

Gimaa Gamig owi Mina Bimaadiziwin

# COVID-19 Ashowizo-mashkiki Mazinigan

Zhibiigan 5.0 - Iskigamizige-giizis 1, 2021

Maanda mazinigan miigwemigad bangii goweta gikendamowin miinwaa gaawii nendaagosino awii miigweng maage meshkodosing awii aawang mashkikiinini giikmigewin, agaa waawiinjigaadeg e'naapinewin maage naandwechigewin, maage onaashowe giikmigowin.

Apiinish nongo, ninda eni zhibiigaadegin agii minwaabmijigaadenon awii nikaazan maampii Gaanada owi Mina Bimaadiziwin Gaanada: [Pfizer-BioNTech COVID-19 ashowizo-mashkiki](#), [Moderna COVID-19 ashowizo-mashkiki](#), [AstraZeneca COVID-19 ashowizo-mashkiki](#), [COVISHIELD COVID-19 ashowizo-mashkiki](#), miinwaa [Janssen COVID-19 ashowizo-mashkiki](#). Gikendamowin owi Janssen COVID-19 ashowizo-mashkiki ada aankesijigaade maampii mazinigining apii temigag nikaaziwin agii gagwekwendaagwog maampii Gaanada. Kina [ashowizo-mashkikiin owi COVID-19](#) begidinigaadegin awii nikaazang maampii Gaanada agii ndagikenjigaadenon owa Mina Bimaadiziwin Gaanada, nikaazang memaanji waawiinge-aag dibaamjigewinan. Mina Bimaadiziwin Gaanada ada aabji naagozowaabmdaanaa-aan kina ashowizo-mashkikiin awii gagwekwendaagwog waankiiwendaagwog miinwaa nishing.

**Weweni gindan manda gikendamowin mazinigan miinwaa gagwekwendan kina gdo gagwedwewinan agii nakwechigaadenon owa mina bimaadiziwin maagwed jibwaa debinaman owi ashowizo-mashkiki.**

## Wegnesh owi COVID-19

COVID-19 aawan miniiwesiwin abi njibaamigag owi shki corona aakoziwi-manijooshens aakoziwin (SARS-CoV-2). COVID-19 ntam agii nisidwaabmijigaade Manidoo-giizisoons 2019 miinwaa agii sweshkaamigad miziwe kiing awii temigag miziwe kiing gichi aakoziwin. COVID-19 aakoziwin gagweji sweshkaamigad onji owa bemaadizid miniiwesiwin egigshkang gewe bkaan bemaadizijig apii owa bemaadizid miniiwesiwin egigshkang osasidang, jaachaamad, nigamad, giigidad maage nesed. Gichi piitendaagwod awii gikendamang gewe miniiwesiwin egigshkaagwaad bemaadizijig adaa swenaanaa-aa owi miniiwesiwin giishpin gegwa bwaa yaamiwaad inamjiwinan. [Inamjiwinan owi COVID-19](#) adaa digosinon osasdamang,

nondenaamang, gizhizang, zaazaa-enjing, ekozing miinwaa naajichigaadeg bijjimanjigewin maage bijjipojigewin. Aanin bemaadizijig miniiwesiwin egigshkaagwaad owi ashowiso-mashkiki gaawii gego inamjiwinan ado yaanziinaa-aan, miinwaa dash aani bemaadizijig ado yaanaa-aan inamjiwinan e'dibasaagin apiinish agwa gechi niizaanag.

## **Aaniish newen COVID-19 ashowizo-mashkikiin ezhi nakiimigag awii gnowenimigiwin awii bwaa debinaman COVID-19?**

Kina gwa ashowizo-mashkikiin nakiimigadon miinigaadeg wiiyaw gego ezhinaagog owi miniiwisin owi onji gaa-naadamaagoying aakoziwining aji gikendang waazhi zhitomigag eyaamang gnowenjigewin. Maanda eyaamang gnowenjigewin dash naadmaagemigad awii nigaasijigaadeg niigaan eni tegin aakoziwinan giishpin nakweshkaman owi COVID-19 ashowizo-aakoziwin niigaan ani aawang. **Gaawiin gda debinaziin COVID-19 onji owi ashowizo-mashkiki.**

Woshme miziwe gikendamowin owi nikiiyaa COVID-19 ashowizo-mashkiki ezhi miigwemigag gnowenjigewin adaa makigaadeg odi [Public Health Ontario's \(PHO\) COVID-19 Vaccines](#) asabi mazina igan miinwaa [What You Need to Know About COVID-19 Vaccine](#) miinwaa [COVID-19 Vaccines: Viral vector-nzikaamigag ashowizo-mashkikiin](#)

**KINA COVID-19 ashowizo-mashkikiin begidinigaadeg awii nikaazang maampii Gaanada nishinon owi gnowenjigewin maanaaj inamjiwin, gagwe gikenjigaadeg gamig debwemigag aakoziwin.** Gechi michaag gnowaabmjigewinan bemaadizijig agii miingaaziwog neniish agwa owi ashowizo-mashkiki, kina agwa ashowizo-mashkikiin weweni agii nakiimigadon awii nigaasijigaadeg bemaadizijig awii aakoziwaad yaamiwaad maanaaj inamjiwinan, gagwe gikenjigaadeg gamig debwemigag COVID-19 aakoziwin. Ashowizo-mashkiki nakiimigad ezhi dowendaagwog midaaswi shi niwini giizhigag shkwaa debinigaadeg ntam bidakogewin minwaa jibwaa bidakogowin ekwa niizhing megwaach agwa nendaagwod woshme 90% owi Pfizer-BioNTech miinwaa Moderna miinwaa woshme 70% owi AstraZeneca/COVISHIELD. Ashowizo-mashkiki nakiimigad ezhi dowendaagwog shkwaa bidakogong ekwa niizhing owi apii nendaagwod awii debinigaadeg megwaach agwa nendaagwod woshme 90% owi Pfizer-BioNTech miinwaa Moderna miinwaa woshme 80% owi AstraZeneca/COVISHIELD. Gichi

piitendaagwog awii debinaman niish bidakogowinan ninda ashowizo-mashkikiin. Gnesh gnowenjigewin owi COVID-19 gaawii debnigaadesno apiinish ekwa niishing bidakogowin debinaman. **KINA COVID-19 ashowizo-mashkikiin begidinigaadeg awii nikaazang maampii Gaanada age aapaji nishinon nigaasijigaadeg aakozi gamgong awii biindigangowin.**

## Wenesh age debinangiba ninda ashowizo-mashkikiin?

Moshkin agwa ashowizo-mashkiki aanikesing adaa bagidinamaagaaziwog bemaadizijig bwaa maaji doodaagiwaad owi ashowizo-mashkiki miinwaa megwaa ayaawaad zhiwe agaa waawinjigaaziwaad niigaangaabiwiwaad.

- Owi Pfizer-BioNTech COVID-19 ashowizo-mashkiki megwaa bagidinigaade gewe bemaadizijig midaaswi shi nigodwaaswi maage woshme epiitizijig.
- Owi Pfizer-BioNTech COVID-19 ashowizo-mashkiki megwaa bagidinigaade gewe bemaadizijig midaaswi shi nshwaaswi maage woshme epiitizijig.
- Owi AstraZeneca COVID-19 ashowizo-mashkiki miinwaa COVISHIELD megwaa bagidinigaade gewe bemaadizijig midaaswi shi nshwaaswi maage woshme epiitizijig. Nongo megwaa, owi National Advisory Committee on Immunization (NACI) [giikmigewog](#) owi AstraZeneca COVID-19 ashowizo-mashkiki miinwaa COVISHIELD gaawii adaa miinaasiwog bemaadizijig naanimdana shi naanan mashi epiitiziswaad.

Awii ndakendaman endagwen aji miigsewin awii debinaman owi ashowizo-mashkiki nongo megwaa dibaamjigaadeg niigaan gaabiwiwin gnowaabmdan [Ontario's COVID-19 vaccination plan](#).

### **Jibwaa debinaman owi ashowizo-mashkiki, wiindamo gdo mina yaawin maagwed awaa miinig owi ashowizo-mashkiki giishpin:**

- Gaawii megwaa gdo mina zhayaasii maage waabmdowen miinwaa inamjiwinan owi COVID-19 gdo ayaanan.
- Zhaazhigwa agii yaan omaanaaskaagowin owi COVID-19 ashowizo-mashkiki maage digoniganan zhiwe COVID-19 ashowizo-mashkikiin, maage gego bkaan ashowizo-mashkiki.

- Gdaa-aanan omaanaaskagowin maage omaanaaskaagowin namjiwinan.
- Gdo maajiishkaa maage gnimaa gdaa maajiishkaa maage gdo nonaawis.
- Gdo naapine gaa-miigaanigod genaadamaagopan miigaadamang aakoziwin nishizininag zaam onji aakoziwin maage naandowechigewin maage agii waawinjigaadeg yaaman gakina gegoon odaazhoo'igiyin.
- Aaniish giishpin agii nikaamdamaa maage agii giwishkwe-aan shkwaaj agii debinamaa ashowitzo-mashkiki maage aakoziwin naandowechigewin maage gotaamaa zhaabiniginan? Owa mina yaawin maagwed gnimaa gdaa miinig aasgaabwitaagewinan awii naadmaagiyin, dibishko gonaa giikimig awii debinaman owi ashowitzo-mashkiki zhigishinan awii bwaa nikaamdaman.
- Gdaa-aan gichi miskwiiwiwin aakoziwin, maage gdo daapinan mashkiki age madookdaagemigag miskwi awii odowan. Maanda gikendamowin ada naadmaagon owa mina yaawin maagwed awii nigaasidod miskwiiwin maage oshaawishkoziwin owi zhaabinigan agii bidakogowin.
- Agii debinan bkaan ashowitzo-mashkiki (gaawii COVID-19 ashowitzo-mashkiki) ekwa midaaswi shi niwin giizhigag.

Owi [Vaccination Recommendations for Special Populations](#) giikmigewin mazinigan miigwemigad aanke gikendamowin gewe bemaadiziji e'nonaawisajig, maajiishkaajig, eyaamijig omaanaaskagowinan, gakina gegoon odaazhoo'gon, maage gaa-miigaanigod genaadamaagopan miigaadamang aakoziwin anishizininag zaam onji aakoziwin maage naandowechigewin, miinwaa eshkiniigijig gechi niizaanziwaad awii debinamwaad maanaaj doodaagewin owi COVID-19. Giishpin yaaman gagwedwewinan endogwen owi ashowitzo-mashkiki miigsemigag awii debinaman onji gdo aakoziwin, ginosh gdo mina yaawin maagwed.

## Wenesh age baabiitopa awii debinang ninda ashowitzo-mashkikiin?

- Bemaadizijig agaa debinamwaad bkaan ashowitzo-mashkiki (gaawii COVID-19 ashowitzo-mashkiki) ekwa midaaswi shi niwin giizhigag.
- Bemaadizijig eyaamiwaad inamjiwinan owi gichi aakoziwin; gewe bemaadizijig adaa baabiitowog apiinish inamjiwinan kina maajimigag awii miwishkigaadeg

naamjigaadeg zinagiziwin abi njibaamigag owi gichi aakoziwin newen ashowizo-mashkiki e'nowendaagwog omaanaaskaagowinan.

- Bemaadizijig eyaamiwaad inamjiwinan owi COVID-19. Awii naazhinigaadeg niizaanziwin awii meshkodosemigag COVID-19, giishpin gwanda bemaadizijig ai digoshinowaad enji bidakooding wiigwaam, ada wiindamaagaaziwog awii naagidowaad megwaa etegin bemaadizijig mina yaawin naagijigewinan miinwaa gagaandinigaaziwog awii ndakenimindwaa.
- Inamjiwinan miinwaa gaawii nyaagsinag inamjiwinan yaamiwaad bemaadizijig agaa giikimigaaziwaad awii gibaakodiziwaad owi onji e'dinenjigaadeg maage debwemigag yaamiwaad COVID-19 miniiwesin maage beshaa agii yaawaad owa eyaang COVID-19 gawii adaa zhaasiwog enjig bidakoding miinwaa adaa baabiitonaa-aa apiinish ekwaasemigag ado gibwaakodiziwin.

## Aaniish ezhi miigweng owi ashowizo-mashkiki?

Owi ashowizo-mashkiki miigwem nikaazang zhaabinigan zhiwe shpiming anik (odinimaangan gimashkawewagiziwin). Akiins naagidon [recommendations from the National Advisory Committee on Immunization \(NACI\)](#) awii giikinigaadeg owi minik apii biitiwiwiing owi ekwa niizhing bidakogowin owi COVID-19 ashowizo-mashkiki newen Pfizer-BioNTech, Moderna miinwaa AstraZeneca/COVISHIELD ashowizo-mashkikiin apiinish niiwin giizis shkwaa debinigaadeg ntam bidakogewin.

- Owi Pfizer-BioNTech ashowizo-mashkiki, owi e'giikmigaadeg bitiwiiwiing owi ekwa niizhing bidakogowin aawang niiwin giizis shkwaa debinigaadeg ntam bidakogewin.
- Owi Moderna ashowizo-mashkiki, owi e'giikmigaadeg bitiwiiwiing owi ekwa niizhing bidakogowin aawang niiwin giizis shkwaa debinigaadeg ntam bidakogewin.
- Owi AstraZeneca miinwaa COVISHIELD ashowizo-mashkiki, owi e'giikmigaadeg bitiwiiwiing owi ekwa niizhing bidakogowin aawang niiwin giizis shkwaa debinigaadeg ntam bidakogewin.

Bemaadizijig adaa debinaanaa-aa naasaab COVID-19 ashowizo-mashkiki yaawong owi akina ashowizo-mashkiki aanikesing (dibishko gonaa bemaadizid adaa debinaan owi naasaab ashowizo-mashkiki owi ntam miinwaa ekwa niizhing bidokogowin). Ashowizo-mashkikiin nowonj yaawong (dibishko gonaa mRNA, viral vector) adaa

gnowaabmijigaadenon aawang bkaan ashowizo-mashkikiin miinwaa gaawii adaa nikaazisiim zhiwe naasaab eni aanikesing.

**Wegnesh newen digonganan zhiwe newen ashowizo-mashkikiin?**

| <b>Digoniganan</b> |        | <b>Pfizer-BioNTech</b>   | <b>Moderna</b>   | <b>AstraZeneca/ miinwaa COVISHIELD</b>   |
|--------------------|--------|--|--|--|
| Medical            |        | <ul style="list-style-type: none"> <li>mRNA</li> </ul>   | <ul style="list-style-type: none"> <li>mRNA</li> </ul>   | <ul style="list-style-type: none"> <li>Non-replicating viral vector (ChAd)</li> </ul>  |
| Non-medical        | Lipids | <ul style="list-style-type: none"> <li>ALC-0315</li> <li>ALC-0159 – a polyethylene glycol (PEG)</li> <li>1,2-Distearoyl-sn-glycero-3-phosphocholine (DSPC)</li> <li>Cholesterol</li> </ul> | <ul style="list-style-type: none"> <li>1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC)</li> <li>Cholesterol</li> <li>PEG2000 DMG SM-102</li> </ul>       | <ul style="list-style-type: none"> <li>Disodium edetate dihydrate (EDTA)</li> <li>Ethanol</li> <li>L-Histidine</li> <li>L-Histidine hydrochloride monohydrate</li> <li>Polysorbate 80</li> </ul> |
|                    | Salts  | <ul style="list-style-type: none"> <li>Dibasic sodium phosphate dihydrate</li> <li>Monobasic potassium phosphate</li> <li>Potassium chloride</li> <li>Sodium chloride</li> </ul>           | <ul style="list-style-type: none"> <li>Acetic acid</li> <li>Sodium acetate trihydrate</li> <li>Tromethamine</li> <li>Tromethamine hydrochloride</li> </ul> | <ul style="list-style-type: none"> <li>Magnesium chloride hexahydrate</li> <li>Sodium chloride</li> </ul>  |
|                    | Sugar  | <ul style="list-style-type: none"> <li>Sucrose</li> </ul>  | <ul style="list-style-type: none"> <li>Sucrose</li> </ul>  | <ul style="list-style-type: none"> <li>Sucrose</li> </ul>  |
|                    |        | <ul style="list-style-type: none"> <li>Nibiish awii bidakoogowin</li> </ul>  | <ul style="list-style-type: none"> <li>Nibiish awii bidakoogowin</li> </ul>  | <ul style="list-style-type: none"> <li>Nibiish awii bidakoogowin</li> </ul>  |

Gichi piitendaagwod awii gnowaabmdaman maanda ezhibiigaadeg zaam aanin bemaadizijig gnimaa adaa maanaaskaagonaa-aa ninda agaa digonigaadeg, edigosin **polyethylene glycol (PEG), miinwaa polysorbate 80 miinwaa/maage tromethamine**. Adash wiigwa, gichi wewiika ninda miigwenaa-aan maanaaskaage inamjiwinan. Polyethylene glycol (PEG) makigaade zhichiganan dibishko gonaa mashkikiin, gichi onagizhiing giizhaa mashkiki owi biindaabiiginigaadenig mazinaaki ziganens o-gichi-onagizhiing jiwaabanjigaadenig ji-aakozigwen, zhaaboziganan, osasdamiwin mashkiki, naawiing nikaaziwinan, sho-iingwegan, mashkikiin nikaaziwinan zhiwe naghay miinwaa bigojiingeng, gizii-aabidegan, shkiizhigokaajigaansan etemigag biinji shkiizhigon miinwaa shkiizhigokaajigaansan etemigag biinji shkiizhigon biinchigan. Polyethylene glycol age adaa makigaade miiijiming miinwaa minikwewining, dash wiigwa gaawii gikenjigaadesno miigwemigag maanaaskaage inamjiwinan owi miiijim maage minikwewinan. Polysorbate 80 makigaade mashkiki zhichigaadeg (dibishko gonaa miiijikaan ji-onji-minagid bimiden, bikookidonsan miinwaa gaa znagak aakoziwin nikaaziwinan) miinwaa naawiing nikaaziwinan. Tromethamine aawan e'digosing zhiwe aazhide digosijigan, adooning miinwaa bidokogowin mashkikiin.

## Wegnesh newen omaanishkaagonan owi ashowizo-mashkiki?

COVID-19 ashowizo-mashkikiin, dibishko kina ashowizo-mashkikiin, adaa tenoon omaanishkaagonan, aanwi gwa gaawii kina gwaya mozhitosiinan newen miinwaa gewe e-mozhitowaad dibaataanaa-aan e'dibasaag omaanishkaagowinan. Gagwech agwa memdage yaawong omaanishkaagonan shkwaa debinigaadeg COVID-19 ashowizo-mashkiki aawinon agaanji bidakogowin digosinon gagiidizing, miskowaag maage baagishing gaanji bidokogowin ekozing, dewekweng, mishkowiziiwinan gaagiidag, aanikosing wiisgiziwin, zaazaa-enjing, miinwaa bangii gizhizang.

Aabajibideg ganowaabmajigewinan newen COVID-19 ashowizo-mashkikiin waabmdowemigad neniizaanag omaanishkaagonan agaa makigaadeg apiinish nongo **gichi wewiikaa tenon**. Bemaadizijig agaa debinamwaad owi ashowizo-mashkiki zhiwe gnowaabmjigewinan aabaji naagzowaabmjigaazwog gego newen woshme gnesh omaanishkaagonan.

Naandowe chige gamig enkiitaagejig giizhiitaawog awii naagdowendamowaad omaanishkaagonan giishpin temgag. Apii debinaman ekwa niizhing bidakogowin owi COVID-19 ashowizo-mashkiki, **wiindamo owa mina yaawin nyaagdowendang e'miinig ekwa niishing bidakogan giishpin agii yaaman omaanishkaagonan agaa shkwaa debinaman ntam bidakogewin.**

Gichi wewiikaa, owi AstraZeneca/COVISHIELD ashowizo-mashkiki agii wiijbide owi wewiika dnowaa odowan shkwaa jiiitawaaganiwinan ji-onji-aakozising.

Mashkikiinwog dizhinikaadaanaa-aa maanda "vaccine-induced prothrombotic immune [thrombocytopenia](#)" (VIPIT). Ninda odowan daawaanaa-aa niish gechi piitenaagwog: izhiwebidon niwin apiinish niishtana giizhigag shkwaa debinigaadeg jiiitawaaganiwin ji-onji-aakozising, miinwaa digowenjigaadenon newen dibasaag gaa-ayaagin gegoonensan miskwiiwimaang (e'gaaching gaa-miskwaagin gegoonan gaa ayaagin miskwiimaang amii dash gaa-onji ozhi'oomagak odowan awii nigaasijigaadeg gichi miskwiiwing). VIPIT wewiikaa temigad, temigag nigoji gwa 1 ensa 125,000 apiinish 1 ensa 1 million bemaadizijig. Memdage agwa nta zhiwebad gewe kwewog gaawii mashi 55 epiitiziswaad. Esna gnowaabmdan [VIPIT Following AstraZeneca COVID-19 Vaccination](#) woshme gego awii gikendaman.

[Mina Bimaadiziwin Gaanada](#) agii dibizhaan maanda miinwaa agii giizhendamog newen bamitigewinan owi AstraZeneca/COVISHIELD ashowizo-mashkiki owi gnowenjigaaziwaad bemaadizijig maampii Gaanada bwaa debinamwaad COVID-19 yaa-aabi woshme piitendaagwog dash iniwe dziwinan. Odowan gagweji aawinon, memdage agwa gechi piitizijig. COVID-19 njike agii dinenjigaaden abi njibaamigag odowan, dash kina COVID-19 ashowizo-mashkikiin yaa-aabi giikmigaadenon gewe bemaadizijig zhaazhigwa agaa yaamiwaad odowan, maage yaamiwaad inodewiziwin odowan miinwaa e'debinamwaad miskwi zhiigaagimig mashkikiin.



## Aaniish apii age ginonigiba ndo mina yaawin maagwed?

Giishpin moozhitowin omaanishkaagonan e'znagendimigiya maage bwaa maajaamigag gmaaminig giizhigag, ginosh gdo mina yaawin maagwed maage gagwedwen mashkikiinini waabmigowin.

Zhaan memaanji besha etemigag **aakoziwin niizaanag wiigwaam maage giigidan 911** gishpin ninda eni zhibiigaadegin maanaaj inamjiwinan maajitaamigad nisiwi giizhigag shkwaa debinaman owi ashowizo-mashkiki:

- babiikozhageshkaa
- baagiingweng maage baagidoneng
- znagag awii neseng
- aapaji gwaa waabnaagozing miinwaa gogwetaani giikiimgoshing
- gichi gizhizong (woshme 400C)
- ojibinigo maage odaaabshkaang
- aanin yaa-aabi neniizaanag inamjiwinan (dibishko gonaa, "giikimizing" maage biinisamanji'o)

Giishpin agii debinaman owi AstraZeneca/COVISHIELD ashowizo-mashkiki miinwaa maajitaamigag gego ninda inamjiwinan shkwaa debinaman ashowizo-mashkiki **wewiib debinan mashkikiinini waabmigowin:**

- nonde naamiyin
- gaagijj kaakoganang
- baagising maage dikaag anik maage okaad
- aabaji wiisgi-masideng
- aapaji maage woshme aapaji dewikwendibeng maage biigizawinam
- niibna egaaching ozhaawashkosewinan yaaman, miskwaa maage miinaandeg gidagiziwinan maage miskwi apishkwebiigiziwin naami nagay

Miinwaa age gdaa ginonaa gdo [mina bimaadiziwin nakiigamig](#) gego awii gagwedwewin maage awii wiindamaagewin maanaaj inamjiwin.

## Aaniish apii age bskaabii-aan awii debinamaa ekwa niizhing dibakogowin?

Giishpin maanda shki ntam aawang debinaman COVID-19 ashowizo-mashkiki, gagwekwendan awii bskaabiiwin awii debinaman ekwa niizhing bidakogowin ezhi wiindamaag owa mashkiki gamig maage gdo mina yaawin maagwed agaa miinig shki ntam bidakogowin. Gichi piitendaagwod awii debinaman niish bidakogowinan owi ashowizo-mashkiki aawan gnowemigiwin awii bwaa debinaman COVID-19. Gaawii memaanji nishizino apiinish debinaman ekwa niizhing bidakogowin. Biidoon gdo bidakogowin zigagibiigan apii miinwaa gdo ekwa niizhing bidakogowin. **Aapaji gwa gichi piitendaagwod awii debinaman ekwa niizhing bidakogowin aanwi gwa giishpin agii moozhitowin omaanishkaagonan shki ntam agii bidakogowin.**

## Wenesh age ginongiba giishpin gego awii gagwedwe-aan?

Giishpin yaaman gagwedwewinan, aga bigosenimigo awii ginonad gdo mina yaawin maagwed maage owa bemaadizid agaa miinig owi ashowizo-mashkiki.