atu o te takanga i waenga i tēnei rōpū i te NZ\$576.

Otirā, ka heke te utu ki te hōhipera mā ia tangata e pāngia ana e te takanga i te hautoru i roto i tēnei rōpū, heoi, ehara i te mea he rerekētanga nui tēnā.

## Te whakakotahitanga o ngā hua

Ka whakakotahihia ngā raraunga mai i ngā whakamātautau e whā ki tētahi tātaringa raraunga meta. (15)

Heoi anō, nā te hōtaka korikori ka heke te nui o ngā takanga i te 35%, ā, ka heke te nui o ngā wharanga nā te takanga i te 35%.

Nā te whakakotahitanga o ngā raraunga, ka āta kitea ko ēhea ngā rōpū i tino whai hua i te hōtaka korikori.

- He nui ake ngā hua ki te hunga e 80 tau, neke atu, i ērā e 65 ki te 79 tau te pakeke, inā rā ko te nui o ngā wharanga i kauparehia atu. Ko te whakapae anō, ahakoa he iti noa te pikinga ake o te kaha me te tautika i waenga i te hunga kaumātua, ka eke tonu rātou ki tua o te taumata e tohua ana, e tū tautika ai rātou. Hei tāpiriringa atu, he nui ake ngā takanga i waenga i te hunga e 80 tau, neke atu te pakeke.

- Kāore he rerekētanga o ngā hua o tēnei hōtaka ki te hunga kāore anō kia taka, ki ērā o te hunga kua pāngia kētia e te takanga. Heoi, he nui ake ngā takanga o te hunga kua pāngia kētia e tēnei āhuatanga, ā, he nui ake anō ngā takanga hei kaupare atu.
- Kāore he rerekētanga o ngā hua ki te tāne me te wāhine, arā, ka heke te nui o ngā takanga katoa i te 35%.

Kei te Tūtohi 2 te whaihua o te hōtaka ki ia rōpū whāiti i runga anō i te mōhio, he nui ake ngā takanga o ētahi rōpū. Ka tino whaihua te hunga e 80 neke atu te pakeke rātou ko te hunga kua pāngia kētia e te takanga i runga i te nui o ngā takanga me ngā wharanga i kauparehia atu nā te hōtaka.

Nō te whakaemitanga mai o ngā hua i ngā whakamātautau e whā, ka kitea, ka kauparehia atu e tēnei hōtaka te nuinga o ngā takanga me ngā wharanga o te hunga e 80 tau te pakeke, kua pāngia kētia e te takanga i te tau kua pahure.

I runga i ngā otinga o ngā aromatawai ā-tinana māmā e rua (arā, ko ngā whakamātautau mō te āhua o te tūnga ake me te tū tautika), ka kitea kua piki ake te kaha me te tū tautika o te rōpū korikori.

Ka pūmau tonu hoki tō rātou māia ki te whai i ngā mahi o ia rā, arā, kāore he takanga. He mea nui tēnei i te mea, ka houtete haere ētahi tāngata i runga i te mataku ka taka rātou, whāia, ka ngoikore haere ngā uaua me te tū tautika.

He ruarua noa iho ngā putanga kino o te hōtaka korikori i ngā whakamātautau.

He rautaki haumaru, he whai hua, he whai take, he whai tikanga anō te Otago Exercise Programme, ā, he iti noa te utu ki te kaupare atu i ngā takanga – otirā, he nui ngā painga ki te hunga kaumātua, ināianei tonu.

# Tūtohi 1 – he whakarāpopoto o ngā whakamātautau e whā

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<b>Ngā āhuatanga</b>	<b>Whakamātautau 1</b> Rōpū A, Ōtepoti	<b>Whakamātautau 2</b> Rōpū B, Ōtepoti	<b>Whakamātautau 3</b> Te Uru o Tāmaki	<b>Whakamātautau 4</b> Te Waipounamu
<b>Te rōpū</b>	Ngā wāhine, e 80 tau	Ngā wāhine me ngā tāne e 65 tau, e kai ana i te rongoā mō te hinengaro	Ngā wāhine me ngā tāne e 75 tau	Ngā wāhine me ngā tāne e 80 tau
<b>Te tatau</b>	Tau 1:233 Tau 2: 152	93	240	450
<b>Ngā tikanga whakamātautau</b>	He whakamātautau matapōkere motuhake; ko te 2 x 2 te tikanga rangahau (e 4 ngā rōpū)	He whakamātautau matapōkere motuhake	He whakamātautau matapōkere motuhake	E 3 ngā whare korikori, e 4 ngā whare motuhake
<b>Ngā tikanga mahi</b>	(1) He hōtaka korikori (n=116) ki (2) Ngā toronga me ngā mahi noa (n=117)	(1) He hōtaka korikori (2) Ka āta whakaitia ngā rongoā – i raro i te tikanga tōkeke	(1) He hōtaka korikori (n=121) ki (2) Ngā mahi tiaki noa	(1) He hōtaka korikori (n=330) (2) Ngā mahi tiaki noa (n=120)
<b>Kaiwhakakorikori tinana</b>	Kairomiromi	Kairomiromi	Nēhi ā-haporī	Ngā nēhi tikanga whānui
<b>Ngā toronga ki ngā kāinga</b>	4	4	5	5
<b>Te wāhi</b>	Rangahau	Rangahau	Ratonga hauora ā-haporī	Whare tākuta
<b>Te aroturuki takanga</b>	E 2 ngā tau	E 44 ngā wiki	1 tau	1 tau
<b>Ngā otinga matua</b>	Ka heke te nui o ngā takanga i te 32% i te tau 1. Ka rongo tonu te hunga e whai ana i te hōtaka i ngā paingā i te tau 2	Ka heke ngā takanga o te hunga i mutu te kai rongoā i te 66%. Kāore te hōtaka korikori i whakaheke i te tūpono pā o ngā takanga ki a rātou	Nā te hōtaka korikori, ka heke te nui o ngā takanga i te 46%	Nā te hōtaka korikori, ka heke te nui o ngā takanga i te 30%

\* I tīkina ake i Robertson MC et al. J Am Geriatr Soc 2002; 50:905-911<sup>15</sup>

## Tūtohi 2 – he tātaringa o ngā putanga o ngā whakamātautau e whā: te nui o ngā takanga i kauparehia atu i waenga i ngā rōpū whāiti\*

Rōpū whāiti	Te tatau o ngā takanga i kauparehia atu mā te 100 tāngata i te tau	Te tatau o ngā wharanga nā te takanga i kauparehia atu mā te 100 tāngata i te tau
E 80 tau, kua taka i te tau o mua	54.0	28.8
Kua taka i te tau o mua	44.3	20.9
E 80 tau	40.8	20.1
Ngā kaiuru katoa (e 65 ki te 97 tau)	33.9	15.8
E 80 tau, kāore i taka i te tau i mua	25.8	11.6
Kāore i take i te tau i mua	23.6	11.0
E 65 ki te 79 tau	5.4	-2.3

\* Mai i Robertson MC et al. J Am Geriatr Soc 2002; 50: 905-911<sup>15</sup>

# Te whakatinanatanga o te hōtaka

He mahi whakangungu te Otago Exercise Programme, he tūmahi korikori hei whakakaha i ngā uaua, hei whakapakari anō i te tū tautika. Ka whakahaerehia ngā mahi korikori e tētahi kaiwhakangungu motuhake i ngā toronga e whā, e rima rānei, ki te kāinga o te tangata. Kei te Tūtohi 3 ngā āhuatanga matua o te kaupapa.

Kei tēnei wāhanga ngā aratohu mā te kairomiromi, mā te kaiwhakangungu rānei i a ia e whakahaere ana i te hōtaka ki ngā kaumātua e noho ana i ū rātou ake kāinga. Kua whakaputaina hoki tētahi pepa e whakamārama ana i ‘ngā pēheatanga’ o te kaupapa. (17)

## Te wātaka

Toro atu ki te kāinga o te tangata, kia whā, kia rima rānei ngā wā ki te āta whakahaere, ki te whakawhanake hoki i ngā korikori whakatāwariwari i te tinana, ngā korikori whakakaha i ngā uaua me te tū tautika kei te Tūtohi 4 me tētahi mahere hīkoi. I te wā o ngā whakamātautau, ka toroa te kāinga i te wiki tuatahi, tuarua, tuawhā, tuawaru, ā muri hoki i te marama tuaono (tirohia te Tūtohi 3.1).

- Tāpuia tētahi hāora mō te toronga tuatahi ki te kāinga, ā, kia 30 meneti mō ngā huihuinga ā muri atu.
- Ka tīmata te hōtaka ki ngā tūmahi whakamahana tinana ōrite, arā, kia rima ngā korikori whakatāwariwari (kei te Āpitihanga 3), e rima meneti te roa.

- Ka tutuki ngā mahi korikori (hei whakatāwariwari, hei whakakaha, hei whakatū tautika hoki i te tinana) i te takiwā o te 30 meneti, ā, kia toru ngā mahinga i te wiki, waihoki, me whakatā i ngā rā o waenganui.
- Tonoa te tangata ki te hīkoi, kia 2 ngā rā o te wiki mō te 30 meneti mēnā e tika ana.
- I waenganui i ngā toronga ki te kāinga, me waea atu ki te tangata ki te kōrero mō ngā mahi, ki te whakaea i ngā raruraru, ki te akiaki anō i te tangata.
- Me tuhituhi ngā mahi korikori me ngā takanga mā tētahi maramataka, mā tētahi rātaka rānei.

Whakamahia ngā kōrero me ngā pikitia e pā ana ki ia mahi korikori ki te Āpitihanga 3 ki te hanga i tētahi puka tohutohu mā ia tangata.

## Te toronga tuatahi ki te kāinga

I te toronga tuatahi (1) Me whakawhanaunga atu ki te tangata (2) whakamāramahia atu te kaupapa o te hōtaka (3) tonoa ngā kōrero mō te hauora, ā, aromatawaihia ngā āhuatanga e whai pānga ana ki te noho haumaru me te āhei ki te ū ki te hōtaka (4) whakamātauria te kaha me te tōtika o te tū hei tūāpapa mō te kaupapa (5) tautohua ētahi tūmahi korikori, ā, ākina te tangata ki te whai haere i ngā tohutohu mō ia tūmahi korikori, ā (6) mēnā e tika ana, whakatakotohia tētahi mahere hīkoi.

Ka aromatawaihia te kaha o ngā uaua o ngā peke o raro mā ngā whakamātautau māmā e rua: ko te

whakamātautau i te āhua o te tūnga ake me ngā whakamātautau e whā mō te tū tautika (tirohia te Āpitihanga 1). (18, 19) He whakamātautau māmā ēnei, he whai tikanga, he whai hua anō, ā, ehara i te mea me whai rawa motuhake, hāunga anō tētahi matawā tū. Mā ēnei whakamātautau ka kitea ngā raruraru o te kaumātua, ka noho hoki ngā otinga hei pae matua e mōhiotia ai ngā kokenga whakamua.

Aromatawaitia te kaha me te tū tautika o te tangata hei pae matua, ā, hei whakapuaki ake i te hōtaka, tautohuā ngā mahi korikori e tika ana me te taumata e tika ana mā te tangata. (kei te Tūtohi 4 ngā mahi korikori)

## Ngā mahi hei whakakaha i ngā uaua, hei whakaū i te tū tautika

Ka arotahi ngā mahi whakakaha ki ngā uaua o ngā peke matua o raro:

- ko te uaturi, ko te toroturi, ko me ngā momo uaua o te hope e pai ai te neke me te hīkoi.
- ko te ua rekereke me te ua kapuwae, kia tū tautika anō te tangata.

Ka whakataumahahia ngā maitai rekereke i te uaturi, i te toroturi me ngā ua hope; ka whakakahangia te ua rekereke me te ua kapuwae mā te taumaha o te tinana anake.

He tūmahi korikori ngā tūmahi tautika, arā, ehara i te mea e tū noa ana te tangata. Ka whakapūmauhia te tū tautika, waihoki ka whakakahangia ake te āhei ki te whakatikatika anō i tōna tū.

I ngā toronga ki ngā kāinga, whakaritea ētahi mahi korikori mā ia tangata e hāngai ana ki tōna anō hauora me ūna anō āheinga. Me whai kia piki ake te uaua o ngā tūmahi korikori i te takanga o te wā.

## Te mahere hīkoi

Tonoa te tangata ki te hīkoi, hei wāhi anō o te hōtaka korikori, kia piki ake hoki tōna kaha ā-tinana. Kia mahara mai, e kore te mahi hīkoi anake e whakaheke i te nui o ngā takanga.

- Kia 30 meneti te roa o te hīkoi, me hīkoi noa, ehara i te mea me tere. E tika ana kia 2 ngā hīkoi i te wiki.
- Me wāwāhi hoki rānei te roa o te hīkoi, arā, kia toru ngā hīkoi, kia 10 meneti te roa.

I ngā toronga ki ngā kāinga, whakaritea ētahi mahi korikori mā ia tangata e hāngai ana ki tōna anō hauora me ūna anō āheinga. Me whai kia piki ake te uaua o ngā tūmahi korikori i te takanga o te wā.

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## **Ngā whakaritenga mō ngā tūmahi korikori**

### **NGĀ TIKANGA MAHI**

Whakatauirahia, whakamāramahia, ā, āta titiro ki te tangata e mahi ana ngā tūmahi korikori, arā:

- me whakatutuki ngā tūmahi whakamahana i te tuatahi, kia rima meneti te roa.
- me hāngai ngā tūmahi korikori ki te tangata.
- me mahi tonu ia ngā tūmahi korikori i tōna kotahi, i waenga i ō toronga ki tōna whare.

### **NGĀ TŪMAHI WHAKAKAHA**

- Kei te taumata tuatahi, whakaritea te taumaha o ngā maitai rekereke i runga i tōna āhei ki te whakatutuki kia 8-10 ngā mahinga tōtika o te tūmahi korikori i mua i te paunga o tōna hau. Me aromatawai ia huinga uua, ki ia waewae. Ka tīmata ngā tāngata e 80 neke atu ngā tau, ki te maitai 1kg ki te 2kg. I te wā o ngā whakamātautau, ka eke ngā maitai o ētahi tāngata ki te 8kg.
- Kia mahara: me he māmā te taumaha o ngā maitai i te tuatahi, ka iti noa te mamae ki ngā uua, ka māmā ake ngā mahi ki te tangata.

I te tangata e whai ana i ngā tūmahi whakakaha:

- me mau i a ia ngā maitai rekereke mēnā e tika ana.
- me iti noa te pānga ki ētahi atu huinga uua.
- me whai ngā tikanga whakahā tōtika (arā, me whakahā i mua i te hikinga, me whakaputa hā i a ia e hiki ana, me whakahā i a ia e tuku ana i te maitai). me āta haere te tangata (arā,

kia rua ki te toru hēkona ki te hiki i te maitai, kia 4 ki te 5 hēkona ki te tuku i te maitai) me whakamahi ngā uua tika i te wā tika.

- me whakatā te tangata i waenga i ngā huinga tūmahi – kia 1-2 meneti te roa.
- hāunga anō te wā e noho ana te tangata ki te mahi i te “tūmahi whakakaha a mua o te turi”, me tū te tangata ki te whakatutuki ngā tūmahi korikori (hei hāpai i te tū tautika me te kaha).
- he tūmahi āhua māmā ēnei, ehara i te mea me ngenge te tangata.

### **NGĀ TŪMAHI E WHAKAORA ANA I TE TŪ TAUTIKA**

- Mātakina te tangata i a ia e pupuri ana ki ia tūmahi whakatautika, ā, me āta mōhio ka taea e ia te tū tautika anō mā te whakamahinga o te wāhangā o raro o tōna tinana (arā, kāore i te nanao atu mā te ringaringa) i mua i te whakatau koia te tūmahi motuhake tōtika mōna.
- Ehara i te mea ka tīmata ngā tāngata katoa ki te taumata tuatahi, ka mahi rānei i ngā tūmahi whakatautika katoa. Mēnā e tīkokikoki ana te tū, me whai papa āwhina.

I te wā e whai ana te tangata i ngā tūmahi whakatautika:

- me hāngai te titiro ki mua.
- me mōhio te tangata he pai noa iho te whakatikatika i te tū o ngā waewae, arā, kia tau tētahi waewae ki te papa i a ia e mahi ana i ngā tūmahi korikori.

## **Ngā rauemi**

Ka whiwhi ia tangata:

- i te puka ārahi e mau ana i ngā pikitia me ngā tohutohu, e tāia ana ki ngā pū nui, mō ngā tūmahi korikori i whakaritea hei whai mā rātou.
- i te maitai rekereke kotahi, neke atu rānei, ā, kia ngāwari te whakamau atu me te unu atu. Kia mahara: ka piki ake te kaha o te tangata, me piki haere te taumaha o te maitai rekereke.
- i te maramataka, i te rātaka rānei ki te aroturuki i ngā tūmahi korikori me ngā takanga.

Kei te kaiwhakangungu:

- tētahi matawā tū mō ngā aromatawai.
- he tānga o Tūtohi 4 e mau ana i ngā tūmahi korikori kei ia taumata.
- he tānga o te puka ārahi me ngā tohutohu mō ia tūmahi ki ia taumata, hei whakauru atu ki tētahi kōpaki motuhake mā te tangata. E mau ana ēnei ki te Āpitihanga 3.
- he tūtohi hei tā i ngā tūmahi whakakaha me ngā tūmahi whakatautika me ngā taumata e tika ana mā ia tangata i ia toronga atu ki a ia (kei te Āpitihanga 2).

## **Ngā ahunga whakamua i ngā toronga ā muri atu**

### **NGĀ TŪMAHI WHAKAKAHA**

- Tāpirihia atu he maitai anō ki ngā maitai rekereke hei whakapiki ake i te uua o ngā tūmahi whakakaha, hei whakapiki ake rānei i te nui o ngā huinga tūmahi kei te Tūtohi 4.
- Hei tauira, tōna tikanga me āhei te tangata ki te whakatutuki kia rua ngā huinga tūmahi o ngā mahinga 10 i mua i tana pikinga ake ki te taumata hou.
- Me āta whakataurite ngā painga o ngā maitai taumaha ki te tūpono o te pānga atu o tētahi raruraru (arā, kei whara, kei pā te mate manawa, kei whakarērea noa ngā mahi).

### **NGĀ TŪMAHI WHAKATIKA ANŌ I TE TŪ TAUTIKA**

- Ka piki haere te uua o ngā tūmahi tautika, arā, i te tuatahi ka pupuri te tangata ki tētahi hanga pūmau, ā, ka taka te wā, ka tū motuhake kē ia ki te whakatutuki i te tūmahi.
- E rārangi atu ana ngā taumata o ngā tūmahi ki te Tūtohi 4.

## **He tikanga whakahauamaru anō**

- Tonoa ngā tāngata kua pāngia e ngā momo mate kaikōwi me ērā atu mate mamae ki te ū ki te taumata korikori tika mā rātou – kia kore ai rātou e pāngia e te mamae.

- Tonoa te tangata ki te whakamutu atu i te tūmahi korikori, ki te whakapā atu hoki ki te tākuta mēnā ka ānini te māhunga, ka mamae te poho, ka kihakiha, ka ū roa rānei te mamae o ngā uaua.
- Ki te taka te tangata, tonoa ia ki te haere ki te tākuta, ā, ki te whai rānei i ētahi atu momo rautaki whakakaupare wharanga, pērā i ngā papare whakamarumaru hope.
- Ki te pāngia te tangata e tētahi mauiui, ā, ka haukotia te rere o te hōtaka, me whakapā atu ia ki te kaiwhakangungu i mua i te hokinga atu ki ngā tūmahi.

## Kia mau, kia ū

Me ū ki ngā tūmahi korikori kia rangona ai ngā painga.

Anei ngā rautaki e tutuki ai tēnā āhuatanga:

- Āta whakapuaki ake ngā mahi, me whakarite ngā whāinga tōtika.
- Me tautoko tonu, me akiaki tonu te tangata, arā, me waea atu ki a ia i waenga i ngā toronga atu ki tōna kāinga.
- Me toro atu anō ki a ia i ngā wā e tika ana, arā, ki te tīmata anō te tangata, ki te whakahoungia rānei tētahi āhuatanga, nō muri atu rānei i te mauiui.
- Ākina te tangata ki te hīkoi, ki te whai i ētahi atu momo mahi korikori (ehara i te mea ka heke te pānga atu o te takanga i te hīkoi anake).

- Me piri atu ki ētahi atu hōtaka ā-rōpū, hei tauira me tutaki ki ngā hoa i ia wiki ki te whakaū i ngā mahi.
- Me whai wāhi atu te whānau.
- Me whai wāhi atu te tākuta.

## Te aroturuki

Anei ētahi ara māmā ki te aroturuki i ngā hua o te hōtaka:

- Me tuhi tētahi rātaka i ia marama e whakatakoto ana i ngā takanga. Matapakina ngā āhuatanga o te takanga mā te waea. Tuhiā ngā tūmahi e whakatutukihia ana e te tangata ki tētahi maramataka, ki tētahi rātaka rānei.
- Me aromatawai ngā ahunga whakamua mā ngā whakamātautau māmā mō te kaha me te tū tautika (pērā i ngā whakamātautau mō te tū tautika me te āhua o te tūnga ake). Whakatauritehia ngā otinga ki te aromatawai tuatahi.

# Tūtohi 3 – ngā āhuatanga matua o te Otago Exercise Programme

	Whakakaha	Whakatautika anō	Hīkoi
Ngā tūmahi	Kia 5 ngā tūmahi whakakaha i ngā uaua o te waewae, kia 4 ngā taumata korikori*	Kia 12 ngā tūmahi whakatautika, kia 4 ngā taumata korikori*	He kōrero mō te hīkoi
Aromatawai	Kia tika te taumaha o ngā maitai rekereke kia eke ngā mahinga ki te 8-10 rānei i mua i te paunga o te hau	Whakatūria ngā tūmahi ki te taumata e tika ana kia whakatutukihia e te tangata i tōna kotahi	Matapakina ngā tūmahi hīkoi i tēnei wā
Te kaha	Kia āhua kaha	Kia āhua kaha	Kia hīkoi noa, kia mau noa ki āna rawa āwhina
Ngā taumata*	Whakapikihia ake te nui o ngā tūmahi ki ngā huinga e rua o ia tūmahi.	Mai i te tūmahi whai tautoko ki te tūmahi tautoko-kore	
Te maha	Kia 3 ngā wā i te wiki – me whakatā i waenganui	Kia 3 ngā wā i te wiki	Kia 2 ngā rā i te wiki
Te roa	Kia 30 meneti ki te whakatutuki i ngā tūmahi tāwariwari, whakakaha me te whakatautika; he pai noa te whakatutuki i te roanga o tētahi rā		Kia 30 meneti: ka taea te wāwāhi ki ngā hīkoi e toru i te rā kotahi, kia 10 meneti te roa

\* Kei te Tūtohi 4 ngā tūmahi kei ia taumata

## Tūtohi 3.1 Te wātaka o te Otago Exercise Programme

Te marama	1	2	3	4	5	6	Ā-marama	12
Te wiki	1	2	4	8				
Ngā toronga	X	X	X	X			X	X
Ngā waea					X	X	X	
Kua aroturukina ngā tūmahi			X	X	X	X	X	X
Kua aroturukina ngā takanga			X	X	X	X	X	X

# Tūtohi 4 – ngā taumata me te nui o ngā mahinga o ngā tūmahi whakakaha me ngā tūmahi whakatautika

Ngā tūmahi whakakaha		
1 Whātoro turi (hei whakakaha o mua o te turi)	NGĀ TAUMATA E 4	
2 Uaturi (hei whakakaha o muri o te turi)	Ka whakamaua ngā maitai rekereke hei hiki mā ngā uaua, ā, kia 10 ngā mahinga o ia tūmahi	
3 Uahope (hei whakakaha i te taha o te hope)	TAUMATA C	TAUMATA D
4 Uaturi (he hiki takapū)	Kia 10 ngā mahinga, kia mau ki tētahi rawa, mahia anō	Kia 10 ngā mahinga, kāore he rawa āwhina, mahia anō
5 Ua rekereke (he hiki matiwae)	Kia 10 ngā mahinga, kia mau ki tētahi rawa, mahia anō	Kia 10 ngā mahinga, kāore he rawa āwhina, mahia anō

## Ngā tū mahi whakaora whakatautika

	TAUMATA A	TAUMATA B	TAUMATA C	TAUMATA D
1 Turi whatia	Kia 10 ngā mahinga Puritia te tokotoko	i) Kia 10 ngā mahinga, kāore he tokotoko ii) kia 10 ngā mahinga, puritia te tokotoko, mahia anō	Kia 10 ngā mahinga Kāore he tokotoko, mahia anō	Kia 3 x 10 ngā mahinga Kāore he tokotoko
2 Hīkoi whakamuri		Kia 10 ngā takahanga, e 4 ngā wā Puritia te tokotoko		Kia 10 ngā takahanga, e 4 ngā wā. Kāore he tokotoko
3 Hīkoi, ā, hurihia		Hīkoi, ā, hurihia (mā te āhua o te 8) e 2ngā wā Whakamahia te tokotoko	Hīkoi, ā, hurihia (mā te āhua o te 8) e 2 ngā wā Kāore he tokotoko	
4 Neke tītaha		Kia 10 ngā takahanga, e 4 ngā wā, Whakamahia te tokotoko	Kia 10 ngā takahanga, e 4 ngā wā Kāore he tokotoko	
5 Tū rua (rekereke, matiwae, tū)	Kia 10 hēkona Pupuri tokotoko	Kia 10 hēkona Kāore he tokotoko		
6 Hīkoi rua (rekereke, matiwae, hīkoi)			Kia 10 ngā takahanga, kia mau ki te tokotoko, mahia anō	Kia 10 ngā takahanga, kāore he tokotoko, mahia anō
7 Hīkina tētahi waewae		Kia 10 hēkona, kia mau ki te rawa tokotoko	Kia 10 hēkona, kāore he rawa tokotoko	Kia 20 hēkona, kāore he rawa tokotoko
8 Hīkoi rekereke			Kia 10 ngā takahanga, e 4 ngā wā, kia mau ki te rawa tokotoko	Kia 10 ngā takahanga, e 4 ngā wā, kāore he rawa tokotoko
9 Hīkoi matiwae			Kia 10 ngā takahanga, e 4 ngā wā, kia mau ki te rawa tokotoko	Kia 10 ngā takahanga, e 4 ngā wā, kāore he rawa tokotoko
10 Hīkoi rekereke matiwae whakamuri				Kia 10 ngā takahanga whakamua, kāore he rawa tokotoko, mahia anō
11 E noho, e tū	Kia 5 ngā tūnga, kia 2 ngā ringaringa hei tokotoko	i) Kia 5 ngā tūnga kia 1 te ringa ii) kia 10 ngā tūnga, kia 2 ngā ringa hei tokotoko	ii) kia 10 ngā tūnga, kāore he ringa tokotoko ii) kia 10 ngā tūnga, kia 1 te ringa tokotoko, mahia anō	Kia 10 ngā tūnga, kāore he ringa tokotoko, mahia anō
12 Piki arapiki	Whāia ngā tohutohu	Whāia ngā tohutohu	Whāia ngā tohutohu	Whāia ngā tohutohu, mahia anō

# Ngā pānga o te rangahau ki te ao tūturu

He wāhi anō ngā rangahau o tēnei pukapuka o ngā taunakitanga e mea ana ka taea te kaupare atu i ngā takanga me ngā wharanga e hua mai ana i te takanga.

I te mea, he nui ake te tūpono ka hūnuku ngā kaumātua e pāngia ana e te takanga ki te whare kaumātua, ki te kauparehia atu ngā takanga, ka roa ake te noho motuhake o ngā kaumātua ki waenganui i te hapori. Mā ngā kaupapa e kaupare atu ana i ngā takanga ka iti ake ngā utu ki ngā kuhunga ki rō hōhipera me ngā whare kaumātua – otirā, koia ngā wāhi e kawe ana i ngā utu nui a ngā wharanga nā ngā takanga.

Heoi anō, e whakahaerehia ana te nuinga o ngā kaupapa kaupare takanga ki waenganui i te hapori, ahakoa kāore anō kia kitea ngā taunakitanga e pā ana ki ngā hua. Hei tā ētahi rangahau, kāore he painga o ētahi kaupapa ki te whakaheke i te nui o ngā takanga, o ngā wharanga rānei, otirā, ka kino kē atu ngā raruraru o ētahi.(16)

Kua whakamātauria te Otago Exercise Programme ki ngā aromatawai motuhake e whā, ā, kua kitea ka heke te nui o ngā takanga me ngā wharanga i waenga i te hunga kaumātua e noho ana ki te kāinga, inā rā, ko rātou e 80 tau, neke atu te pakeke.

Kāore anō tētahi kaupapa kaupare takanga kia āta whakamātauria pēnei i tēnei. Ko tētahi atu painga o ngā taunakitanga nei, kua whakamātauria te kaupapa ki tua atu i te wāhi rangahau, ā, kua kitea he whai tikanga, he whai hua anō te kaupapa mēnā ka whakahaerehia mai i tētahi whare hauora anō.

I te mea ko te kauparenga atu o te mate te take matua o ngā pūtea e whakapaua ana ki ngā ratonga hauora, kei te kitea ngā taunaki tōtika mō te whakatakotoranga o tēnei hōtaka hei kaupare atu i ngā takanga me ngā wharanga i waenganui i te hunga kaumātua.

Kei tēnei wāhangā ētahi o ngā take matua hei whakaaerotanga mā te hunga e whakatinana ana i ngā putanga o ngā rangahau.

## Te whakangungutanga o ngā kaiwhakahaere

Ki te whakahaerehia te kaupapa e tētahi kairomiromi, e tētahi nēhi rānei kua oti kē i a ia tētahi hui whakangungu kotahi wiki te roa, ā, ka arahina āna mahi i ngā whakamātautau e te kairomiromi, ka heke te nui o ngā takanga me ngā wharanga.

Me āta whakatakoto ngā hui whakangungu i ngā taunakitanga a te rangahau, te kaupapa o te hōtaka, ā, me āta whakamārama hoki ngā mahi whakahaere. Me ārahi hoki ngā kaiwhakahaere, ā, me tautoko tonu i a rātou i te roanga o te hōtaka.

Me mōhio te kaiwhakangungu:

- ki te āta whakamārama i te kaupapa me ngā hua o te hōtaka ki ngā kaiuru.
- ki te aromatawai ngā kaiuru, ā, ki te waihangā hoki i tētahi hōtaka motuhake e hāngai ana ki ngā āheitanga o te tinana me te hauora o te tangata.

- ki te whakatakoto i ngā tūmahi kia pai ai te whakatutukitanga mā te tangata – kia haumaru, kia māia, kia tika hoki ngā tūmahi korikori.
- ki te tuku kōrero āwhina e pā ana ki ngā tikanga haumaru ki te hunga kua pāngia ki ngā mate ā-tinana pērā i te kaikōiwi, i ngā ponā hou rānei.
- ki te aroturuki i te hōtaka, ā, ki te whakatakoto i ngā kōrero me ngā pikinga tōtika i runga i te urupare o te tangata ki ngā tūmahi korikori.
- ki te whakarerekē i te hōtaka i muri i te mauui.
- ki te tautoko, ki te akiaki i ia tangata.

Me ārahi te kaiwhakahaere e tētahi kairomiromi, inā rā, ko te hunga e tauhou ana ki te whakarite tūmahi korikori mā te hunga kaumātua.

Anei ngā mahi a te kaiārahi:

- Me wātea te kaiārahi ki te whakautu pātai ā-waea, ki te tuku kōrero āwhina, ki te akiaki hoki i te kaiwhakahaere.
- Me tae ā-tinana atu ki te wāhi korikori kia tika te kounga o te hōtaka. Me he kairomiromi te kaiwhakahaere, he pai noa iho te aropā.

## **Ngā whakaritenga me te whakatinanatanga o te hōtaka**

Kāore he pānga o ngā mahi noa a te hunga kaumātua, pērā i te hīkoi me te mahi māra, ki te pikinga o te kaha o ngā uaua, ki te haukotinga rānei o te ngoikoretanga i te wā o te kaumātuatanga. Me whakatū ngā tūmahi whakakaha, whakatautika anō e hāngai ana ki te tangata tonu, otirā, he whakaaro hou pea tēnei ki te hunga kaumātua.

I ngā whakamātautau, i hua mai ngā painga ki te kaha me te tū tautika o te tangata i te hāngai o ngā tūmahi korikori ki taua tangata tonu. Ko tā ngā maitai rekereke, he whakataumaha i ngā hīkinga ā, i mahia ngā tūmahi korikori katoa i te wā e tū ana te tangata (hāunga anō ngā whātoronga ā-turi).

I te wā o ngā whakamātautau, ka whakaūngia ngā hua o te kaupapa i ngā toronga e whā, e rima rānei ki ngā kāinga. Mēnā he iti ake ngā toronga ki ngā kāinga, ka kore pea te tangata e ahu whakamua, ka tere rawa rānei te ahunga whakamua, kātahi ka pau te hau, ka piki ake rānei te tūpono o te wharanga.

**Kāore e mōhiotia ana mēnā ka eke te kaha me te tū tautika o te tangata ki te taumata e tika ana mēnā ka whakarerekēhia tētahi wāhi o te hōtaka.**

He kupu whakatūpato:

- He pānga mōrearea anō tā te whakatairangatanga o te tūmahi me te mahi motuhake. Ahakoa he iti noa iho ngā raruraru i pā i te wā o ngā whakamātautau, me mōhio tonu, nā te hōtaka nei ka piki ake ngā tūmahi korikori, pērā i ngā hīkoi i ia rā, otirā, ka nui ake hoki te tūpono pā o te takanga ki te tangata.
- Me whakapā atu ki te tākuta o te tangata, me tono whakaae me ngā kōrero matua e whai pānga ana ki tana hauora i mua i te whakapuakitanga o te hōtaka.

## Te tautohu tāngata

He mea āta tīpako ake ngā tāngata i roto i ngā whakamātautau matapōkere motuhake, ā, he ngākau hihiri pea ō te nuinga ki te kaupapa. He whānui tonu ngā āheinga ā-tinana o ngā tāngata nō te whakamātautau o te Otago Exercise Programme, ā, nā runga i ngā mahi a te hōtaka ka tino heke te nui o ngā takanga me ngā wharanga, ahakoa i eke tō rātou kaha ki te whai i ngā tūmahi tōtika ki te takiwā o te 43% noa.

E whai pānga ana ngā hua o ngā whakamātautau ki ngā kaumātua katoa – e āhei ana ki te mārama ki te whai haere anō i ngā tohutohu a ngā tūmahi, e āhei ana anō ki te mahi korikori i tō rātou kotahi – e noho ana ki waenga i te hapori.

Hei tā ngā whakamātautau whai tikanga, i heke te nui o ngā takanga o ngā tāngata e 65 tau, neke atu, e noho ana i te kāinga i te 35%.

Heoi, hei tā ngā rangahau anō, ka tino whai pānga ngā rōpū e kaha ana te tūpono ka raruraru rātou i tēnei āhuatanga: te hunga e 80 tau, neke atu me te hunga kua pāngia kētia e te takanga.

Ka pikī ake ngā tau, ka heke haere te kaha o ngā uua me te tū tautika, heoi, me eke te ngoikore ki tētahi taumata, kātahi ka raruraru ngā mahi o ia rā. Ko te whakapae, ka pātata atu te tangata ki taua taumata, ahakoa he iti noa pea te whakapikinga o te kaha, o te tū tautika rānei, ka pai ake tonu tōna tū.

## Te utu o te hōtaka

Ka rerekē ngā utu o te hōtaka i runga anō i ētahi āhuatanga, pērā i te hora o ngā rohe o ngā kaiuru, mēnā e taea ana te whakangungu, te ārahi rānei i te kaiwhakahaere i taua rohe, te utu mō ngā maitai rekereke he māmā te whakamau, mēnā he tari e tū ana i te rohe me ngā hiahia o te kaipupuri pūtea.

I te wā o ngā whakamātautau, ka mahi te kaiwhakahaere i te haurua o te wiki, i te 18 marama, ki te kimi tāngata, ki te whakarato i te hōtaka ki te 100 tāngata mō te kotahi tau. Nō muri atu i ngā toronga tuatahi ki ngā kāinga, ka pūmau tonu ngā hua o te hōtaka, ā, he iti noa ngā rauemi hou i whakamahia; ka kitea hoki tēnei āhua i te wā i whakaroahia ake te Whakamātautau 1 ki ngā tau e rua.

Hei tā ngā rangahau ka puta mai ngā tino hua o ngā whakapaunga pūtea mēnā ka tonoa te hunga e 80 tau neke atu, e noho ana i waenga i te hapori, kua pāngia ki te takanga i te tau kua pahure i te tuatahi.

## Te horopaki

Kāore anō te Otago Exercise Programme kia whakamātauria ki tētahi atu horopaki i tua atu i te kāinga.

Ka pai tonu pea te hōtaka mā ētahi o ngā kaumātua ki roto i ngā whare kaumātua, heoi anō, ka raruraru te hunga kua roa e noho ana ki ēnei whare i te mea, kua ngoikore rawa te tinana ka nui ake te mate hinengaro, te mate wareware rānei.

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He rangatahi ake pe a te hunga e whai ana i tētahi tūmahi korikori ā-rōpū, kāore he rite te kaha o te ngoikore ki ērā nō ngā whakamātautau.

Kāore e mōhiotia ana mēnā ka whai hua te hōtaka i te whakahekenga o ngā takanga me ngā wharanga o te hunga e whai ana i te mahi ā-rōpū, o te hunga kua roa e noho ana i roto i te whare kaumātua rānei.

Kua whakamātauria te hōtaka hei kaupapa motuhake, heoi, ka taea te tāpiri atu i te hōtaka ki ētahi atu rautaki kaupare takanga e whakahaerehia ana mā te hunga kaumātua e noho ana i te kāinga.

Ahakoa i whakamātauria te hōtaka nei hei kaupapa motuhake, ka taea anō te whakahaere te Otago Exercise Programme hei wāhi o tētahi atu kaupapa kaupare takanga.

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19. Rossiter-Fornoff JE, Wolf SL, Wolfson LI, Buchner DM, and the FICSIT Group. A cross-sectional validation study of the FICSIT common data base static balance measures. *J Gerontol Med Sci* 1995;50A:M291-297.

# Āpitihanga 1

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## Te whakamātau i te āhua o te tūnga ake

- Whakamāhia tētahi tūru he tōtika te tuara, ā, kāore he okiokinga mā ngā ringaringa.
- Whakatūria ki te taha o tētahi pakitara (hei tikanga whakamarumaru noa).
- Tonoa te tangata ki te pōkai i ōna ringaringa, kātahi ka tū, ka noho anō kia rima ngā wā. Kia tere te mahi.
- Whakamaua te roa o te wā ki te tū, ki te noho hoki kia rima ngā wā mā te matawā tū.
- Me tutuki ngā mahi i te rua meneti.

Tohua ngā mahinga i tutuki/kāore i tutuki: te roa o te wā mā te hēkona.

Tohutoro: Guralnik JM et al. / Gerontol Med Sci  
1994;49:M85-94

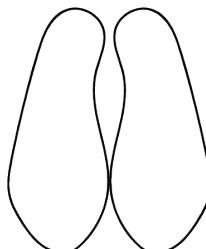
## Ngā whakamātautau e whā mō te tū tautika

- E whā ngā tū mahi tautika, e whakaine ana i te roa o te tū, ā, ka piki haere te uaua, kāore he rawa āwhina (tirohia te pikitia kei tērā taha mō te tū o ngā waewae).
- Kaua e whakawai ngā tū mahi nei.
- Me tū hū-kore.
- Ka taea e te kaiaromatawai te āwhina i te tangata ki te kimi i ngā tūranga tika, ā, ka tukuna te kaiāwhina e te tangata, ka tīmata te whakamātautau.
- Ki te kore te tangata e āhei ki te whai i te tū mahi, kaua e haere tonu (kua raruraru ia).
- Kia 10 hēkona te tangata e ū pūmau ana ki te tūranga, kātahi ka eke ki te tū mahi whai muri atu.
- Me tū te matawā mēnā:
  - ka neke ngā waewae o te tangata i te tūranga tōtika.
  - ka tū te kaiaromatawai hei pou tokotoko kia kore te tangata e taka.
  - ka pā atu te tangata ki te pakitara ki tētahi atu rawa rānei hei tokotoko.

Te whakaine i te hē o te tū tahi o ngā waewae/te taumata i ekea, tirohia rānei Rossiter-Fornoff JE et al. J Gerontol Med Sci 1995;50A:M291-297

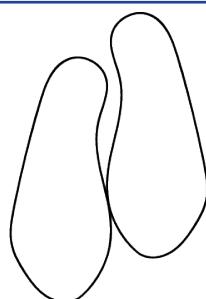
## NGĀ AROMATAWAI E WHĀ E WHAKAMĀTAUTAU ANA I TE TAUTIKA O TE TŪ

### Te tū whakarara



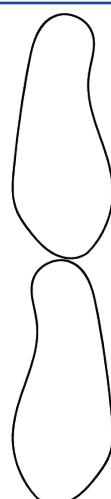
### Te tū kakara/tū whakarehu

- Mā te tangata tonu e whiriwhiri ko tēhea te waewae o mua.
- Me pupuri mō te 10 hēkona.



### Te tū taupiri

- Mā te tangata tonu e whiriwhiri ko tēhea te waewae o mua.
- Me pupuri mō te 10 hēkona.



### Te tū toko tahi

- Mā te tangata tonu te waewae e tohu
- Tīmatahia te matawā nō te hikinga o te waewae
- Kua whiriwhiri mātou ki te whakaroa ake i te wā e puritia te waewae mai i te 10 hēkona ki te 30 hēkona hei whakaū i te taumata o te whakamātautau.



## Āpitihanga 2: te rārangi tūmahi korikori

INGOA	TORONGA 1	TORONGA 2	TORONGA 3	TORONGA 4	TORONGA 5	TORONGA 6
TE RĀ						
Ngā nekehanga o te upoko						
Ngā nekehanga o te kakī						
Whātoroa te tuara						
Ngā nekehanga o te tinana						
Ngā nekehanga o ngā rekereke						
	*TAUMATA	TAUMATA	TAUMATA	TAUMATA	TAUMATA	TAUMATA
He tūmahi hei whakakaha ū mua o te turi						
He tūmahi hei whakakaha ū muri o te turi						
He whakakaha i te taha o te hope						
He tūmahi hiki takapū						
He tūmahi hiki matiwae						
He tūmahi whati turi						
Hīkoi whakamuri						
Hīkoi, ā, hurihia						
Nekenekehia						
E tū mā te rekereke me te matiwae						
Hīkoi mā te rekereke me te matiwae						
Tū toko tahi						
Hīkoi rekereke						
Hīkoi matiwae						
Hīkoi whakamuri mā te rekereke matiwae						
E noho, e tū						
Te pikī arapiki (kia X)						
Te roa o te hīkoi (ngā meneti)						

\*tirohia te Tūtohi 4, kei te whārangī zo mō te taumata o te tūmahi, mai i te A ki te D; ki te kore tētahi tūmahi i whakaritea, tuhia he rārangi (-)

# **Ko te hōtaka tūmahi korikori o Otago, hei kaupare atu i ngā takanga**

Puka tūmahi

---

- Whāia ō mahi mā te maramataka, mā te rātaka rānei.
- Ka mutu ana ō tūmahi korikori, tuhia he “T” ki taua rā i runga i tō maramataka.
- Kua tutuki i a koe tō hīkoi tuhia he “H” ki taua rā i runga i tō maramataka.

# Āpitihanga 3

Nau mai ki te kaupapa! He mea waihanga tēnei hōtaka tūmahi korikori mōu ake.

He nui tonu ngā painga o te mahi korikori. Ka pūmau koe ki tō hōtaka korikori, ka pai ake:

- te tū tautika.
- te kaha o ngā uaua.
- te kaha o te tinana.
- te hauora.

Kia toru, neke atu rānei, ngā whakahā hōhonu i waenga i ia huingga tūmahi.

Ka mamae pea ngā uaua i te tīmatanga. Heoi, he āhuatanga māori noa tēnei. Kāore anō ō uaua kia waia ki te tūmahi korikori. Me ū tonu. Ka waia haere tō tinana ki ngā mahi korikori, ka pai anō te tinana.

## Te noho haumaru

Kaua e mahi korikori i a koe e pupuri ana i tētahi mea e taea ai te nekenekē, pērā i te tūru. Me pupuri kē ki te taha o tētahi mea e tū mārō ana, pērā i te pae, i te tēpu mārō rānei – hāunga anō ngā wā e āta tohua ana ki te whai i tētahi tūmahi.

Ki te pāngia koe e te mauiui, whakapā atu ki tō kaiwhakangungu i mua i tō hokinga atu ki ngā tūmahi korikori.

Whakapā atu ki tō tākuta mēnā ka rongo koe ki ēnei āhuatanga i a koe e mahi korikori ana

- te āmaimai.
- ka mamae te poho.
- ka kihakiha (arā, kāore e āhei ki te kōrero nā te iti o te hā).

Me he pātai āu e pā ana ki te hōtaka korikori, me waea noa mai ki ahau:

## I ia rā, i ia rā

E mōhio ana rānei koe, ka piki ake te kaha o tō tinana mēnā ka nui ake ō tūmahi i ia rā?

Anei ngā momo tūmahi hei whakauru atu ki ō mahi o ia rā:

- Me hīkoi kē ki ngā toa, kaua e taraiwa.
- Me hīkoi kē ki tō hoa noho tata, kaua e waea atu ki a ia.
- Haere mā ngā arapiki kē, kaua e eke te ararewa, te aranekeneke rānei.
- Me heke moata i te pahi, ā, me hīkoi kē ki te kāinga.
- Ka tae mai ana ngā manuhiri, te whānau rānei, me hīkoi tahi i te tuatahi i mua i te kapu tī.
- Me mahi māra i ngā rā e tika ana.
- E tū i a koe e pōkai ana i ngā kākahu.

---

## Te hīkoi

He ara pai te hīkoi hei whakakaha i te katoa o te tinana.

Me hīkoi i ngā rā i waenganui i ngā rā korikori.

Me whakapiki ake te tawhiti o tō haere, te roa hoki o tō hīkoi. Ka paki ana te rā, me hīkoi.

### HE KUPU ĀWHINA MŌ TE HĪKOI

- Me mau ngā hū me ngā kākahu tōtika.
- Me tīmata ki tētahi tūmahī whakamahana, arā, kia 2 meneti e rangatū haere ana ki te wāhi kotahi.

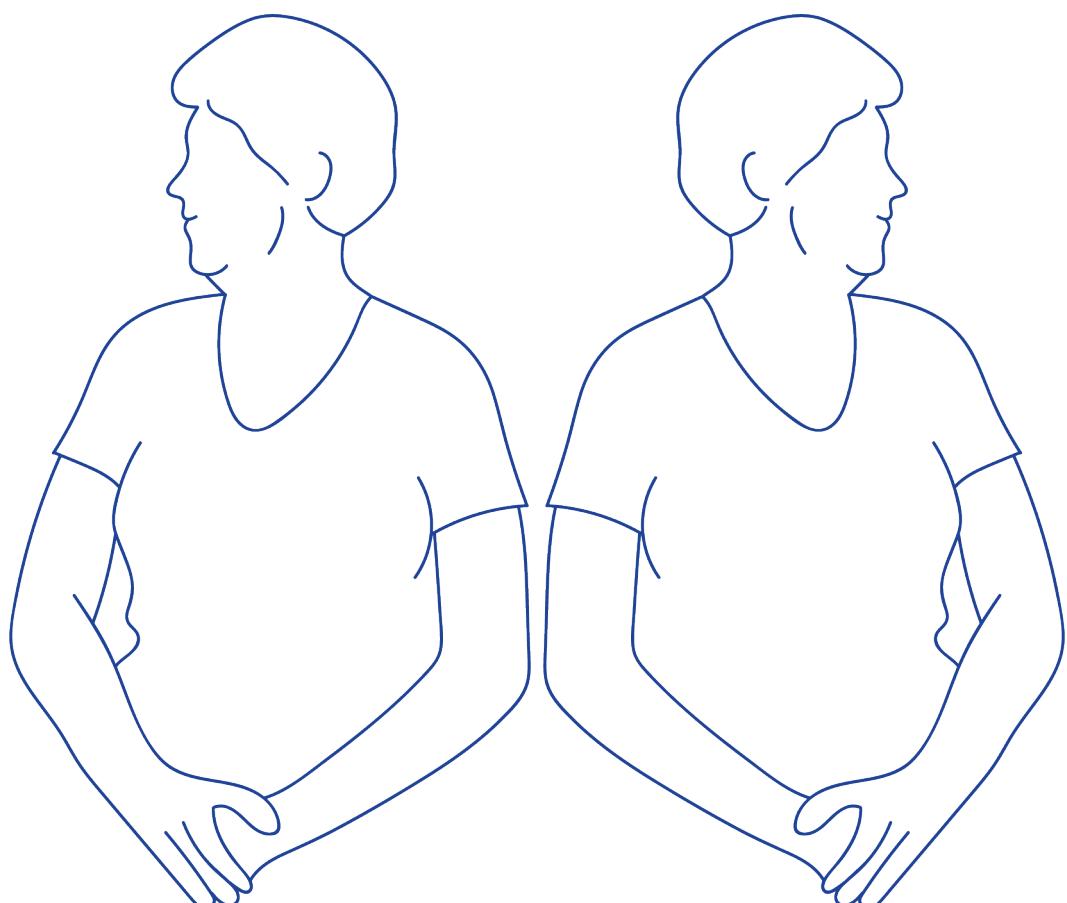
### I A KOE E HĪKOI ANA

- Kia ngāwari ngā pokohiwi, tukuna ngā ringaringa kia rere noa.
- Titiro whakamua, kaua e titiro ki raro.
- Kia tau ngā rekereke ki te papa i te tuatahi, kātahi ka koke whakamua mā ngā matiwaе.
- Me mutu ki te tūmahī whakangā – kia 2 meneti e rangatū haere ana i te wāhi kotahi.
- Mahia i runga i te wairua ngahau!

## Ngā nekehanga o te upoko

---

- E tū tōtika, titiro whakamua
- Āta hurihia tō upoko ki te taha matau rawa
- Āta hurihia tō upoko ki te taha mauī rawa
- Kia rima ngā tū mahi ki ia taha



## Ngā nekehanga o te kakī

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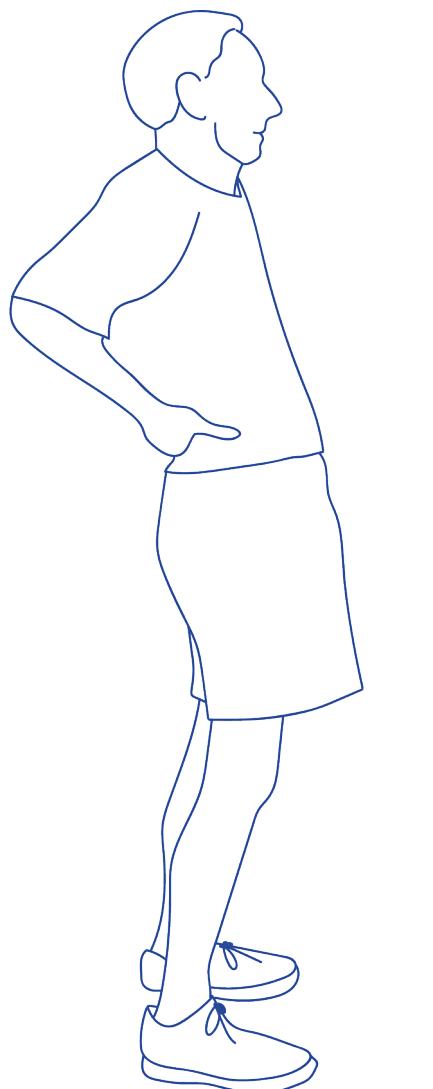
- E tū tōtika, titiro whakamua
- Me whakapā atu tētahi ringa ki tō kauae
- Pēhia tō upoko ki muri
- Kia rima ngā tūmahi



## Whātoroa te tuara

---

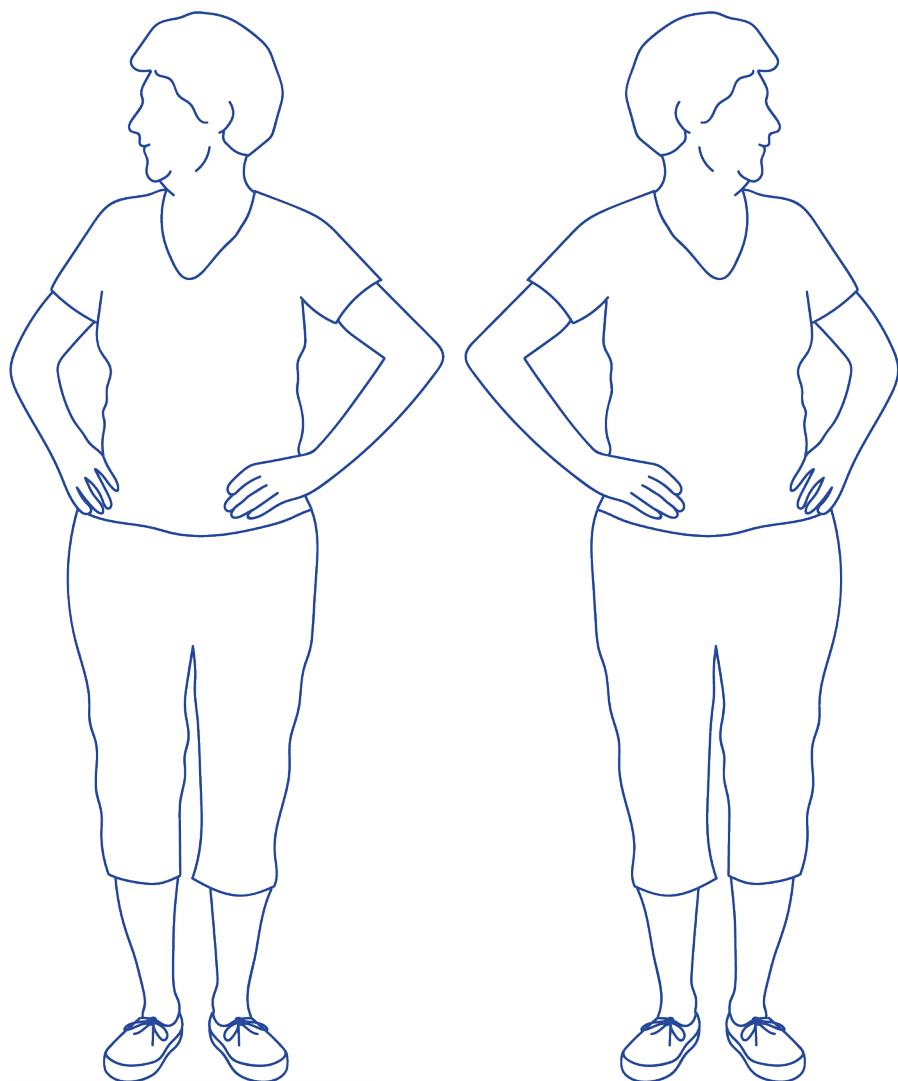
- E tū tōtika, kia rite te whānui o te tū ki te whānui o ngā pokohiwi
- Whakamaua ngā ringaringa ki te kapu o te tuara
- Āta whakatuapuku te tuara ki muri
- Kia rima ngā tūmahi



## Ngā nekehanga o te tinana

---

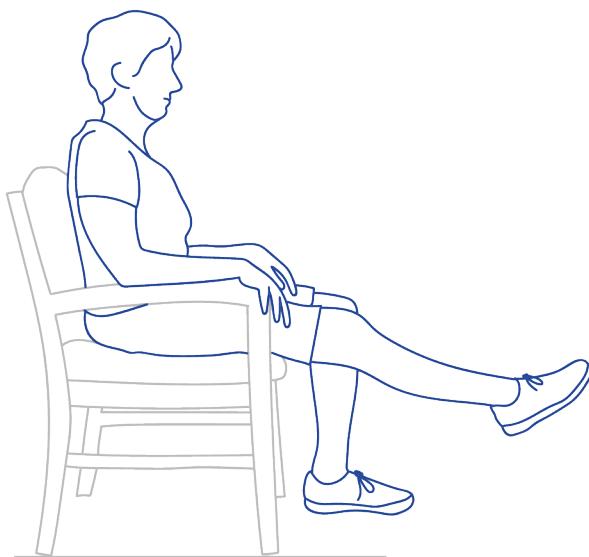
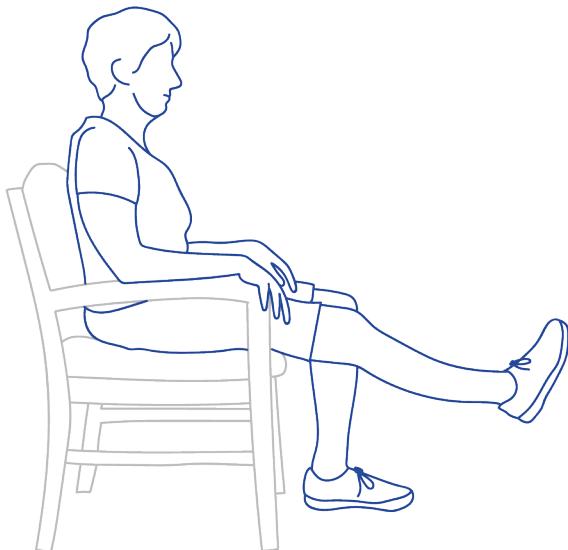
- E tū tōitka, whakamaua ngā ringaringa ki te hope
- Kaua e whakanekeneke tō hope
- E huri ki te taha matau rawa, kia āta haere
- E huri ki te taha mauī rawa, kia āta haere
- Kia rima ngā tūmahī ki ia taha



## Ngā nekehanga o ngā rekereke

---

- E tū, e noho rānei
- Toroa atu tō waewae ki te papa, ā, tōia ake ki a koe anō
- Kia 1o ngā tūmahī ki ia waewae



# Te whakapiki ake i tō kaha mā te hiki maitai

---

Me whakapiki ake te kaha o ō uaua, kia pai tonu ai ngā kōiwi me ngā uaua mō te hīkoi, ā, kia tutuki pai ai i a koe anō ū mahi o ia rā.

Mahia ngā tūmahī whakakaha kia toru ngā rā o te wiki, ā, me whakatā i ngā rā o waenganui.

Me āta hiki te maitai i te roanga o te tūmahī korikori.

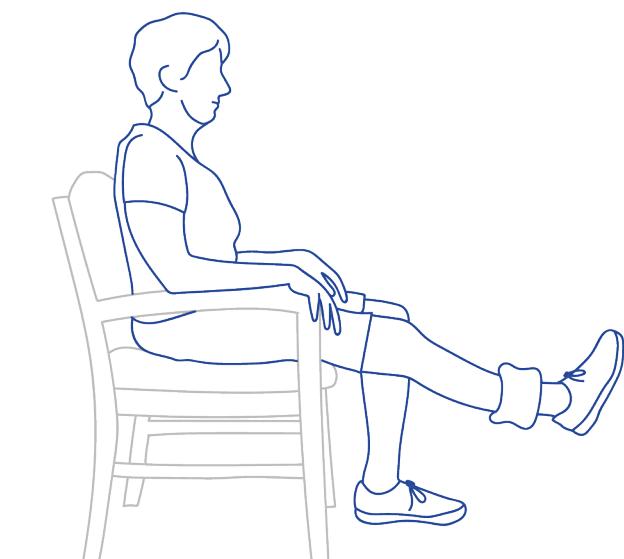
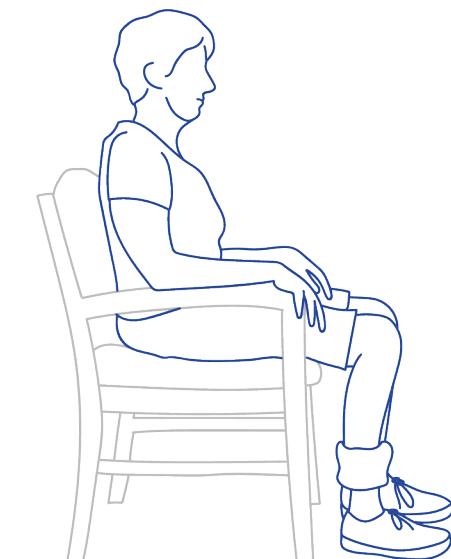
Kaua rawa e pupuri tō hā i a koe e hiki maitai ana.  
Me tango hā i mua i te hikinga, tukuna tō hā i te hikinga ake, ā, me tango hā anō i a koe e whakaheke ana i te maitai.

Ka mamae pea ngā uaua i te tīmatanga. He āhuatanga māori noa tēnei. Kāore anō ū uaua kia waia haere ki ngā mahi korikori. Me ū tonu ki ngā tūmahī korikori. Ka waea haere tō tinana ki ngā tūmahī, ka hikina te mamae.

## He tūmahi hei whakakaha ō mua o te turi

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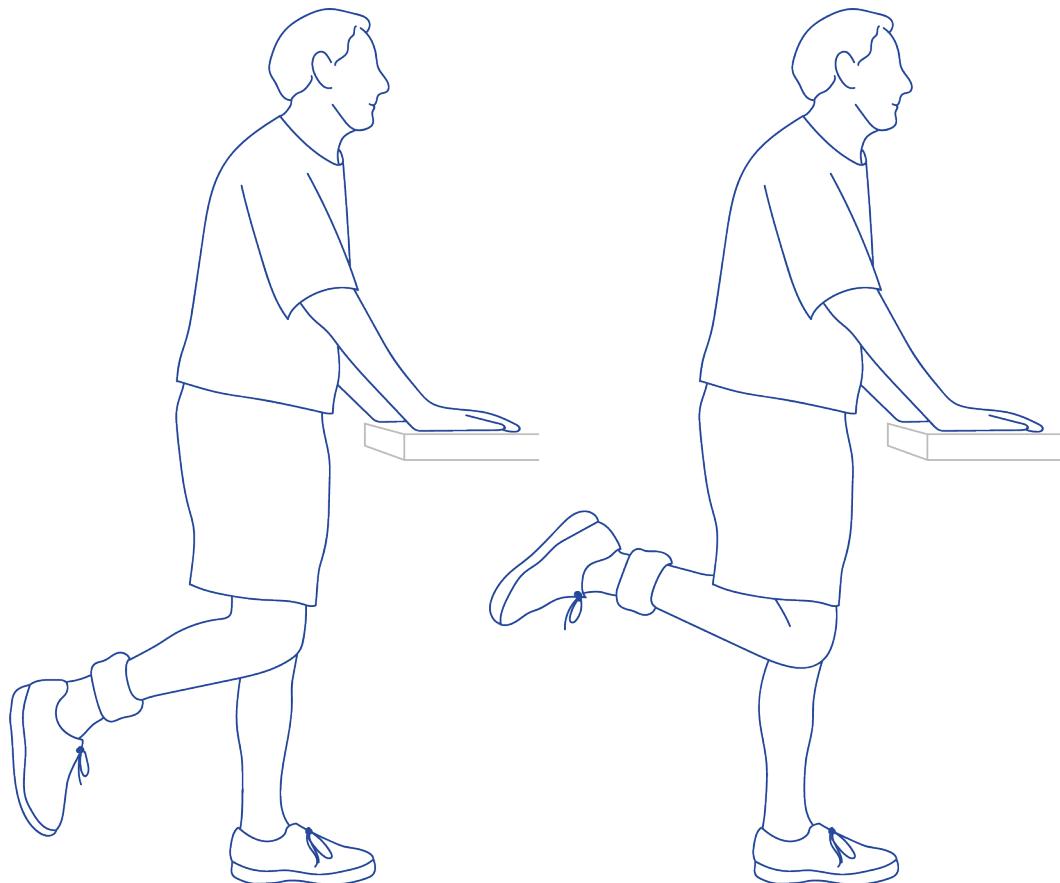
- Mahia tēnei tūmahi i a koe e mātakitaki ana i te pouaka whakaata
- Whakamaua te maitai ki tō rekereke
- E noho ki tētahi tūru, tiakina paitia tō tuara
- Toroa tō waewae ki waho rawa
- Whakahekea tō waewae ki raro
- Mahia anō, kia      ngā wā
- Whakamaua te maitai ki tērā atu rekereke
- Mahia tēnei tūmahi anō kia      ngā wā



## He tūmahi hei whakakaha ō muri o te turi

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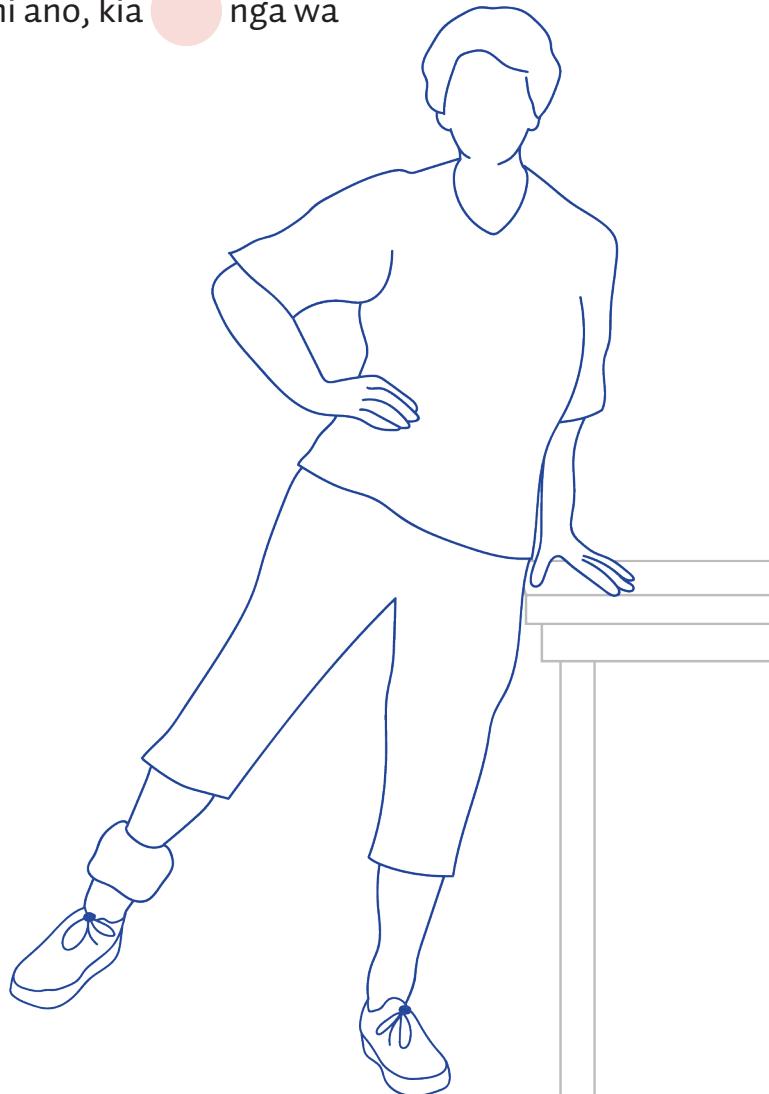
- Whakamaua te maitai ki tō rekereke
- E tū tōtika, kia anga atu te tinana ki tētahi pae. Me noho ngā ringaringa e rua ki te pae.
- Whatia te turi ki muri, kia pā atu tō waewae ki te kumu
- E hoki ki te tīmatanga
- Mahia anō, kia [red circle] ngā wā
- Whakamaua te maitai ki tērā atu rekereke
- Mahia tēnei tūmahi anō, kia [red circle] ngā wā



## He whakakaha i te taha o te hope

---

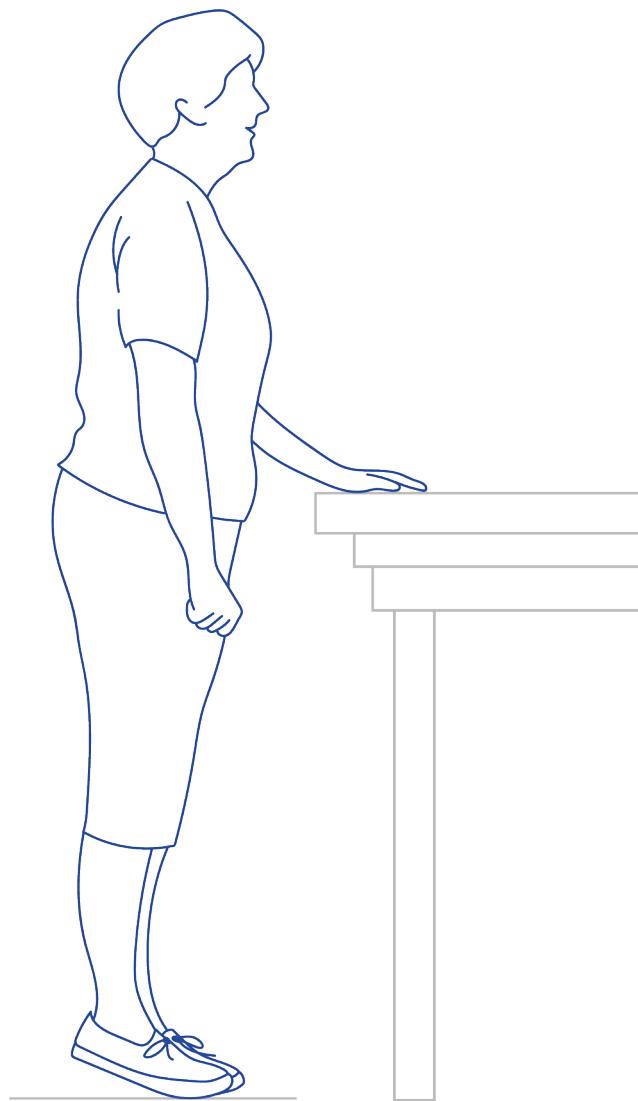
- Herea te maitai ki tō rekereke
- E tū tōtika ki te taha o tētahi pae
- Kia mau ki te pae
- Me tōtika te waewae, me anga whakamua
- Hīkina te waewae ki te taha, ā, hoki atu anō
- Mahia anō, kia [red circle] ngā wā
- Herea te maitai ki tērā atu waewae
- Hurihia
- Mahia tēnei tūmahi anō, kia [red circle] ngā wā



## He tūmahi hiki takapū – whai rawa tokotoko

---

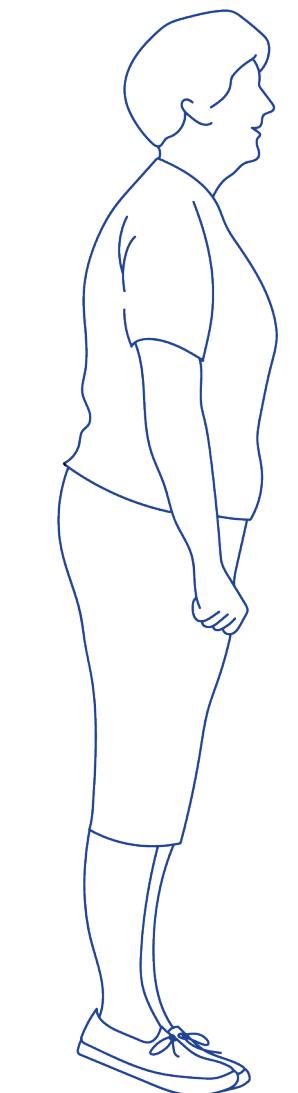
- › E tū tōtika e anga atu ana ki tētahi pae
- › Kia mau ki te pae, titiro whakamua
- › Kia rite te whānui o te tū o ngā waewae ki tērā o ngā pokohiwi
- › E pikī ki runga i ō matiwae
- › E heke ū rekereke ki te papa
- › Mahia tēnei tūmahi anō kia zo ngā wā



## He tū mahi hiki takapū – kāore he tokotoko

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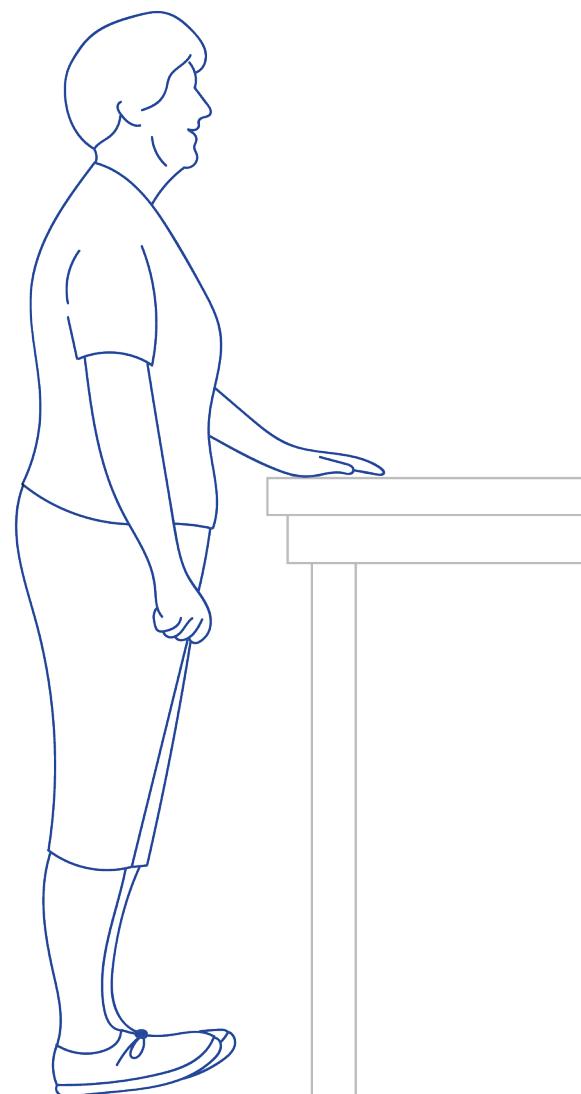
- E tū tōtika, titiro whakamua
- Kia rite te whānui o te tū o ngā waewae ki tērā o ngā pokohiwi
- E piki ki runga i ō matiwae
- E heke ū rekereke ki te papa
- Mahia tēnei tū mahi anō kia zo ngā wā



## He tūmahi hiki matiwae – whai rawa tokotoko

---

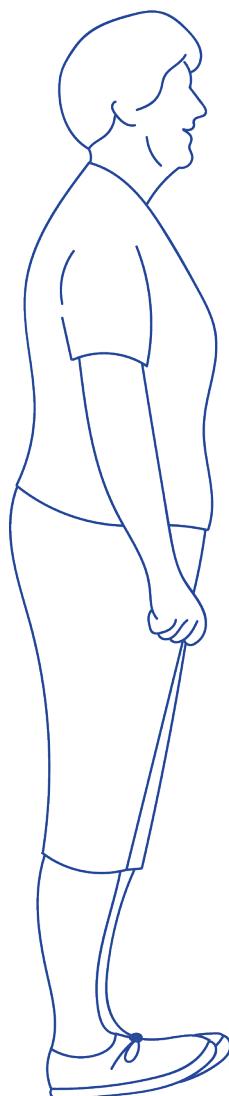
- E tū tōtika ki te taha o tētahi pae
- Puritia, titiro whakamua
- Kia rite te whānui o te tū o ngā waewae ki tērā o ngā pokohiwi
- Neke whakamuri ki runga i ngā rekereke, hikina ake te kapu o ngā waewae
- Tukuna ngā waewae ki te papa anō
- Mahia tēnei tūmahi anō, kia 20 ngā wā



## He tū mahi hiki matiwae – kāore he tokotoko

---

- › E tū tōtika, titiro whakamua
- › Kia rite te whānui o te tū o ngā waewae ki tērā o ngā pokohiwi
- › Neke whakamuri ki runga i ngā rekereke, hīkina ake ngā kapu o ngā waewae
- › Tukuna ngā waewae ki te papa anō
- › Mahia tēnei tū mahi anō, kia zo ngā wā



# Te tū tautika

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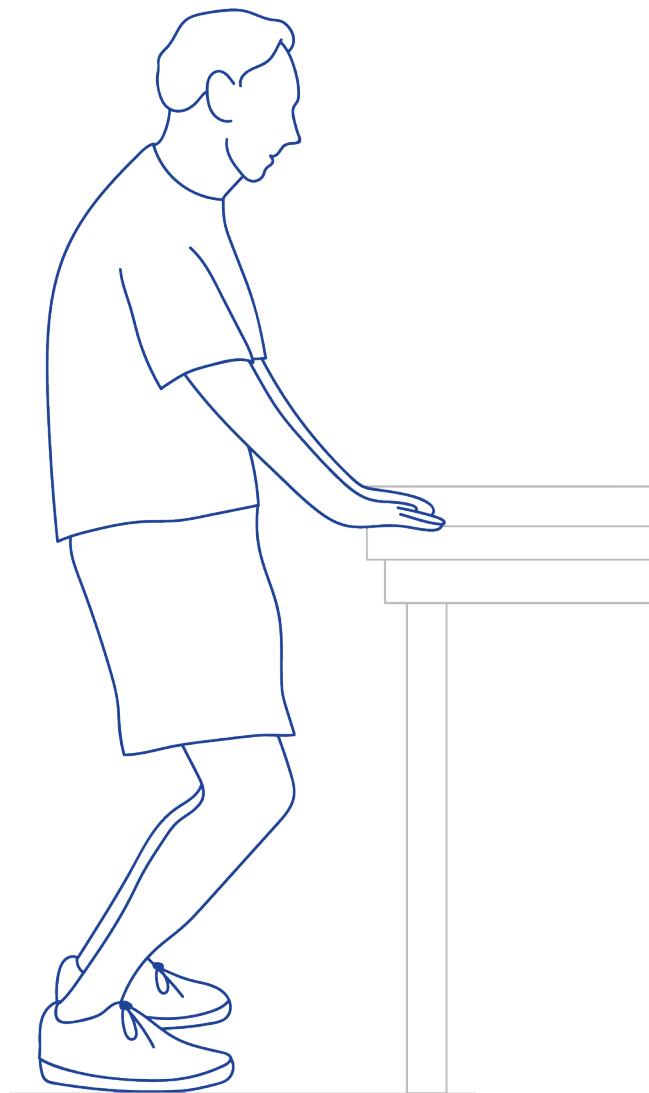
He mea nui te tū tautika e tutuki pai ai ngā mahi o ia rā.

He tū mahi whakatautika tere ēnei, hei mahi i ia rā.

## He tūmahi whati turi – whai rawa tokotoko

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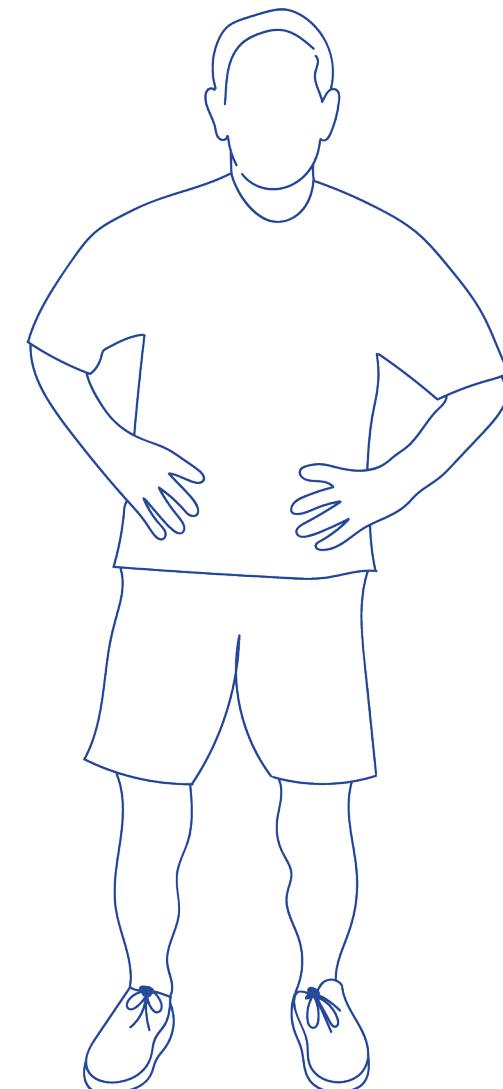
- E tū tōtika, me anga atu ki te pae, puritia ki ngā ringaringa e rua
- Kia rite te whānui o te tū o ngā waewae ki tērā o ngā pokohiwi
- E heke whakararo, turi whatia
- Me noho ngā turi ki runga ake i ngā matiwae
- Ka pikī whakarunga ō rekereke, e tū tōtika
- Mahia anō kia  ngā wā



## He tū mahi whati turi – kāore he tokotoko

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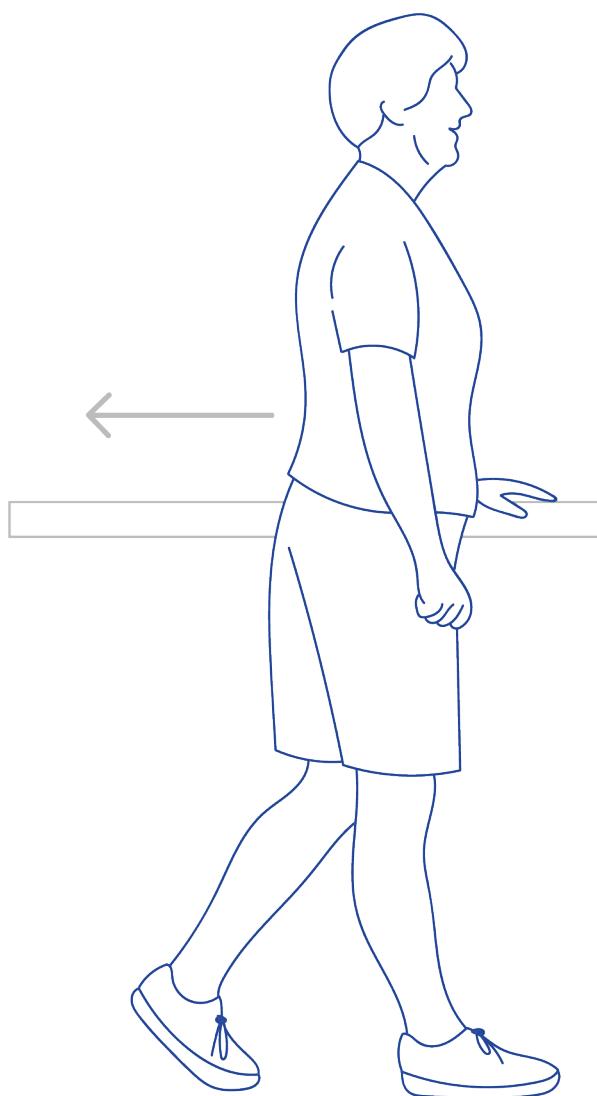
- E tū tōtika, titiro whakamua
- Kia rite te whānui o te tū o ngā waewae ki tērā o ngā pokohiwi
- E heke whakararo, turi whatia
- Me noho ngā turi ki runga ake i ngā matiwae
- Ka piki whakarunga ō rekereke, e tū tōtika
- Mahia anō kia  ngā wā



## Hīkoi whakamuri – whai rawa tokotoko

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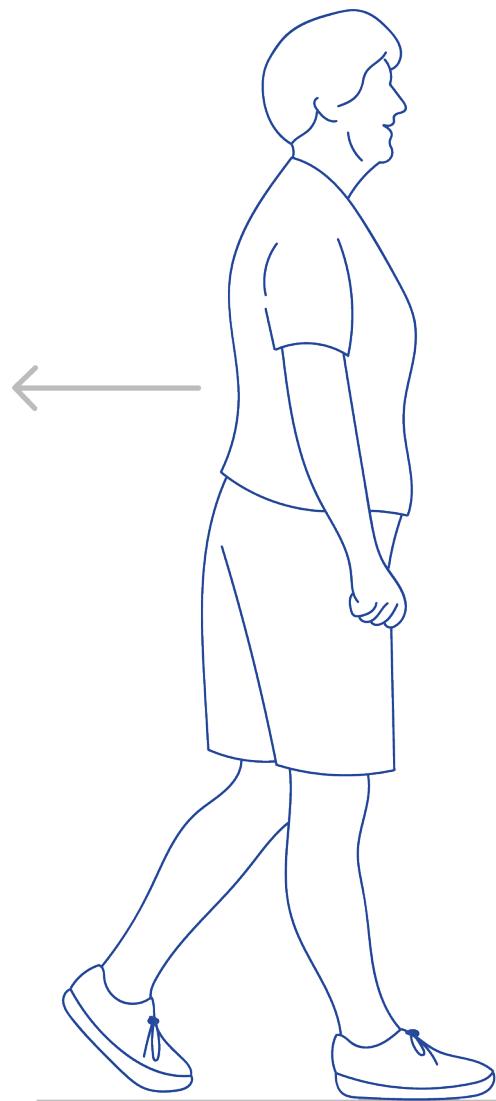
- E tū tōtika, puritia te pae
- Hīkoi whakamuri, kia 1o ngā takahanga
- Hurihia, whakamaua te pae ki tērā atu ringa
- Hīkoi whakamuri, kia 1o ngā takahanga tae noa ki te tīmatanga
- Mahia tēnei tūmahi anō



## Hīkoi whakamuri – kāore he rawa tokotoko

---

- E tū tōtika, titiro whakamua
- Hīkoi whakamuri, kia 1o ngā takahanga
- Hurihia
- Hīkoi whakamuri, kia 1o ngā takahanga tae noa ki te tīmatanga
- Mahia tēnei tūmahi anō



## Hīkoi, ā, hurihia

---

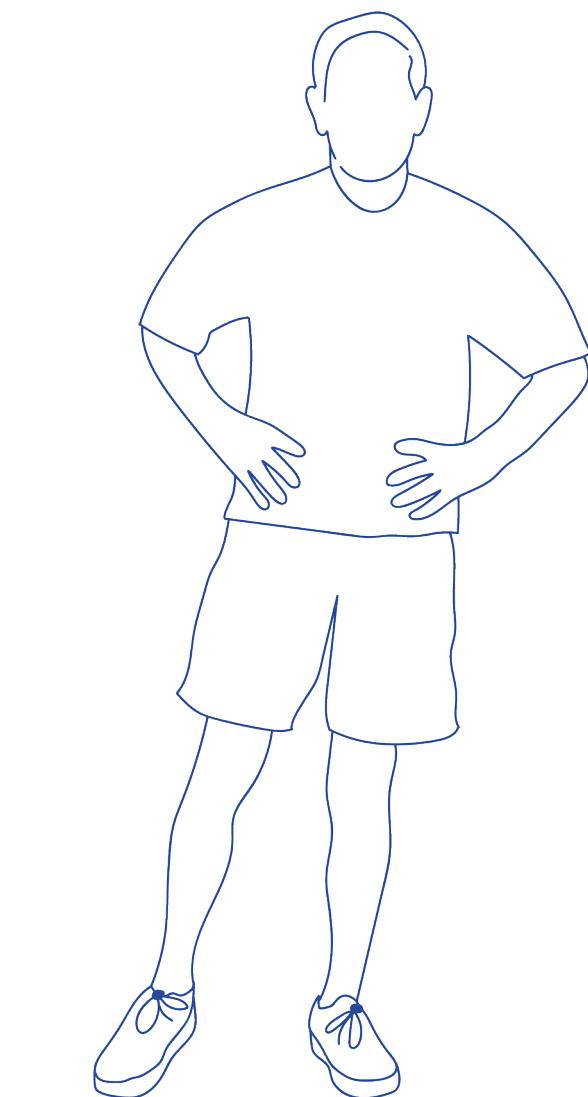
- Hīkoi noa
- Hurihia me te karaka, ki te taha matau
- E hoki ki te tīmatanga
- E huri kōaro, ki te taha mauī
- Kia rite te āhua o te tūmahi korikori ki te nama waru
- Mahia tēnei tūmahi anō



# Nekenekehia

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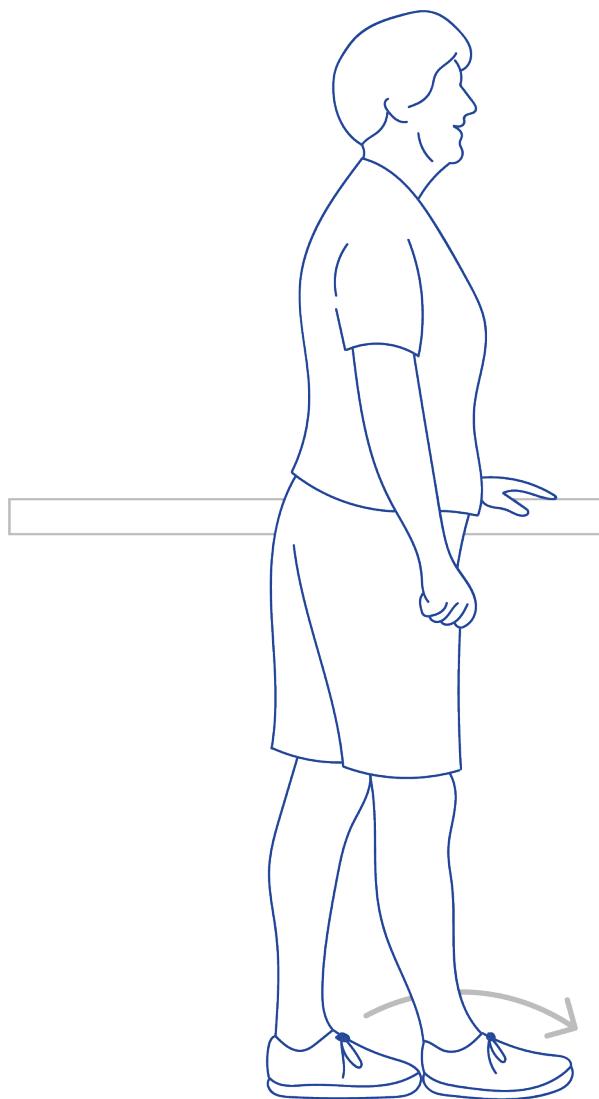
- E tū tōtika, whakamaua ngā ringaringa ki te hope
- Kia 1o ngā nekehanga ki te taha matau
- Kia 1o ngā nekehanga ki te taha mauī
- Mahia anō



## E tū mā te rekereke me te matiwae – whai rawa tokotoko

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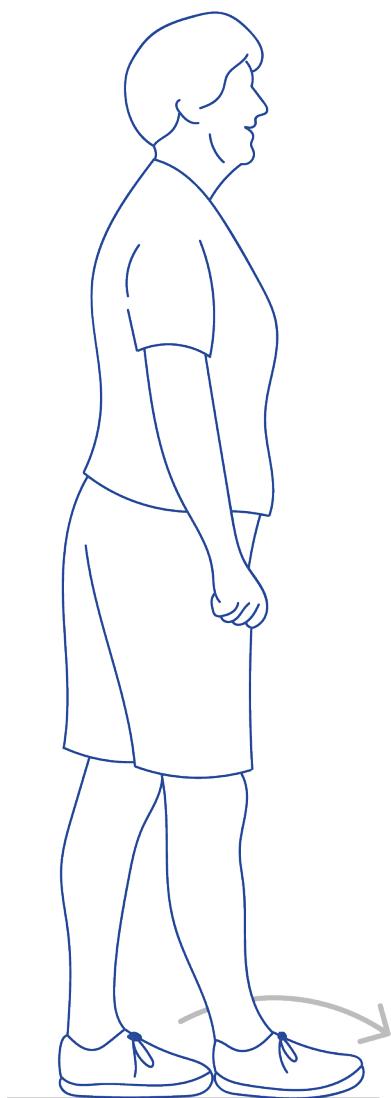
- E tū tōtika ki te taha o te pae
- Kia mau ki te pae, titiro whakamua
- Whakatūria tētahi waewae ki mua i tērā atu – kia hāngai te tū
- Puritia tēnei tūranga, kia 1o hēkona te roa
- Nekehia ngā waewae, whakatūria te waewae o muri ki mua
- Puritia tēnei tūranga, kia 1o hēkona te roa



## E tū mā te rekereke me te matiwae – kāore he rawa tokotoko

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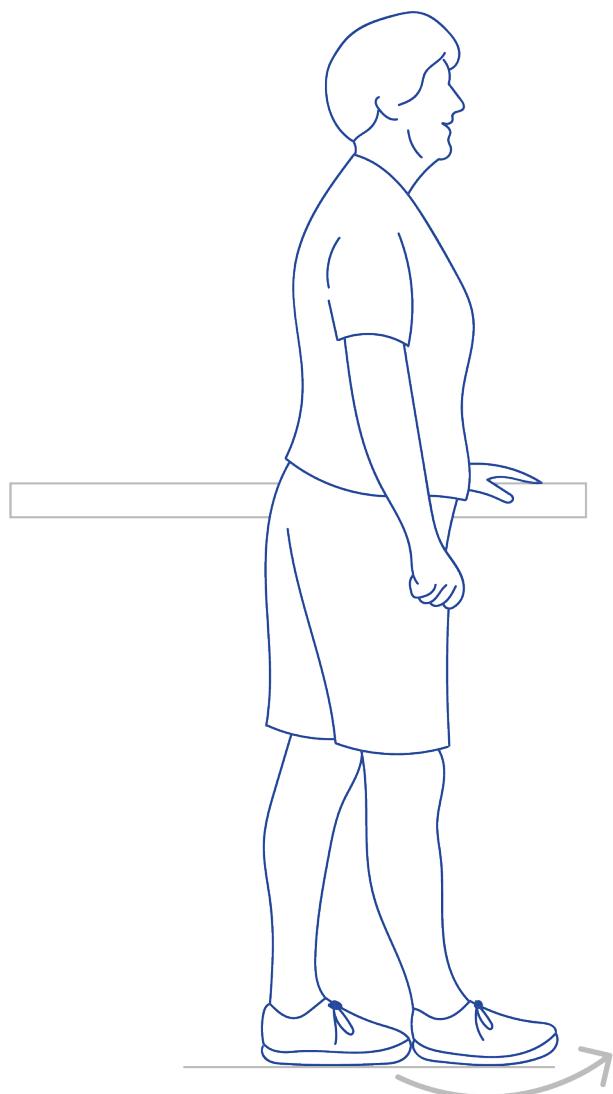
- E tū tōtika, titiro whakamua
- Whakatūria tētahi waewae ki mua i tērā atu – kia hāngai te tū
- Puritia tēnei tūranga, kia 1o hēkona te roa
- Nekehia ngā waewae, whakatūria te waewae o muri ki mua
- Puritia tēnei tūranga, kia 1o hēkona te roa



## Hīkoi mā te rekereke me te matiwae – whai rawa tautoko

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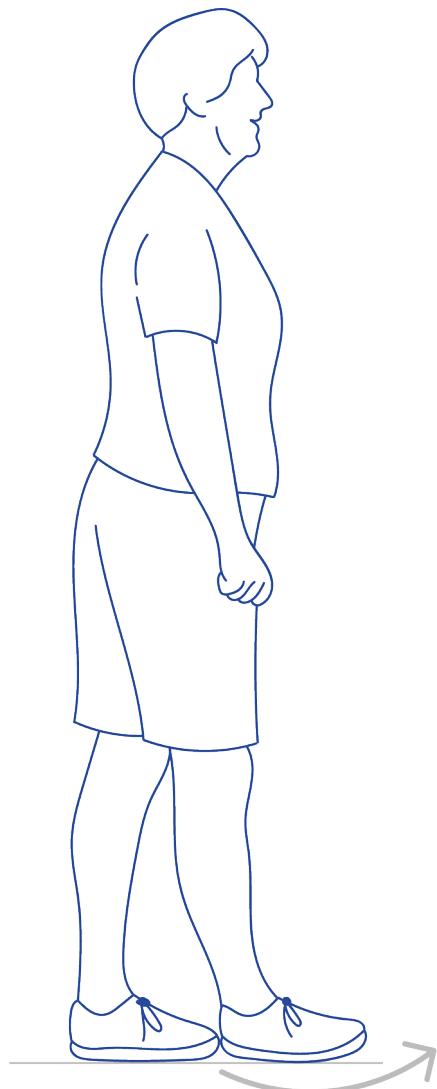
- E tū ki te taha o tētahi pae
- Puritia, titiro whakamua
- Whakatūria tētahi waewae ki mua i tērā atu – kia hāngai te tū
- Hīkina te waewae o muri, whakatūria ki mua
- Mahia anō, kia 1o ngā takahanga
- Hurihia



## Hīkoi mā te rekereke me te matiwae – kāore he rawa tokotoko

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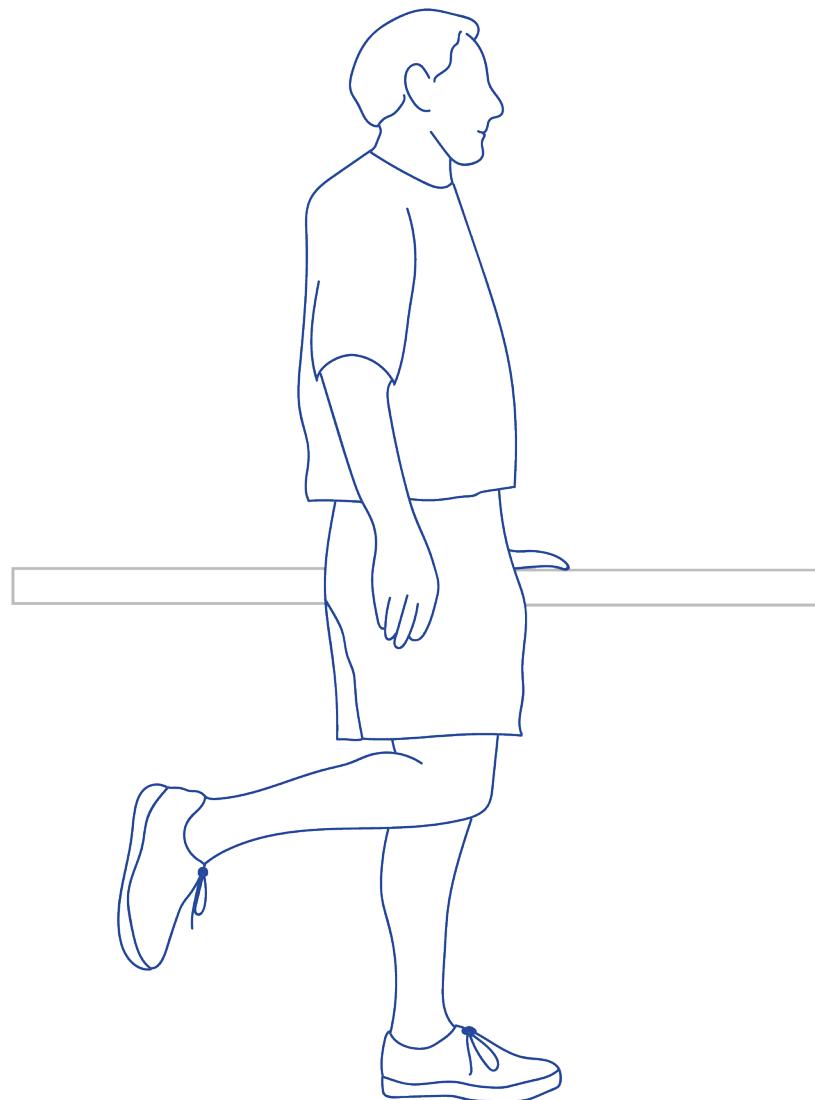
- E tū tōtika, titiro whakamua
- Whakatūria tētahi waewae ki mua i tērā atu – kia hāngai te tū
- Hīkina te waewae o muri, whakatūria ki mua
- Mahia anō, kia 1o ngā takahanga
- Hurihia
- Mahia tēnei tūmahi anō



## Tū toko tahi – whai rawa tautoko

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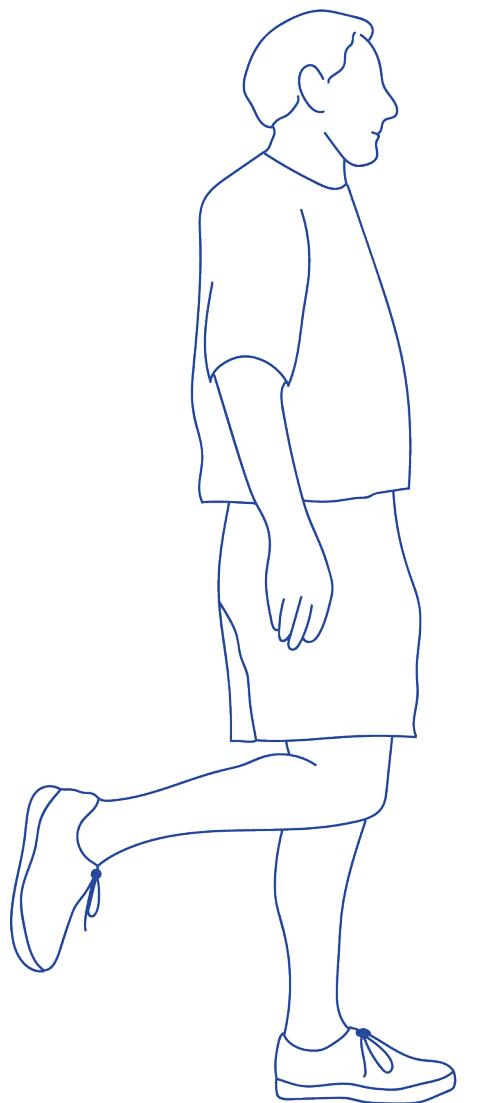
- › E tū tōtika ki te taha o tētahi pae
- › Kia mau, titiro whakamua
- › Hīkina ake tētahi waewae
- › Kia mau mō te 10 hēkona
- › Hīkina tērā atu waewae
- › Kia mau mō te 10 hēkona



## Tū toko tahi – kāore he rawa tautoko

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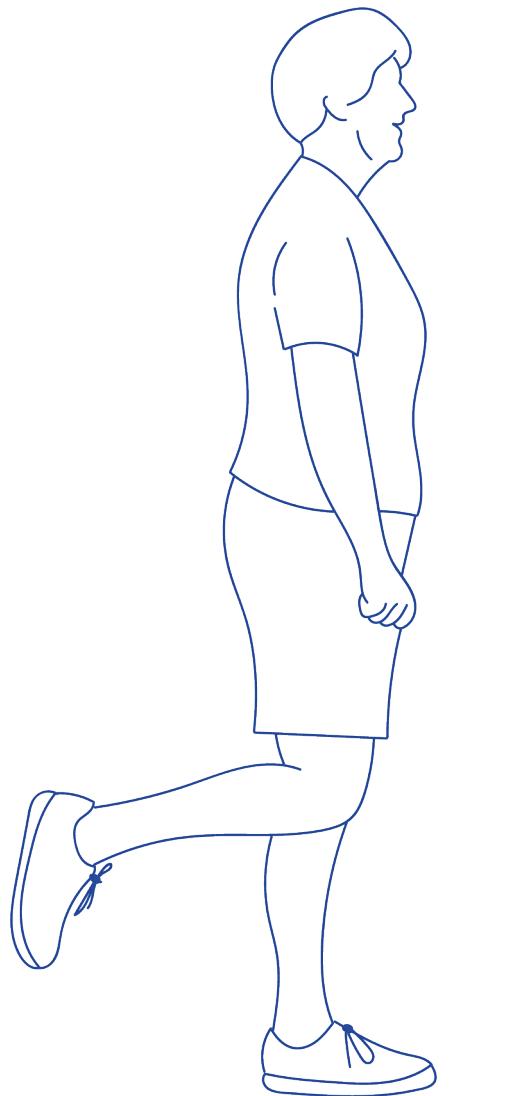
- › Hīkina ake tētahi waewae
- › Kia mau mō te 10 hēkona
- › Hīkina ake tērā atu waewae
- › Kia mau mō te 10 hēkona



## Tū toko tahi – kāore he rawa tautoko

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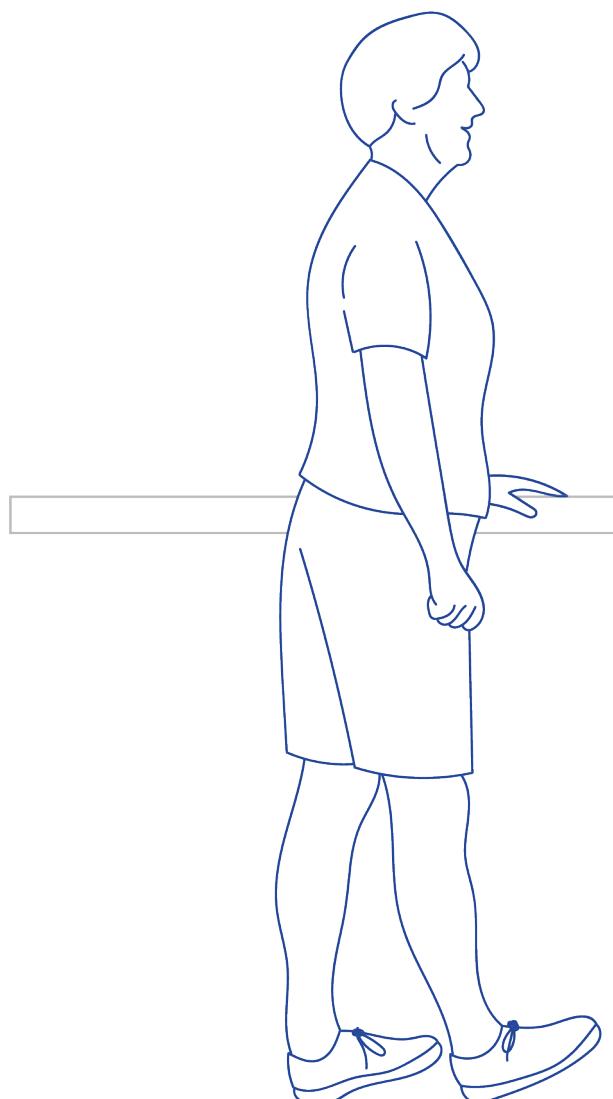
- › Hīkina ake tētahi waewae
- › Kia mau mō te 3o hēkona
- › Hīkina ake tērā atu waewae
- › Kia mau mō te 3o hēkona



## Hīkoi rekereke – whai rawa tokotoko

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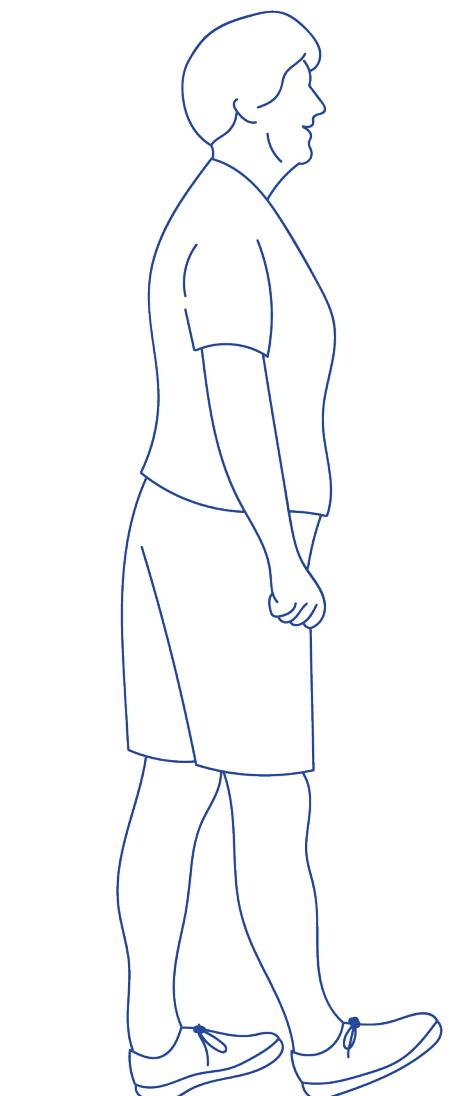
- E tū tōtika ki te taha o tētahi pae
- Puritia, titiro whakamua
- E hoki whakamuri, pēhia ngā rekereke ki raro, hīkina ake te kapu o te waewae ki runga
- Hīkoi whakamua mā ō rekereke, kia 1o ngā takahanga
- Whakahokia ngā waewae ki te papa, ā, hurihia
- Hīkoi whakamua mā ō rekereke, kia 1o ngā takahanga
- Mahia anō



## Hīkoi rekereke – whai rawa tokotoko

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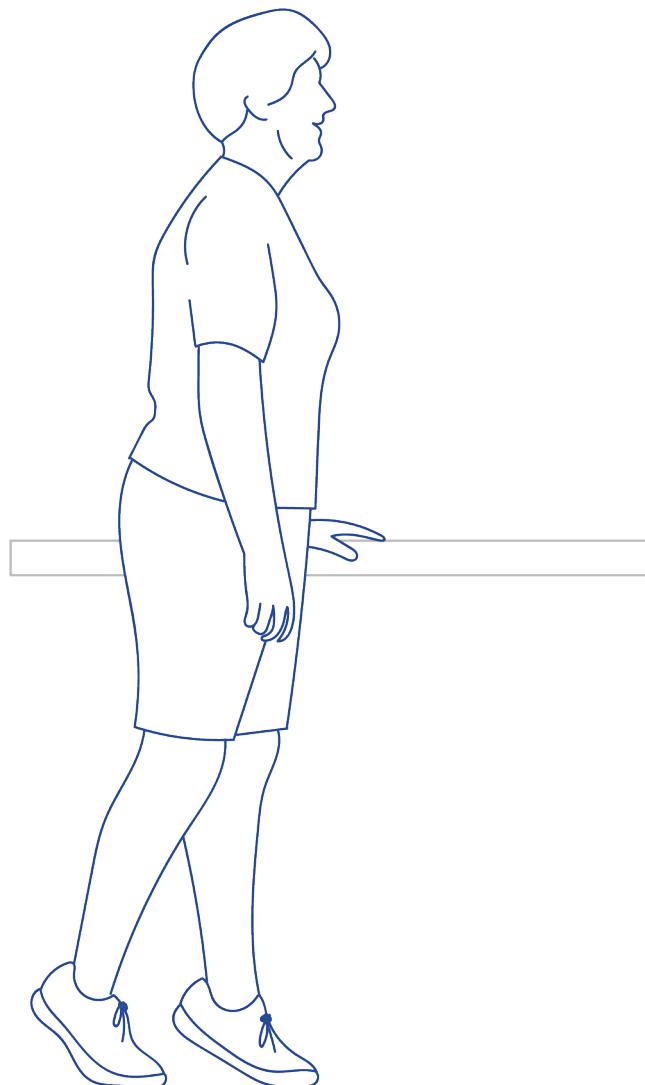
- › E tū tōtika, titiro whakamua
- › E hoki whakamuri, pēhia ngā rekereke ki raro, hīkina ake te kapu o te waewae o mua ki runga
- › Hīkoi whakamua mā ū rekereke, kia iō ngā takahanga
- › Whakahokia ngā waewae ki te papa, ā, hurihia
- › Hīkoi whakamua mā ū rekereke, kia iō ngā takahanga
- › Mahia anō



## Hīkoi matiwae – whai rawa tautoko

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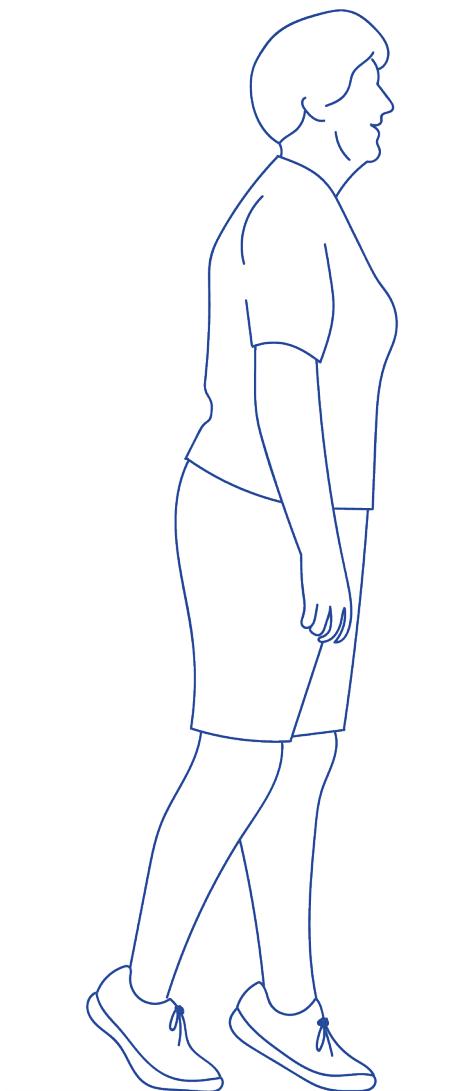
- E tū tōtika ki te taha o tētahi pae
- Kia mau, titiro whakamua
- E pikī ki runga i ō matiwae
- Kia ɪo ngā takahanga mā ū matiwae
- Whakahokia ngā rekereke ki te papa, ā, hurihia
- Kia ɪo ngā takahanga mā ū matiwae
- Mahia anō



## Hīkoi matiwae – kāore he rawa tautoko

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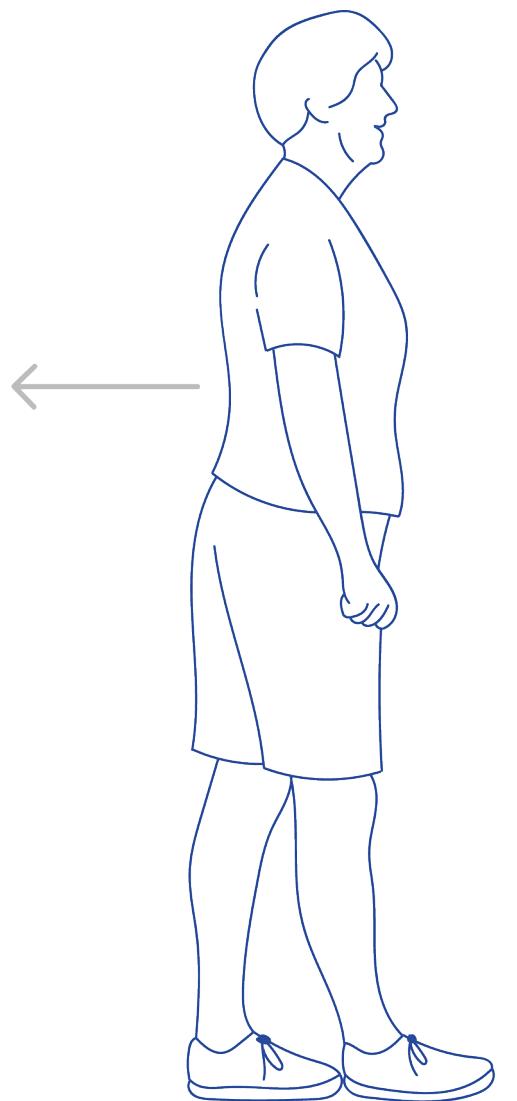
- › E tū tōtika, titiro whakamua
- › E piki ki runga i ō matiwae
- › Kia 1o ngā takahanga mā ū matiwae
- › Whakahokia ngā rekereke ki te papa, ā, hurihia
- › Kia 1o ngā takahanga mā ū matiwae
- › Mahia anō



## Hīkoi whakamuri mā te rekereke matiwae

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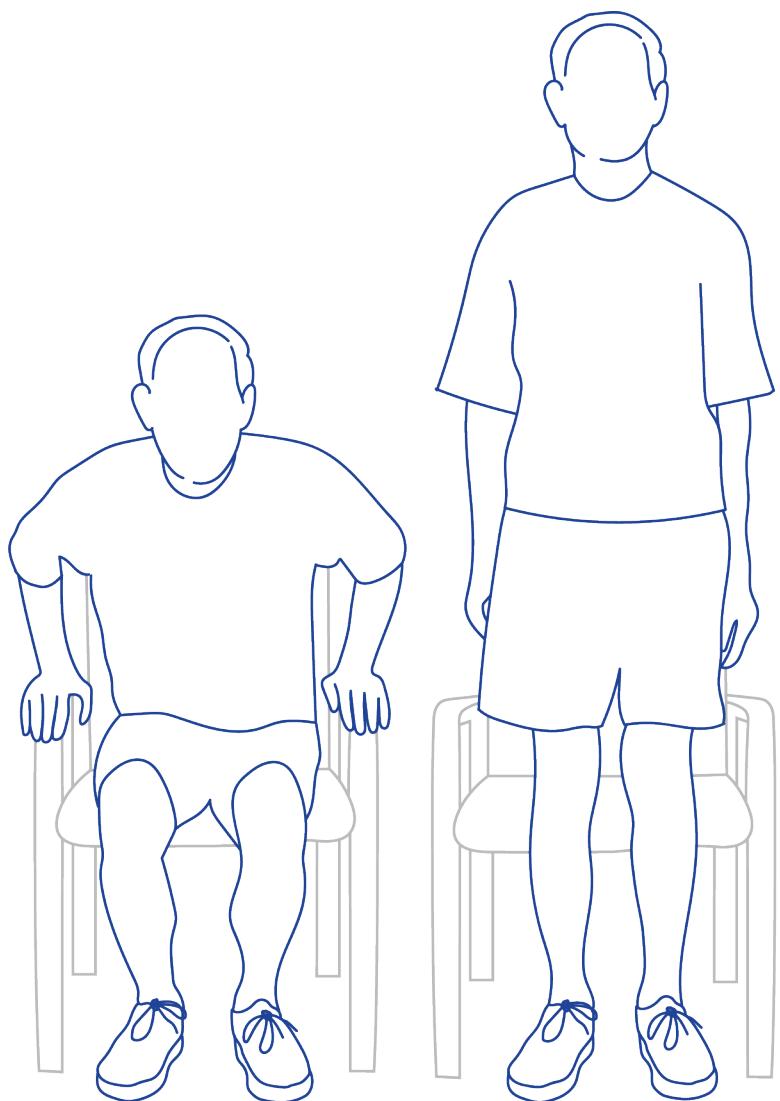
- E tū tōtika, titiro whakamua
- Whakatakotohia tētahi waewae ki muri rawa i tērā atu
- Whakatakotohia te waewae o mua ki muri rawa i te waewae o mu
- Mahia anō, kia 1o ngā takahanga
- Hurihia
- Mahia tēnei tūmahi anō



## E noho, e tū – kia rua ngā ringa

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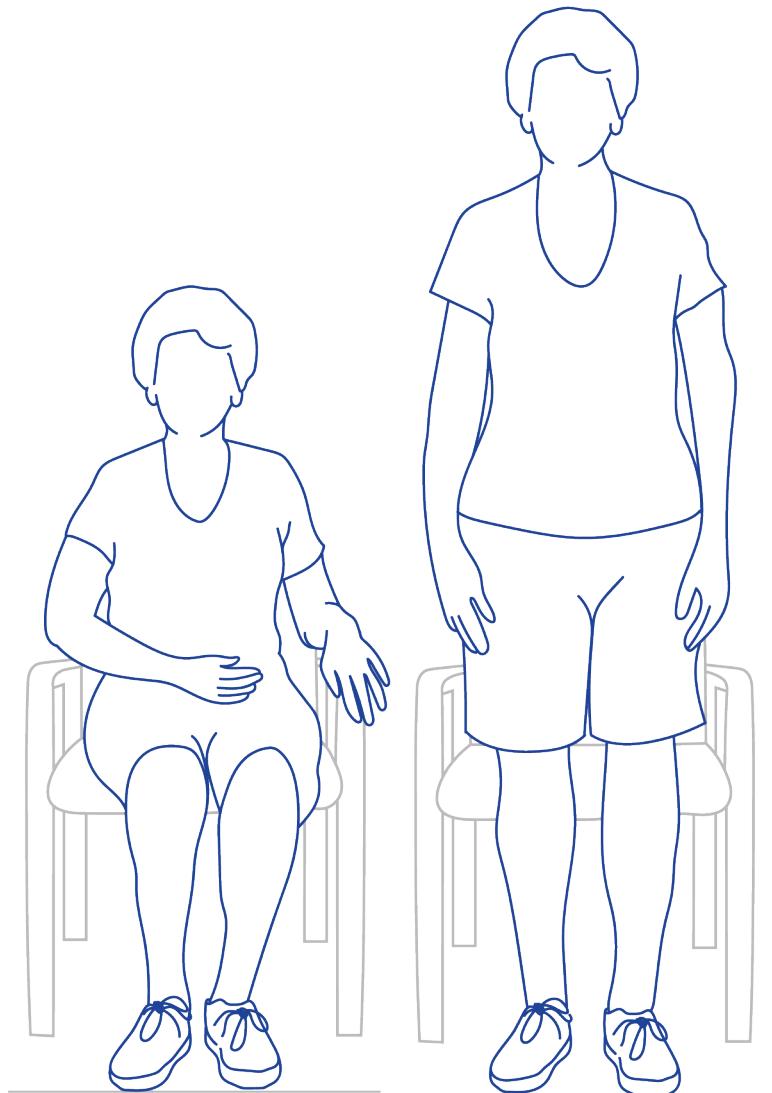
- Whāia tēnei tūmahi i a koe e mātakitaki ana i te pouaka whakaata
- E noho ki runga i tētahi tūru kāore e pātata ana ki te papa
- Whakatūria ngā waewae ki muri i ngā turi
- Nekehia te tinana ki mua, ki runga ake i ō turi
- Kia mau ki ngā taha o te tūru, e tū ki runga
- Mahia anō, kia  ngā wā



## E noho, e tū – kotahi te ringaringa

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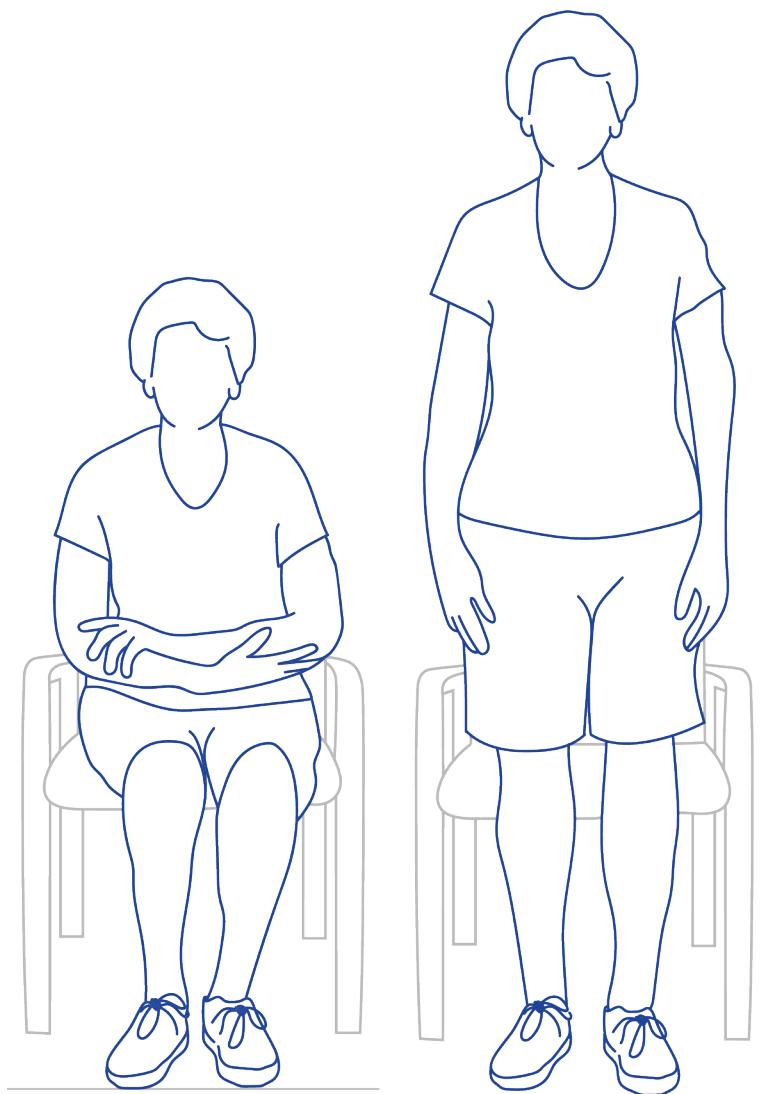
- Whāia tēnei tūmahi i a koe e mātakitaki ana i te pouaka whakaata
- E noho ki runga i tētahi tūru kāore e pātata ana ki te papa
- Whakatūria ngā waewae ki muri i ngā turi
- Nekehia te tianana ki mua, ki runga ake i ō turi
- Kia mau ki tētahi taha o te tūru, e tū ki runga
- Mahia anō, kia  ngā wā



## E noho, e tū – kāore he ringaringa

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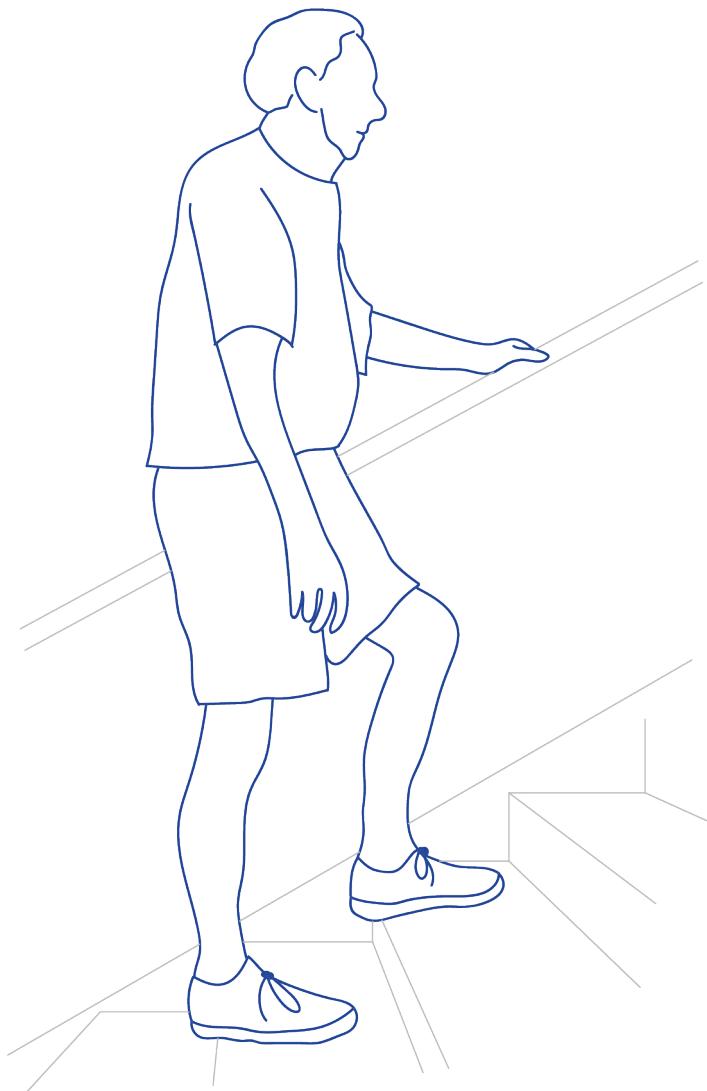
- Whāia tēnei tūmahi i a koe e mātakitaki ana i te pouaka whakaata
- E noho ki runga i tētahi tūru, kāore e pātata ana ki te papa
- Whakatūria ngā waewae ki muri i ngā turi
- Nekehia te tinana ki mua, ki runga ake i ō turi
- E tū, kaua e pupuri ki ngā taha o te tūru
- Mahia anō, kia  ngā wā



## Te pikī arapiki

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- Kia mau ki te kakau o ngā arapiki
- E pikī ki runga, ā, e heke anō kia  ngā arapiki







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He Whakaora.**  
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