

**Supplemental Table 1.** Information of the included studies regarding the association between hyperglycemia and cardiac arrhythmias

Reference	Study Design	Sample size (n)	Arrhythmias
Fu et al, <sup>1</sup> 2019	Cross-sectional study	12,013	atrial fibrillation
Lee et al, <sup>2</sup> 2017	Cohort study	366,507	atrial fibrillation
Latini et al, <sup>3</sup> 2013	Prospective cohort study	8,943	atrial fibrillation
Movahed et al, <sup>4</sup> 2005	Retrospective study	845,748	atrial fibrillation
Kaneko et al, <sup>5</sup> 2021	Retrospective study	1,180,062	atrial fibrillation
Benjamin et al, <sup>6</sup> 1994	Prospective cohort study	4,731	atrial fibrillation
Huxley et al, <sup>7</sup> 2011	Meta-analysis	-	atrial fibrillation
Li et al, <sup>8</sup> 2021	Retrospective study	563	atrial fibrillation
Koracevic et al, <sup>9</sup> 2008	Retrospective study	543	atrial fibrillation
Lazar et al, <sup>10</sup> 2004	Randomized controlled trial	141	atrial fibrillation
Akirov et al, <sup>11</sup> 2017	Retrospective study	1,127	atrial fibrillation
Krittayaphong et al, <sup>12</sup> 2021	Prospective cohort study	3,402	atrial fibrillation
Papazoglou et al, <sup>13</sup> 2021	Retrospective cohort study	1,109	atrial fibrillation
Wilhelmsen et al, <sup>14</sup> 2001	Prospective cohort study	7,495	atrial fibrillation
Agarwal et al, <sup>15</sup> 2017	Cross-sectional study	100	other supraventricular arrhythmias
Movahed et al, <sup>4</sup> 2005	Retrospective study	845,748	other supraventricular arrhythmias
Chen-Scarabelli et al, <sup>16</sup> 2006	Retrospective study	336	VT, VF and SCD
Tran et al, <sup>17</sup> 2018	Retrospective study	4,140	VT VF and SCD

Movahed et al, <sup>18</sup> 2007	Retrospective study	845,748	VT, VF and SCD
Albert et al, <sup>19</sup> 2003	Prospective cohort study	121,701	VT, VF and SCD
Siscovick et al, <sup>20</sup> 2010	Review	-	VT VF and SCD
Kim et al, <sup>21</sup> 2022	Retrospective study	4,234,341	VT, VF and SCD
Brown et al, <sup>22</sup> 2001	Cross-sectional study	5,833	QT prolongation
Ninkovic et al, <sup>23</sup> 2016	Cross-sectional study	501	QT prolongation
Marfella et al, <sup>24</sup> 2000	Randomized controlled trial	20	QT prolongation
Gordin et al, <sup>25</sup> 2008	Randomized controlled trial	35	QT prolongation
Kumar et al, <sup>26</sup> 2004	Prospective interventional study	26	QT prolongation
Movahed et al, <sup>27</sup> 2007	Review	-	other arrhythmias
Movahed et al, <sup>28</sup> 2005	Retrospective study	845,748	other arrhythmias
Haxha et al, <sup>29</sup> 2022	Case-control study	155,999	other arrhythmias
Hasslacher et al, <sup>30</sup> 1977	Cross-sectional study	473	other arrhythmias

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Abbreviations: VT, ventricular tachycardia; VF, ventricular fibrillation; SCD, sudden cardiac death.

**Supplemental Table 2.** Information of the included studies regarding the association between hypoglycemia and cardiac arrhythmias

Reference	Study Design	Sample size (n)	Arrhythmia
Odeh et al, <sup>31</sup> 1990	Case report	-	atrial fibrillation
Celebi et al, <sup>32</sup> 2011	Case report	-	atrial fibrillation
Collier et al, <sup>33</sup> 1987	Case report	-	atrial fibrillation
Andersen et al, <sup>34</sup> 2021	Prospective observational study	21	atrial fibrillation
Ko et al, <sup>35</sup> 2018	Retrospective study	1,509,280	atrial fibrillation
Humos et al, <sup>36</sup> 2022	Retrospective study	534,567	atrial fibrillation
Kacheva et al, <sup>37</sup> 2017	Randomized controlled trial	119	other supraventricular arrhythmias
Chow et al, <sup>38</sup> 2014	Cross-sectional study	25	other supraventricular arrhythmias
Pezzarossa et al, <sup>39</sup> 1993	Case report	-	other supraventricular arrhythmias
Chow et al, <sup>38</sup> 2014	Cross-sectional study	25	ventricular premature beat
Gill et al, <sup>40</sup> 2009	Cross-sectional study	25	ventricular premature beat
Andersen et al, <sup>41</sup> 2021	Non-randomized controlled trial	42	ventricular premature beat
Kacheva et al, <sup>37</sup> 2017	Randomized controlled trial	119	QT prolongation
Andersen et al, <sup>41</sup> 2021	Non-randomized controlled trial	42	QT prolongation
Fitzpatrick et al, <sup>42</sup> 2018	Meta-analysis	-	QT prolongation
Tsujimoto et al, <sup>43</sup> 2015	Retrospective study	59,602	QT prolongation
Chow et al, <sup>38</sup> 2014	Cross-sectional study	25	QT prolongation
Lipponen et al, <sup>44</sup> 2011	Cross-sectional study	27	QT prolongation
Richardson et al, <sup>45</sup> 2022	Retrospective cohort study	6,881	QT prolongation
Christensen et al, <sup>46</sup> 2010	Cross-sectional study	21	QT prolongation
Frier et al, <sup>47</sup> 2014	Review	-	VT, VF and SCD

Chelliah et al, <sup>48</sup> 2000	Case report	-	VT, VF and SCD
Pistrosch et al, <sup>49</sup> 2015	Cohort study	94	VT, VF and SCD
Humos et al, <sup>36</sup> 2022	Retrospective cohort study	534,567	VT, VF and SCD
Gerstein et al, <sup>50</sup> 2008	Randomized controlled trial	10,251	VT, VF and SCD
Chow et al, <sup>38</sup> 2014	Cross-sectional study	25	other arrhythmias
Bolognesi et al, <sup>51</sup> 2011	Case report	-	other arrhythmias
Navarro-Gutiérrez et al, <sup>52</sup> 2003	Case report	-	other arrhythmias

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Abbreviations: VT, ventricular tachycardia; VF, ventricular fibrillation; SCD, sudden cardiac death.

**Supplemental Table 3.** Information of the included studies regarding the association between glycemic variability and cardiac arrhythmias

Reference	Study type	Sample size (n)	Arrhythmias
Gu et al, <sup>53</sup> 2017	Retrospective study	505	atrial fibrillation
Hsu et al, <sup>54</sup> 2021	Retrospective cohort study	27,246	atrial fibrillation
Xia et al, <sup>55</sup> 2017	Prospective observational study	864	atrial fibrillation
Clement et al, <sup>56</sup> 2019	Retrospective study	2,073	atrial fibrillation
Sim et al, <sup>57</sup> 2018	Prospective cohort study	1,743	atrial fibrillation
Zhang et al, <sup>58</sup> 2021	Cross-sectional study	107	other supraventricular arrhythmias
Zhang et al, <sup>58</sup> 2021	Cross-sectional study	107	ventricular arrhythmias
Lee et al, <sup>59</sup> 2021	Retrospective study	23,329	ventricular arrhythmias
Su et al, <sup>60</sup> 2017	Cross-sectional study	2,904	ventricular arrhythmias

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