Manual
(double-click the icon for the embed PDF file)

or click the

LINK

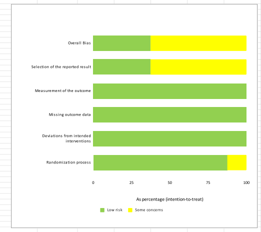
V9 update:
*Add a new button in Summary tab to synchronize results between Results and Summary tabs

V8 update:
*Added judgement-level comment in the summary table
*Removed "Double click on this column…" label in the comments after enter
*Corrected spelling mistakes

																					Overall Bias	Comment for overall bias
RCT-4-1	WG	4	Salmani 2014	HPD (premolded	HPD (premolded	Outcome 1 The	1.1.3	assignment to intervention (the	NA		Some concerns	Participants were	Low	If participants	Low	Each group had 50	Low	Threshold	Some concerns	No protocol is	Some concerns	This RCT was blinded
RCT-5-1	WG	5	Murphy 2007	Multi-earplug	Multi-earplug	Outcome 1	1.1.1	assignment to intervention (the	NA		Low	All subjects were	Low	Participant were	Low	Date from all	Low	the Fitchck	Low	The data reported	Low	It was RCT study.
RCT-5-2	WG	5	Murphy 2007	Multi-earplug	Multi-earplug	Outcome 1	1.1.1	assignment to intervention (the	NA		Low	All subjects were	Low	Participant were	Low	Date from all	Low	the Fitchck	Low	The data reported	Low	It was RCT study.
RCT-5-3	WG	5	Murphy 2007	Multi-earplug	Multi-earplug	Outcome 1	1.1.2	assignment to intervention (the	NA		Low	All subjects were	Low	Participant were	Low	Date from all	Low	the Fitchck	Low	The data reported	Low	It was RCT study.
RCT-2-1-1	WG	2	Federman 2021	HPD (foam	HPD (foam	Outcome 1 The	2.1.1	assignment to intervention (the	NA	53.10%	Low	After screened 821	Low	Participants and	Low	Data for this	Low	The FAES used for	Some concerns	No protocol is	Some concerns	This RCT was designed
RCT-2-1-2	WG	2	Federman 2021	HPD (foam	Foam earplug	Outcome 1 The	2.1.1	assignment to intervention (the	NA	46.90%	Low	After screened 821	Low	Participants and	Low	Data for this	Low	The FAES used for	Some concerns	No protocol is	Some concerns	This RCT was designed
RCT-2-2-1	WG	2	Federman 2021	HPD (foam	Foam earplug	Outcome 2 The	2.2.1	assignment to intervention (the	NA	51.80%	Low	After screened 821	Low	Participants and	Low	Data for this	Low	The FAES used for	Some concerns	No protocol was	Some concerns	This RCT was designed
RCT-2-2-2	WG	2	Federman 2021	HPD (foam	Foam earplug	Outcome 2 The	2.2.1	assignment to intervention (the	NA	48.20%	Low	After screened 821	Low	Participants and	Low	Data for this	Low	The FAES used for	Some concerns	No protocol was	Some concerns	This RCT was designed

After pressing this button, results in the summary table (left table) will overwrite the results in 'Results' tab. This helps you to update results and outputs.

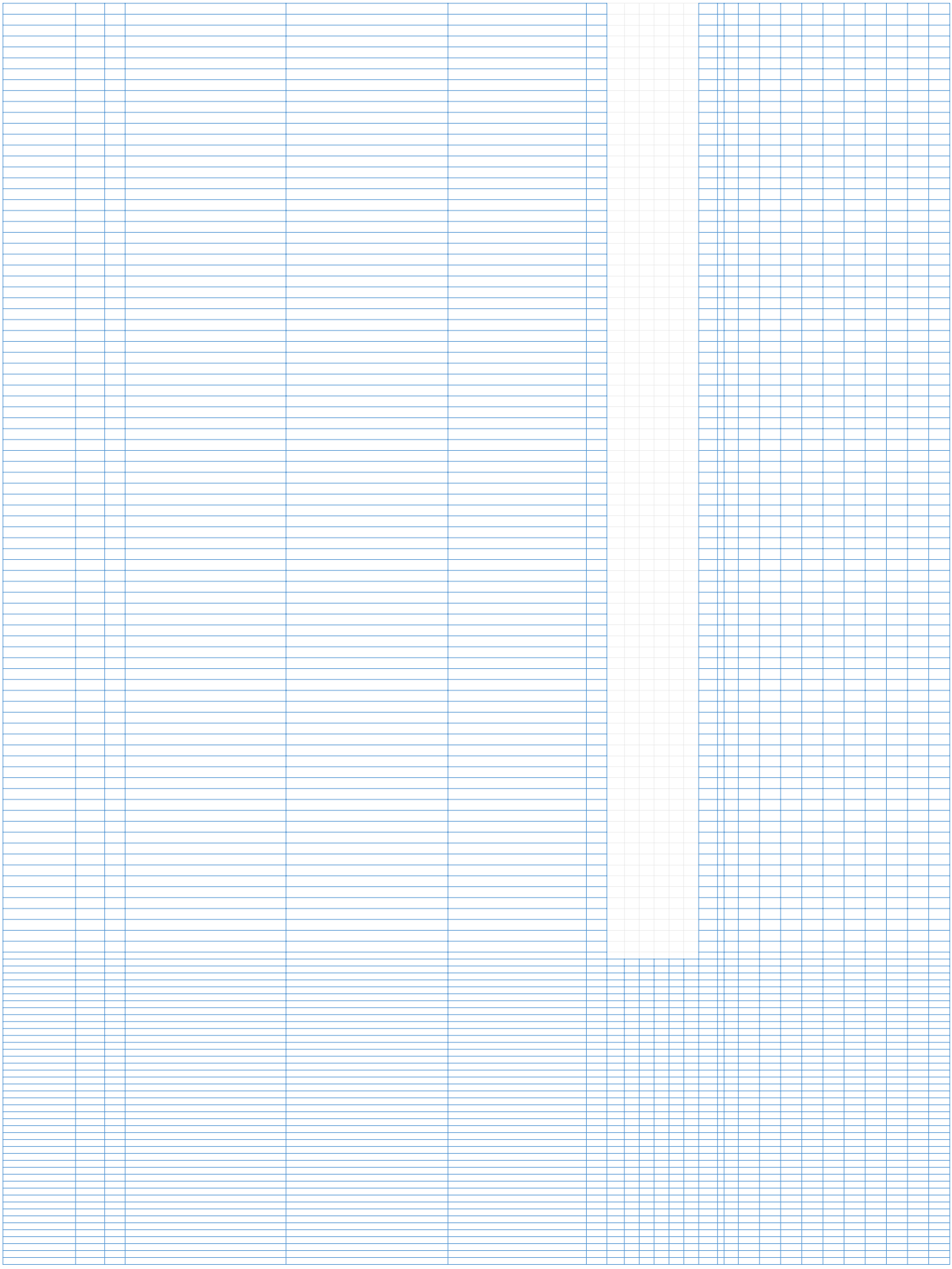
	Randomization proc	from intended int	ssing outcome da	rement of the ou	n of the reported	Overall Bias
Assignment to intervention (the 'intention-to-treat' effect)						
Total number of study = 8						
Low risk	87.50	100.00	100.00	100.00	37.50	37.50
Some concerns	12.50	0.00	0.00	0.00	62.50	62.50
High risk	0.00	0.00	0.00	0.00	0.00	0.00
Adhering to intervention (the 'per-protocol' effect)						
Total number of study = 0						

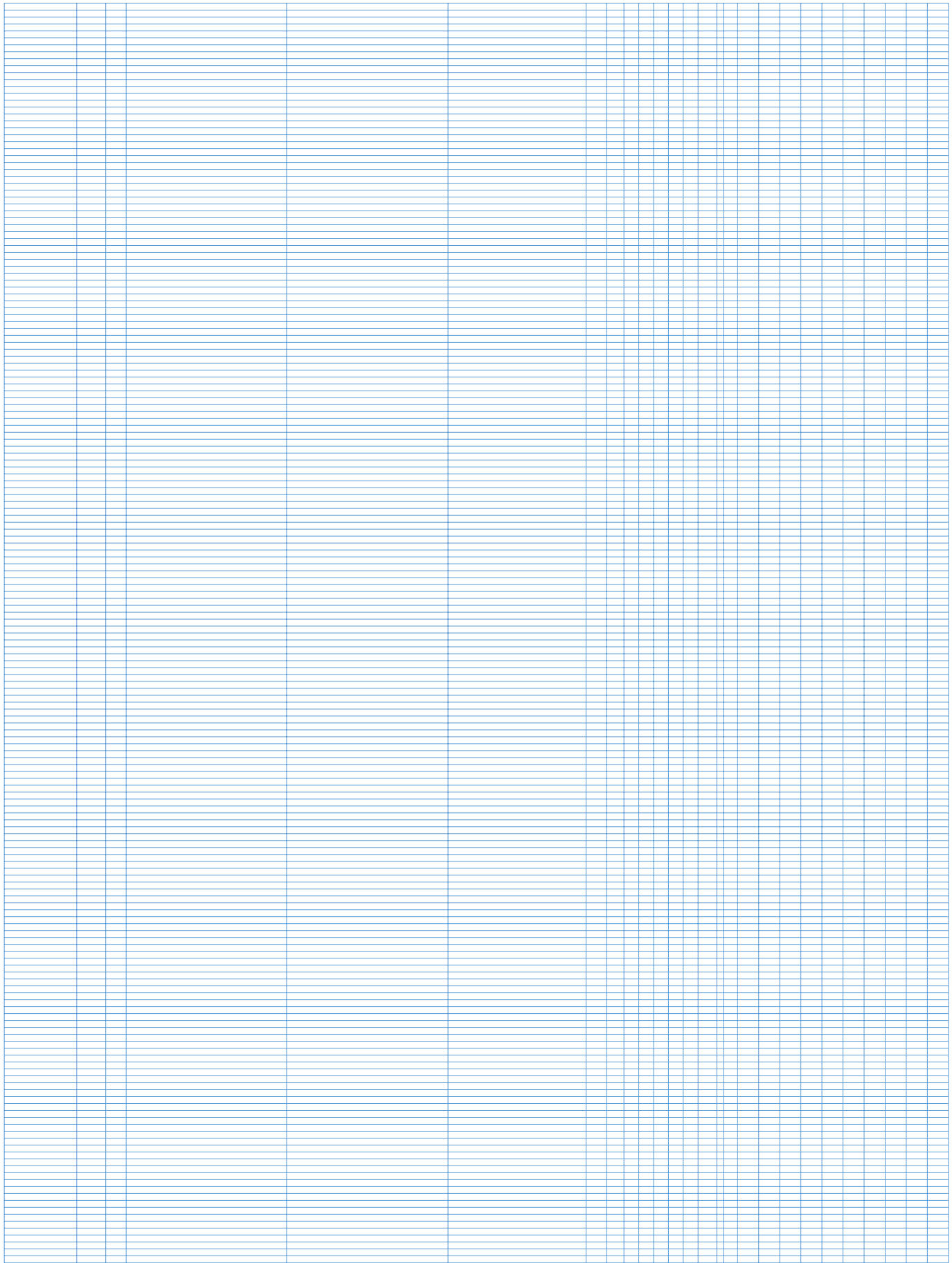


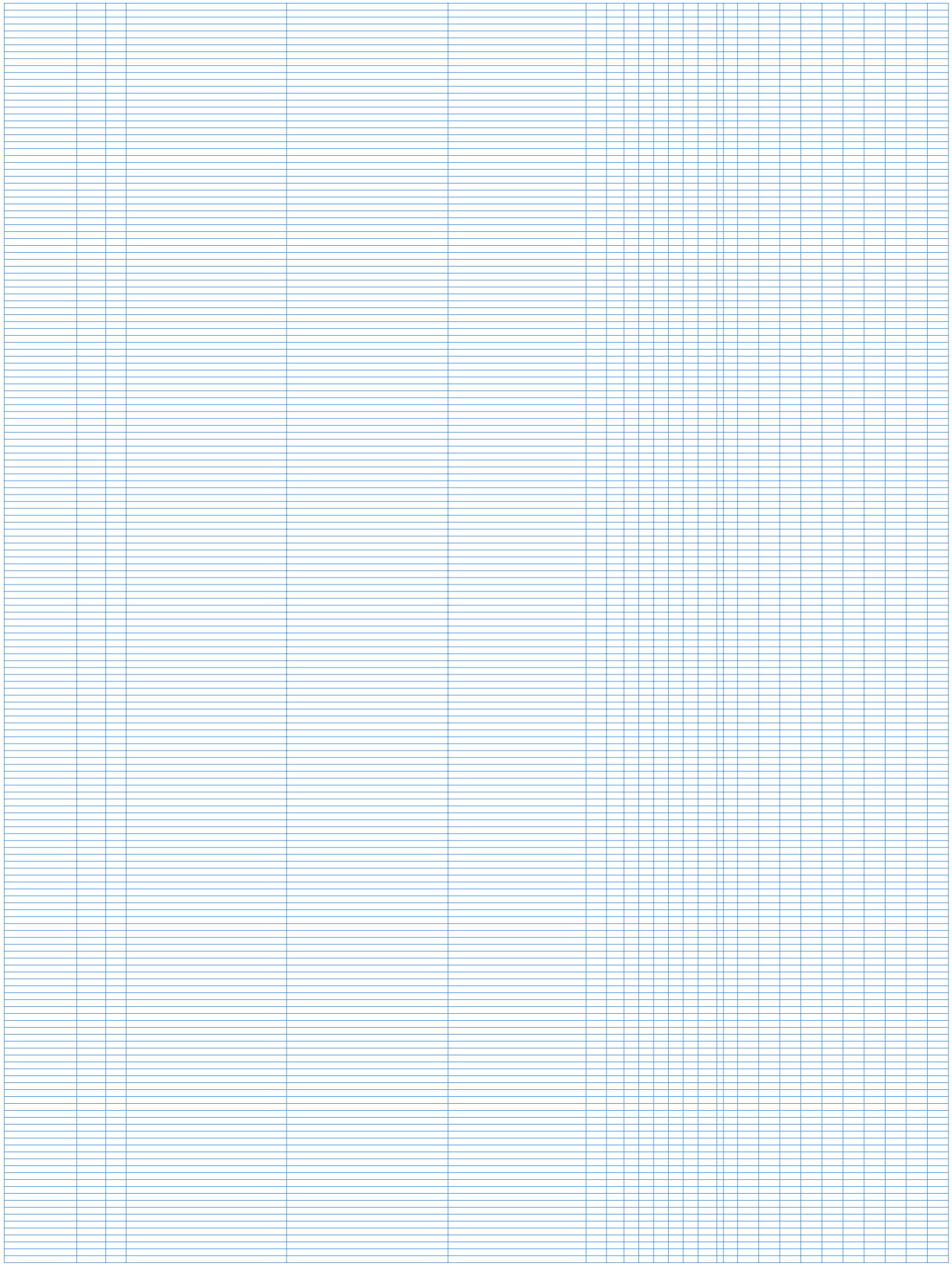
Intention-to-treat	Unique ID	Study ID	Experimental	Comparator	Outcome	Weight	D1	D2	D3	D4	D5	Overall
	RCT-4-1	4	HPD (premolded earplug) fit testing with instruction (immediate)	HPD (premolded earplug) fit testing without instruction	Outcome 1 The difference in PAR levels (dB)	NA	!	+	+	+	!	!
	RCT-5-1	5	Multi-earplug with instruction (short-term)	Multi-earplug without instruction	Outcome 1 Difference in PAR levels (dB)	NA	+	+	+	+	+	+
	RCT-5-2	5	Multi-earplug with instruction (short-term)	Multi-earplug without instruction	Outcome 1 Difference in PAR levels (dB)	NA	+	+	+	+	+	+
	RCT-5-3	5	Multi-earplug with instruction (long-term)	Multi-earplug without instruction	Outcome 1 Difference in PAR levels (dB)	NA	+	+	+	+	+	+
	RCT-2-1-1	2	HPD (foam earplug) fit testing with individualized instruction	HPD (foam earplug) fit testing with small group video instruction	Outcome 1 The difference in PAR levels (dB)	0.531	+	+	+	+	!	!
	RCT-2-1-2	2	HPD (foam earplug) with individualized and small group video instruction (short-te	Foam earplug with small group video instruction	Outcome 1 The difference in PAR levels (dB)	0.469	+	+	+	+	!	!
	RCT-2-2-1	2	HPD (foam earplug) with individualized instruction element (short-term)	Foam earplug with small group video instruction	Outcome 2 The difference in PAR pass rate (%)	0.518	+	+	+	+	!	!
	RCT-2-2-2	2	HPD (foam earplug) with individualized and small group video instruction (short-te	Foam earplug with small group video instruction	Outcome 2 The difference in PAR pass rate (%)	0.482	+	+	+	+	!	!

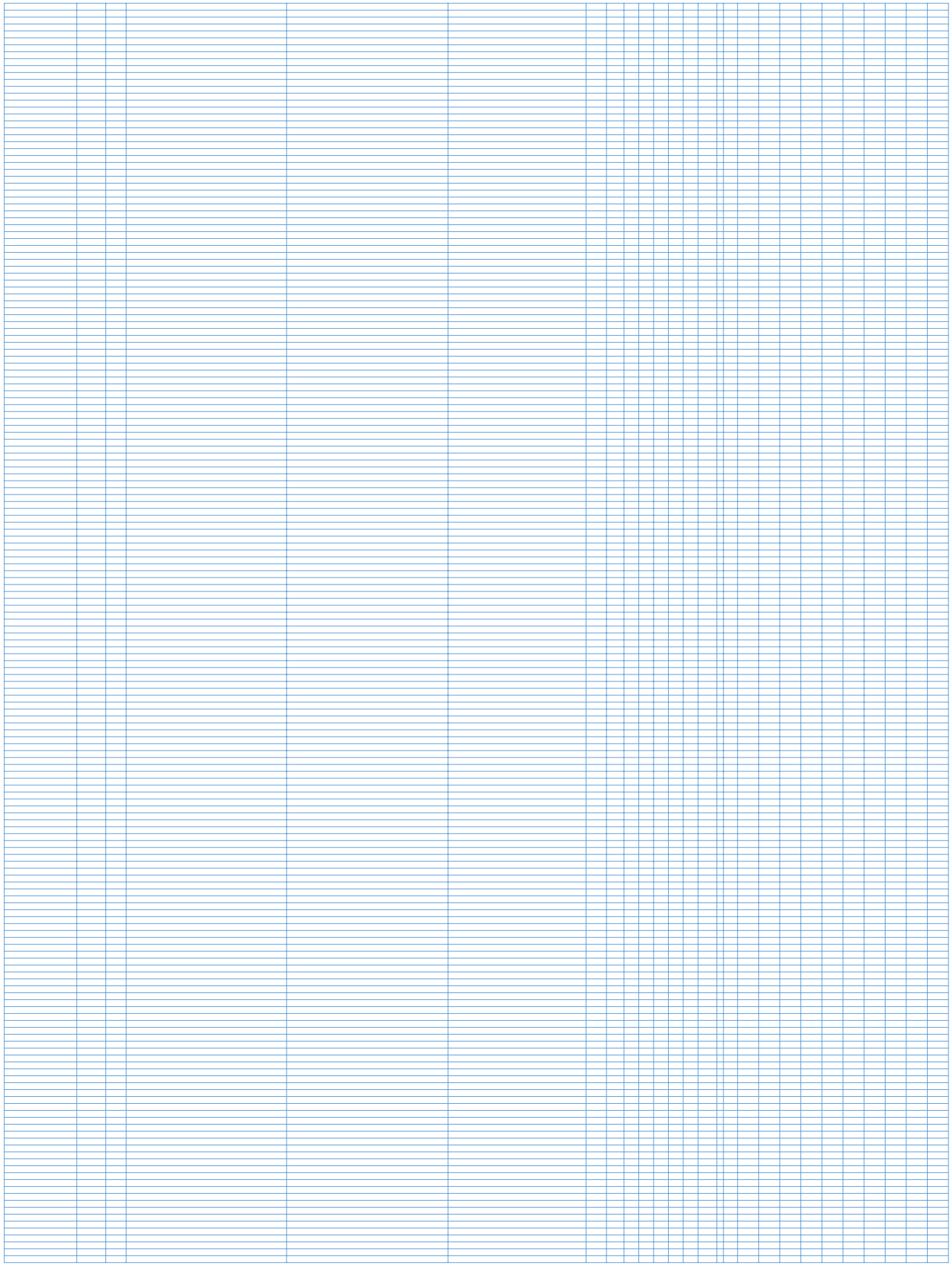
+ Low risk
! Some concerns
- High risk

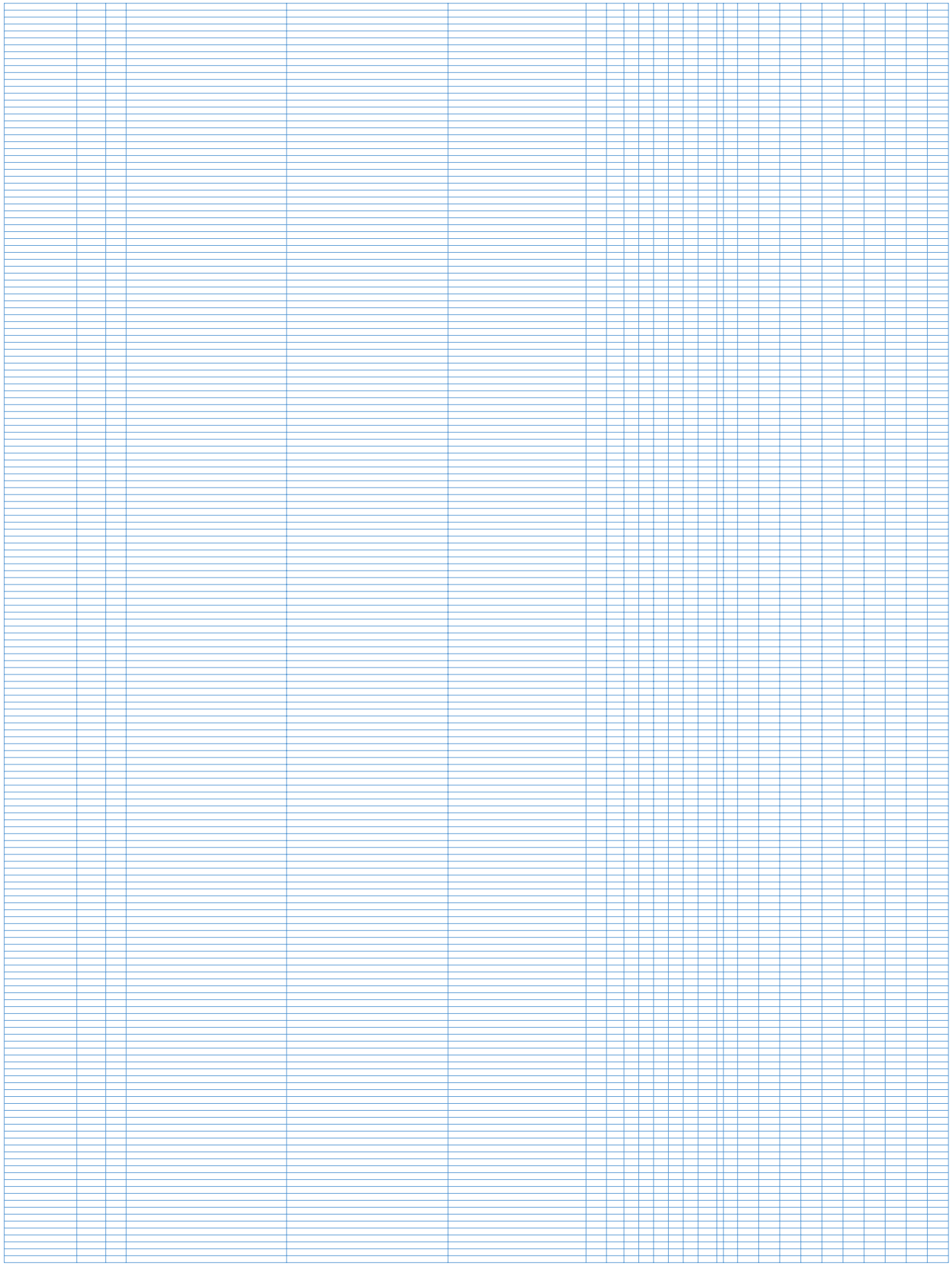
D1 Randomisation process
D2 Deviations from the intended interventions
D3 Missing outcome data
D4 Measurement of the outcome
D5 Selection of the reported result

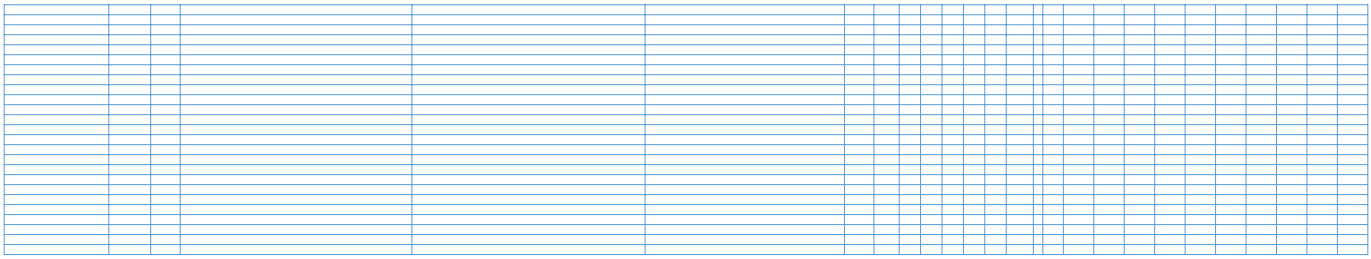




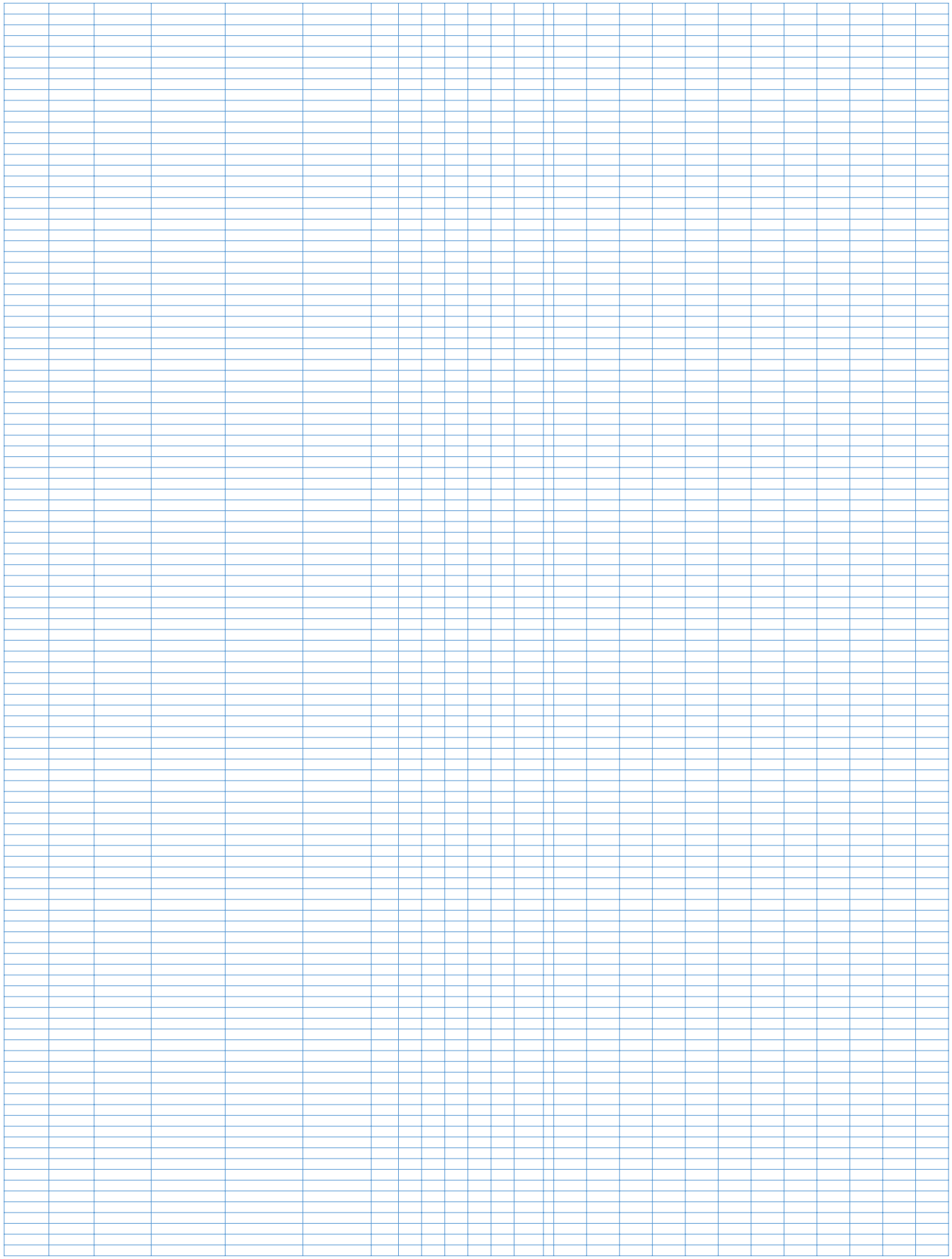


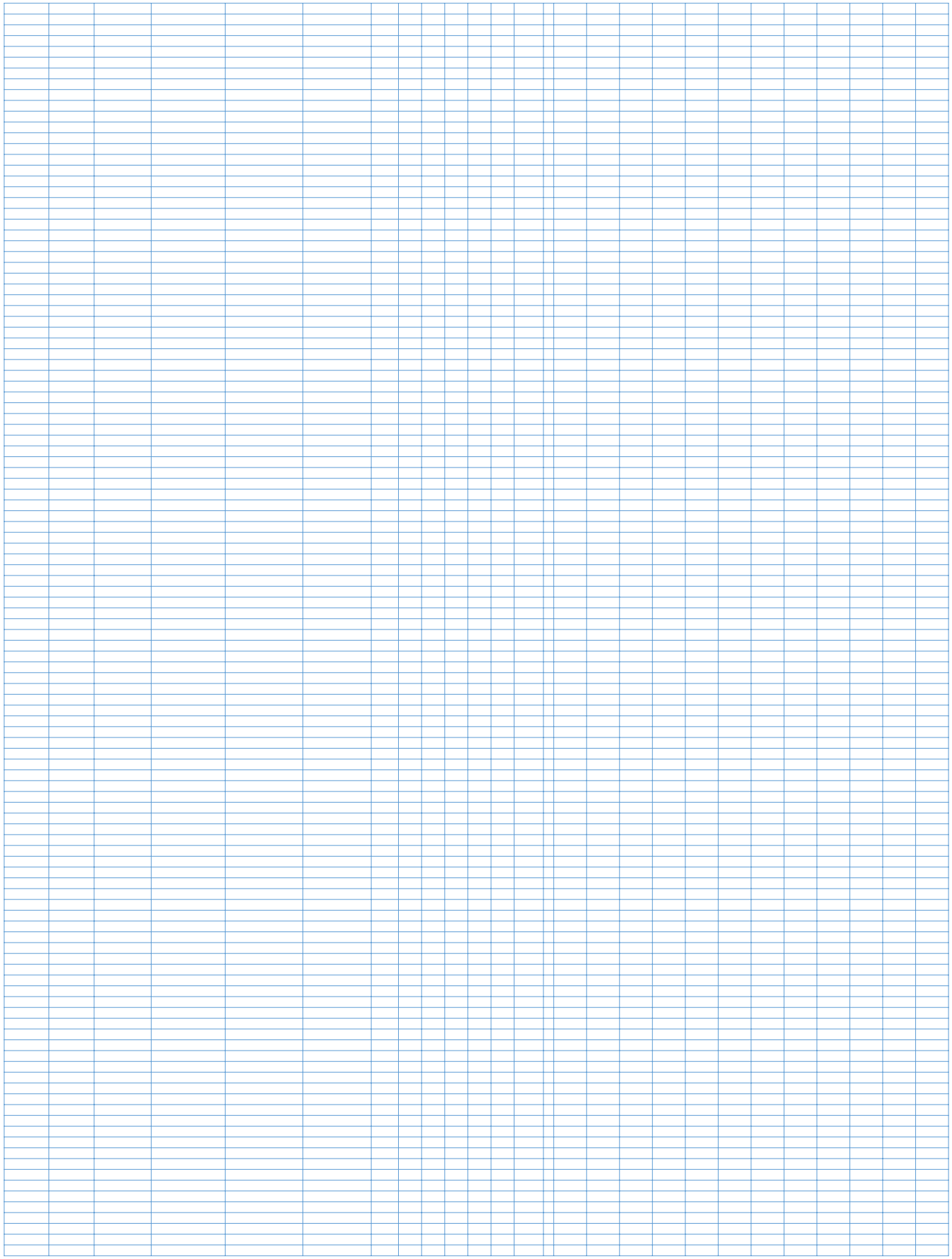


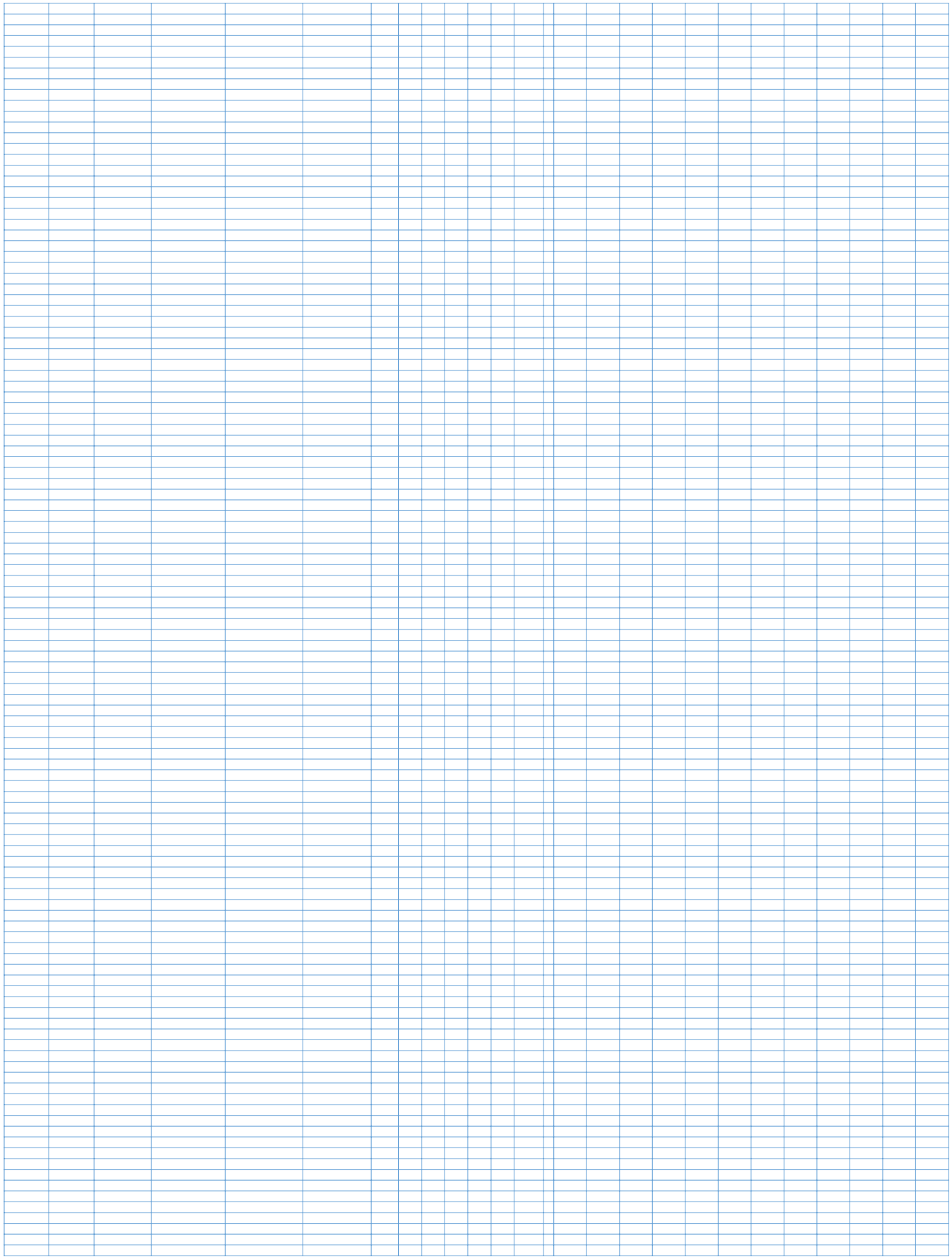


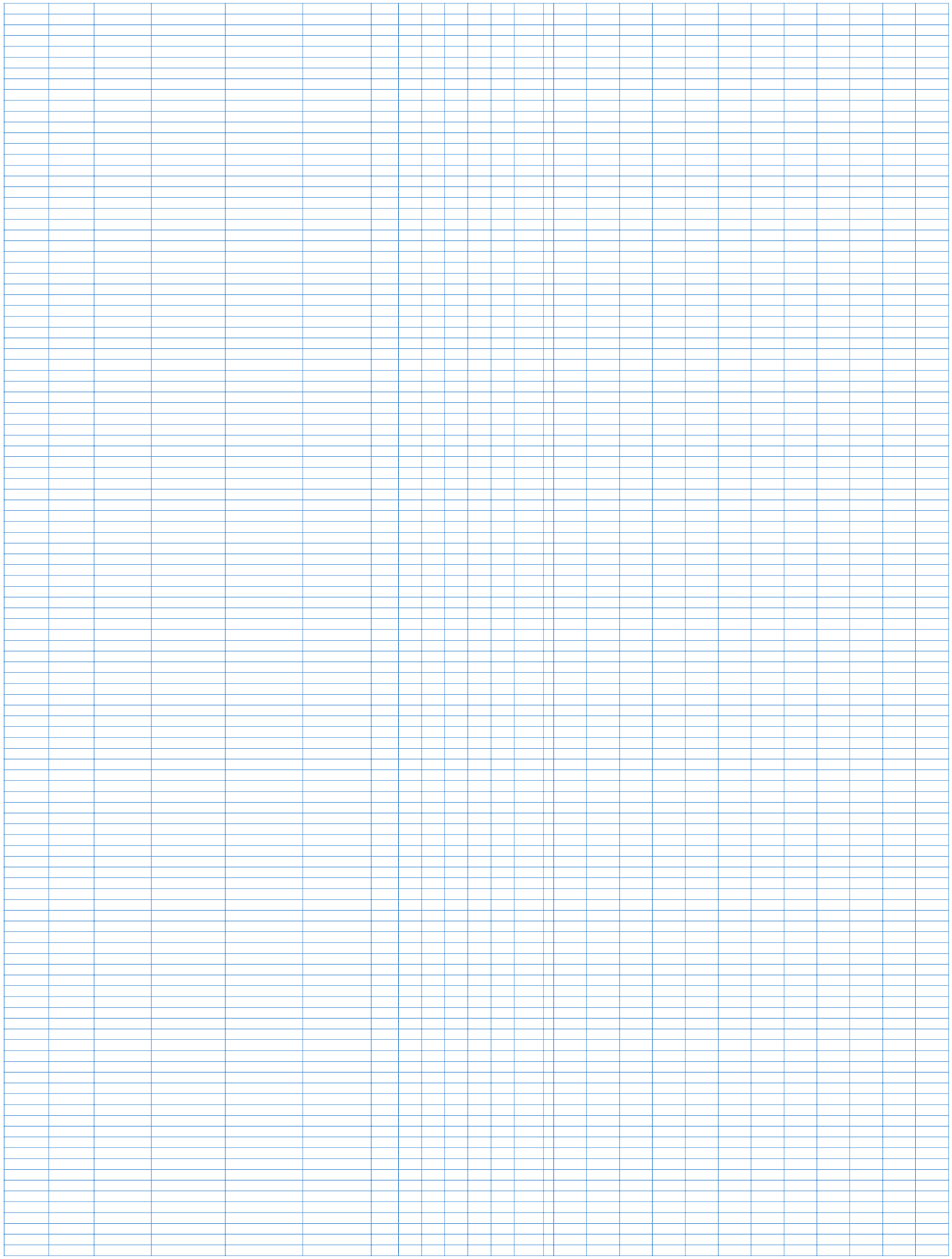


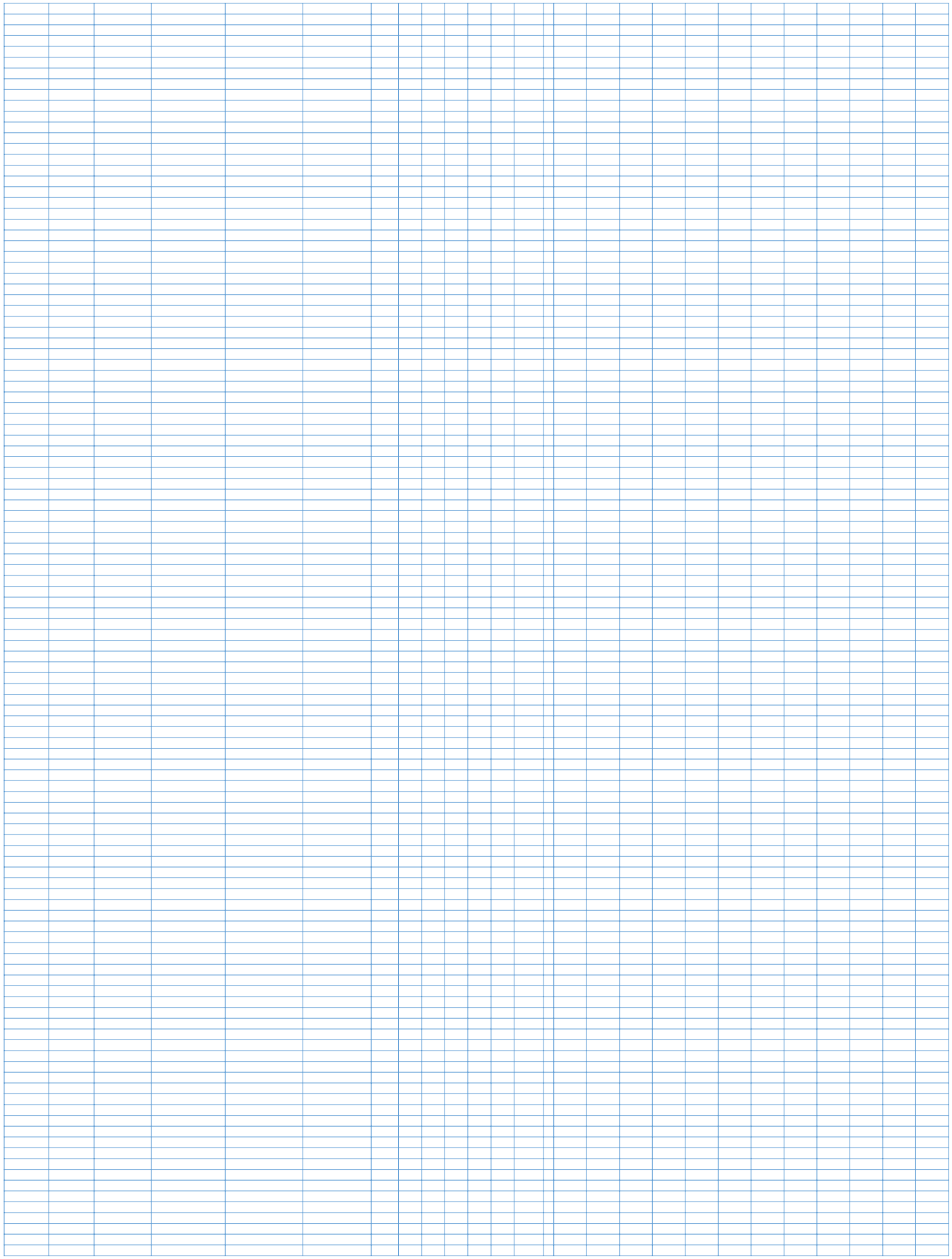
Per-protocol	Unique ID	Study ID	Experimental	Comparator	Outcome	Weight	D1	D2	D3	D4	D5	Overall													

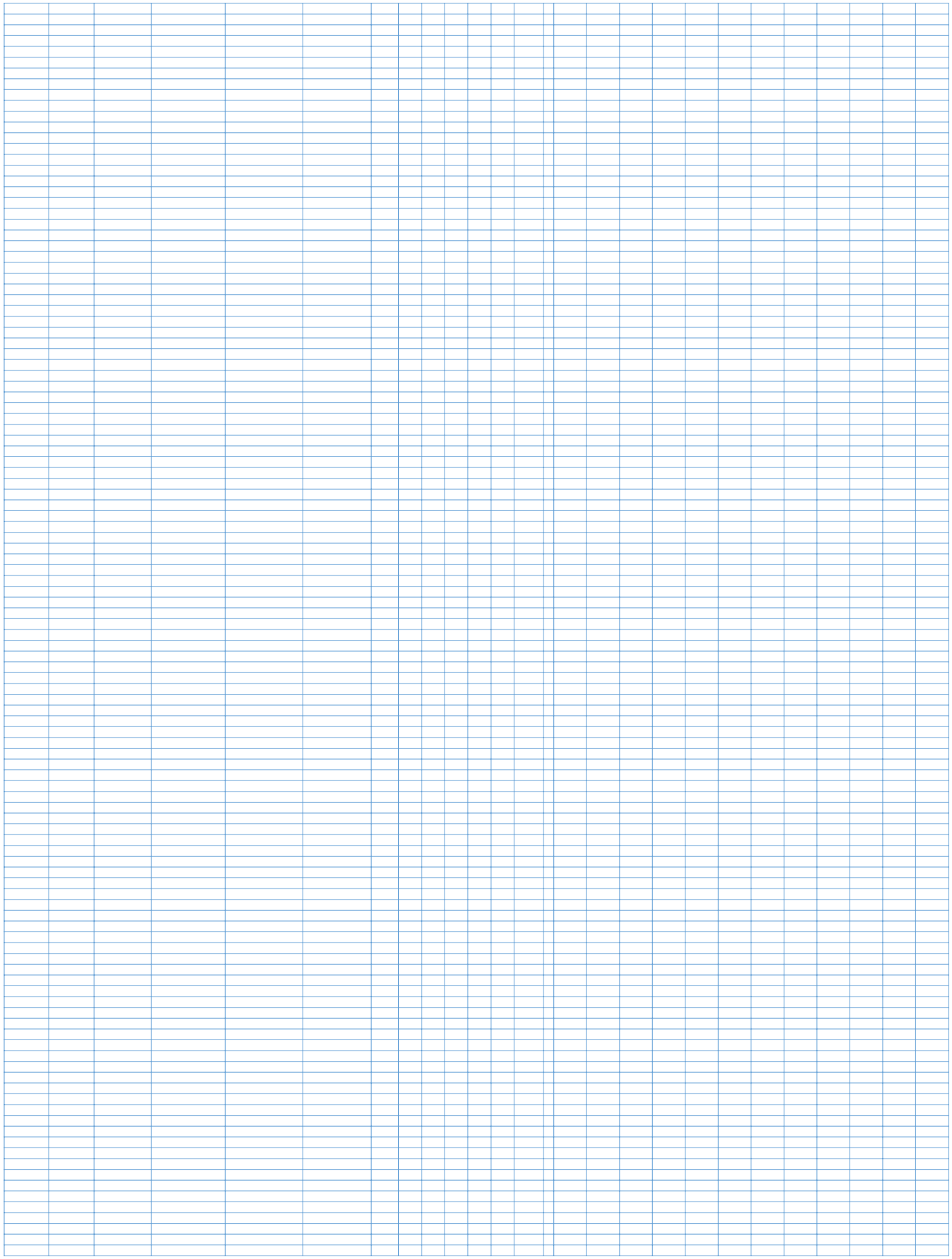


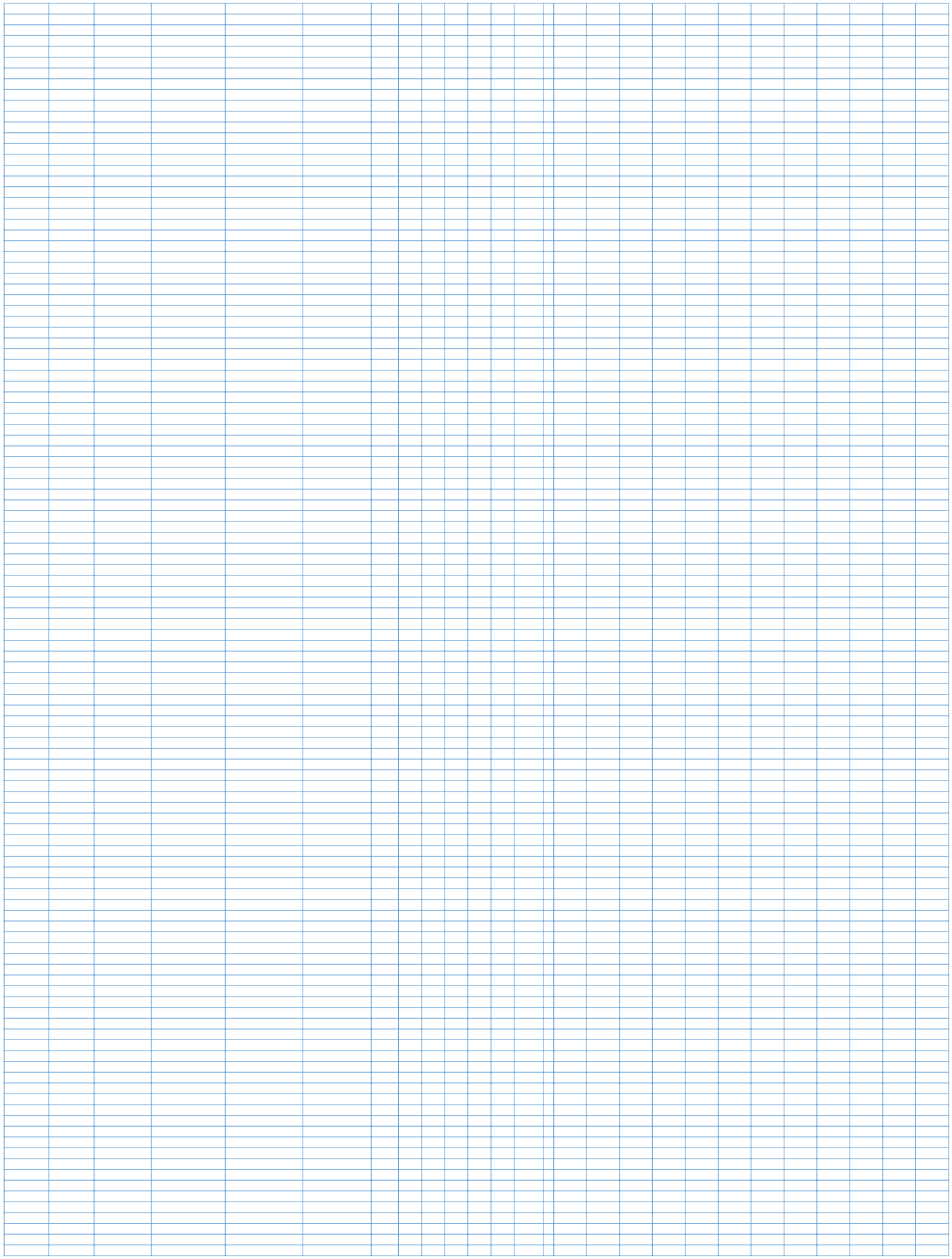












Unique ID	RCT-4-1	**Study ID**	4	**Assessor**	WG
Ref or Label	Salmani 2014 RCT	**Aim**	assignment to intervention (the 'intention-to-treat' effect)		
Experimental	HPD (premolded earplug) fit testing with instruction (immediate)	**Comparator**	HPD (premolded earplug) fit testing without instruction	**Source**	Journal article(s)
Outcome	Outcome 1 The difference in PAR levels (dB)	**Results**	1.1.3	**Weight**	

Domain	Signalling question	Response	Comments
Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y	Participants were randomly assigned using a random digit table. It was not reported if the allocation sequence concealed before assigned to intervention.
	1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	NI	
	1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	N	No difference in age or gender between groups.
	Risk of bias judgement	**Some concerns**	Participants were randomly assigned using a random digit table. It was not reported if
Bias due to deviations from intended interventions	2.1.Were participants aware of their assigned intervention during the trial?	PN	assignment; but if they came group, yes, they possibly were aware. However, the authors did not report it. The group assignment was blinded to the intervention
	2.2.Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	
	2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN	Group 2 was trained for 15 minutes and the correct technique was assured by the
	2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	
	2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	
	2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y	The t-test was used.
	2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	
	Risk of bias judgement	**Low**	If participants visited the clinic individually, they might have not chance to be aware of
Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Each group had 50 participants and no exclude participants reported.
	3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA	
	3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	
	3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	
	Risk of bias judgement	**Low**	Each group had 50 participants and no exclude participants reported.
Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	N	Threshold measurement was performed based on the ASHA criteria using REAT
	4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods applied for all participants.
	4.3 Were outcome assessors aware of the intervention received by study participants?	N	The outcome assessors (the audiologist) was blinded.
	4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	NA	
	4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA	
	Risk of bias judgement	**Low**	Threshold measurement was performed based on the ASHA criteria using REAT
Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	NI	No protocol was available for this study.
	5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	The study only measured the attenuation at each frequency with one method.
	5.3 ... multiple eligible analyses of the data?	N	No multiply eligible analyses applied of the data.
	Risk of bias judgement	**Some concerns**	No protocol is available for this study. The study only measured the attenuation at
Overall bias	**Risk of bias judgement**	**Some concerns**	This RCT was blinded to the audiologist who assessed outcome, and only one

Unique ID	RCT-5-1	**Study ID**	5	**Assessor**	WG
Ref or Label	Murphy 2007 RCT	**Aim**	assignment to intervention (the 'intention-to-treat' effect)		
Experimental	Multi-earplug with instruction (short-term)	**Comparator**	Multi-earplug without instruction	**Source**	Grant database summary (e.g. NIH RePORTER, Research Councils UK Gateway to Research)
Outcome	Outcome 1 Difference in PAR levels (dB)	**Results**	1.1.1	**Weight**	

Domain	Signalling question	Response	Comments
Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y	All subjects were assigned to group A, B, or C by a random card draw from a card deck which was shuffled it by the researchers.
	1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	PY	
	1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	PN	No baseline PAR, age or gender were reported. At baseline, each group had
	Risk of bias judgement	**Low**	All subjects were assigned to group A, B, or C by a random card draw from a card deck
Bias due to deviations from intended interventions	2.1.Were participants aware of their assigned intervention during the trial?	Y	Participant were aware of their assigned intervention because of different intervention methods.
	2.2.Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	
	2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN	All participants in the intervention group were giving counseling regarding correct
	2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	
	2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	
	2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	PY	Analysis performed by the review authors, based on the raw data provided by the
	2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	
	Risk of bias judgement	**Low**	Participant were aware of their assigned intervention because of different
Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Date from all randomized participants
	3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA	
	3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	

data	3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	
	Risk of bias judgement	**Low**	Date from all randomized participants
Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	N	The Fitcheck technical method was used in the study.
	4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods applied for all participants.
	4.3 Were outcome assessors aware of the intervention received by study participants?	NI	Not reported.
	4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	PN	It is unlikely because they followed the same fit testing procedure using same technology and the measurement is fairly objective.
	4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA	
	Risk of bias judgement	**Low**	the Fitchck technical method was used in the study.
Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	Y	The data reported were accordance with the prespecified protocol.
	5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	Only PAR levels were measured.
	5.3 ... multiple eligible analyses of the data?	N	No multiply eligible analyses applied of the data.
	Risk of bias judgement	**Low**	The data reported were accordance with the prespecified protocol.
Overall bias	**Risk of bias judgement**	**Low**	It was RCT study. Group B was received written instruction before the first visit,

Unique ID	RCT-5-2	**Study ID**	5	**Assessor**	WG
Ref or Label	Murphy 2007 RCT	**Aim**	assignment to intervention (the 'intention-to-treat' effect)		
Experimental	Multi-earplug with instruction (short-term)	**Comparator**	Multi-earplug without instruction	**Source**	Grant database summary (e.g. NIH RePORTER, Research Councils UK Gateway to Research)
Outcome	Outcome 1 Difference in PAR levels (dB)	**Results**	1.1.1	**Weight**	

Domain	**Signalling question**	**Response**	**Comments**
Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y	All subjects were assigned to group A, B, or C by a random card draw from a card deck which was shuffled it by the researchers.
	1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	PY	
	1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	PN	No baseline PAR, age or gender were reported. At baseline, each group had
	Risk of bias judgement	**Low**	All subjects were assigned to group A, B, or C by a random card draw from a card deck
Bias due to deviations from intended interventions	2.1.Were participants aware of their assigned intervention during the trial?	Y	Participant were aware of their assigned intervention because of different intervention methods.
	2.2.Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	
	2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN	All participants in the intervention group were giving counseling regarding correct
	2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	
	2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	
	2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	PY	Analysis performed by the review authors, based on the raw data provided by the
	2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	
	Risk of bias judgement	**Low**	Participant were aware of their assigned intervention because of different
Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Date from all randomized participants
	3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA	
	3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	
	3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	
	Risk of bias judgement	**Low**	Date from all randomized participants
Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	N	The Fitcheck technical method was used in the study.
	4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods applied for all participants.
	4.3 Were outcome assessors aware of the intervention received by study participants?	NI	Not reported.
	4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	PN	It is unlikely because they followed the same fit testing procedure using same technology and the measurement is fairly objective.
	4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA	
	Risk of bias judgement	**Low**	the Fitchck technical method was used in the study.
Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	Y	The data reported were accordance with the prespecified protocol.
	5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	Only PAR levels were measured.
	5.3 ... multiple eligible analyses of the data?	N	No multiply eligible analyses applied of the data.
	Risk of bias judgement	**Low**	The data reported were accordance with the prespecified protocol.
Overall bias	**Risk of bias judgement**	**Low**	It was RCT study. Group B was received written instruction before the first visit,

Unique ID	RCT-5-3	**Study ID**	5	**Assessor**	WG
Ref or Label	Murphy 2007 RCT	**Aim**	assignment to intervention (the 'intention-to-treat' effect)		
Experimental	Multi-earplug with instruction (long-term)	**Comparator**	Multi-earplug without instruction	**Source**	Grant database summary (e.g. NIH RePORTER, Research Councils UK Gateway to Research)
Outcome	Outcome 1 Difference in PAR levels (dB)	**Results**	1.1.2	**Weight**	

Domain	**Signalling question**	**Response**	**Comments**

Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y	All subjects were assigned to group A, B, or C by a random card draw from a card deck which was shuffled it by the researchers.
	1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	PY	
	1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	PN	No baseline PAR, age or gender were reported. At baseline, each group had
	Risk of bias judgement	**Low**	All subjects were assigned to group A, B, or C by a random card draw from a card deck
Bias due to deviations from intended interventions	2.1.Were participants aware of their assigned intervention during the trial?	Y	Participant were aware of their assigned intervention because of different intervention methods.
	2.2.Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	
	2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN	All participants in the intervention group were giving counseling regarding correct
	2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	
	2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	
	2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	PY	Analysis performed by the review authors, based on the raw data provided by the
	2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	
	Risk of bias judgement	**Low**	Participant were aware of their assigned intervention because of different
Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Date from all randomized participants
	3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA	
	3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	
	3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	
	Risk of bias judgement	**Low**	Date from all randomized participants
Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	N	The Fitcheck technical method was used in the study.
	4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods applied for all participants.
	4.3 Were outcome assessors aware of the intervention received by study participants?	NI	Not reported.
	4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	PN	It is unlikely because they followed the same fit testing procedure using same technology and the measurement is fairly objective.
	4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA	
	Risk of bias judgement	**Low**	the Fitchck technical method was used in the study.
Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	Y	The data reported were accordance with the prespecified protocol.
	5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	Only PAR levels were measured.
	5.3 ... multiple eligible analyses of the data?	N	No multiply eligible analyses applied of the data.
	Risk of bias judgement	**Low**	The data reported were accordance with the prespecified protocol.
Overall bias	**Risk of bias judgement**	**Low**	It was RCT study. Group B was received written instruction before the first visit,

Unique ID	RCT-2-1-1	**Study ID**	2	**Assessor**	WG
Ref or Label	Federman 2021 RCT	**Aim**	assignment to intervention (the 'intention-to-treat' effect)		
Experimental	HPD (foam earplug) fit testing with individualized instruction	**Comparator**	HPD (foam earplug) fit testing with small group video instruction	**Source**	Journal article(s)
Outcome	Outcome 1 The difference in PAR levels (dB)	**Results**	2.1.1	**Weight**	0.531

Domain	Signalling question	Response	Comments
Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y	randomly assigned to the three test groups (standard, video only, eHPD + video) based on the penultimate digit in their SSN. The allocation sequence concealed until participants were enrolled and assigned to
	1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	PY	
	1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	N	No difference in pre-training PARs between groups
	Risk of bias judgement	**Low**	After screened 821 participants, 344 who did not pass the initial screening were
Bias due to deviations from intended interventions	2.1.Were participants aware of their assigned intervention during the trial?	Y	Participants and people delivering the intervention were aware of their assigned intervention during the trial due to different intervention methods.
	2.2.Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	
	2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN	It is unlikely to have deviation from the intended intervention because eHPD
	2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	
	2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	
	2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y	One-way analysis of variance (ANOVA) with Post-hoc analysis for Delta PAR
	2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	
	Risk of bias judgement	**Low**	Participants and people delivering the intervention were aware of their assigned
Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Data for this outcome available for 321 participants out of 344 randomized
	3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA	
	3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	
	3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	
	Risk of bias judgement	**Low**	Data for this outcome available for 321 participants out of 344 randomized
Bias in measurement of	4.1 Was the method of measuring the outcome inappropriate?	N	The FAES used for data collection was a commercially available software-based
	4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods applied for all participants.
	4.3 Were outcome assessors aware of the intervention received by study participants?	N	Outcome assessors were blinded.

measurement of the outcome	4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	NA	
	4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA	
	Risk of bias judgement	**Low**	The FAES used for data collection was a commercially available software-based
Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	NI	No protocol was available for this study.
	5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	The study has two outcomes, the difference in PAR levels and PAR pass rates.
	5.3 ... multiple eligible analyses of the data?	N	No multiply eligible analyses applied of the data.
	Risk of bias judgement	**Some concerns**	No protocol is available for this study. The study has two outcomes, the difference
Overall bias	**Risk of bias judgement**	**Some concerns**	This RCT was designed to compare the difference in PAR value or PAR pass rates

Unique ID	RCT-2-1-2	**Study ID**	2	**Assessor**	WG
Ref or Label	Federman 2021 RCT	**Aim**	assignment to intervention (the 'intention-to-treat' effect)		
Experimental	HPD (foam earplug) with individualized and small group video instruction (short-	**Comparator**	Foam earplug with small group video instruction	**Source**	Journal article(s)
Outcome	Outcome 1 The difference in PAR levels (dB)	**Results**	2.1.1	**Weight**	0.469

Domain	**Signalling question**	**Response**	**Comments**
Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y	randomly assigned to the three test groups (standard, video only, eHPD + video) based
	1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	PY	on the penultimate digit in their SSN. The allocation sequence concealed until participants were enrolled and assigned to
	1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	N	No difference in pre-training PARs between groups
	Risk of bias judgement	**Low**	After screened 821 participants, 344 who did not pass the initial screening were
Bias due to deviations from intended interventions	2.1.Were participants aware of their assigned intervention during the trial?	Y	Participants and people delivering the intervention were aware of their assigned
	2.2.Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	intervention during the trial due to different intervention methods.
	2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN	It is unlikely to have deviation from the intended intervention because eHPD
	2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	
	2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	
	2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y	One-way analysis of variance (ANOVA) with Post-hoc analysis for Delta PAR
	2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	
	Risk of bias judgement	**Low**	Participants and people delivering the intervention were aware of their assigned
Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Data for this outcome available for 321 participants out of 344 randomized
	3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA	
	3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	
	3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	
	Risk of bias judgement	**Low**	Data for this outcome available for 321 participants out of 344 randomized
Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	N	The FAES used for data collection was a commercially available software-based
	4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods applied for all participants.
	4.3 Were outcome assessors aware of the intervention received by study participants?	N	Outcome assessors were blinded.
	4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	NA	
	4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA	
	Risk of bias judgement	**Low**	The FAES used for data collection was a commercially available software-based
Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	NI	No protocol was available for this study.
	5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	The study has two outcomes, the difference in PAR levels and PAR pass rates.
	5.3 ... multiple eligible analyses of the data?	N	No multiply eligible analyses applied of the data.
	Risk of bias judgement	**Some concerns**	No protocol is available for this study. The study has two outcomes, the difference
Overall bias	**Risk of bias judgement**	**Some concerns**	This RCT was designed to compare the difference in PAR value or PAR pass rates

Unique ID	RCT-2-2-1	**Study ID**	2	**Assessor**	WG
Ref or Label	Federman 2021 RCT	**Aim**	assignment to intervention (the 'intention-to-treat' effect)		
Experimental	HPD (foam earplug) with individualized instruction element (short-term)	**Comparator**	Foam earplug with small group video instruction	**Source**	Journal article(s)
Outcome	Outcome 2 The difference in PAR pass rate (%)	**Results**	2.2.1	**Weight**	0.518

Domain	**Signalling question**	**Response**	**Comments**
Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y	randomly assigned to the three test groups (standard, video only, eHPD + video) based
	1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	PY	on the penultimate digit in their SSN. The allocation sequence concealed until participants were enrolled and assigned to
	1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	N	No difference in pre-training PARs between groups
	Risk of bias judgement	**Low**	After screened 821 participants, 344 who did not pass the initial screening were
	2.1.Were participants aware of their assigned intervention during the trial?	Y	Participants and people delivering the intervention were aware of their assigned

Bias due to deviations from intended interventions	2.2.Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	intervention during the trial due to different intervention methods.
	2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN	It is unlikely to have deviation from the intended intervention because eHPD
	2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	
	2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	
	2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y	One-way analysis of variance (ANOVA) with Post-hoc analysis for Delta PAR
	2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	
	Risk of bias judgement	**Low**	Participants and people delivering the intervention were aware of their assigned
Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Data for this outcome available for 321 participants out of 344 randomized
	3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA	
	3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	
	3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	
	Risk of bias judgement	**Low**	Data for this outcome available for 321 participants out of 344 randomized
Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	N	The FAES used for data collection was a commercially available software-based
	4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods applied for all participants.
	4.3 Were outcome assessors aware of the intervention received by study participants?	N	Outcome assessors were blinded.
	4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	NA	
	4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA	
	Risk of bias judgement	**Low**	The FAES used for data collection was a commercially available software-based
Bias in selection of the reported result	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	NI	No protocol was available for this study.
	5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	The study has two outcomes, the difference in PAR levels and PAR pass rates.
	5.3 ... multiple eligible analyses of the data?	N	No multiply eligible analyses applied of the data.
	Risk of bias judgement	**Some concerns**	No protocol was available for this study. The study has two outcomes, the difference
Overall bias	**Risk of bias judgement**	**Some concerns**	This RCT was designed to compare the difference in PAR value or PAR pass rates

Unique ID	RCT-2-2-2	**Study ID**	2	**Assessor**	WG
Ref or Label	Federman 2021 RCT	**Aim**	assignment to intervention (the 'intention-to-treat' effect)		
Experimental	HPD (foam earplug) with individualized and small group video instruction (short-term)	**Comparator**	Foam earplug with small group video instruction	**Source**	Journal article(s)
Outcome	Outcome 2 The difference in PAR pass rate (%)	**Results**	2.2.1	**Weight**	0.482

Domain	Signalling question	Response	Comments
Bias arising from the randomization process	1.1 Was the allocation sequence random?	Y	randomly assigned to the three test groups (standard, video only, eHPD + video) based
	1.2 Was the allocation sequence concealed until participants were enrolled and assigned to interventions?	PY	on the penultimate digit in their SSN. The allocation sequence concealed until participants were enrolled and assigned to
	1.3 Did baseline differences between intervention groups suggest a problem with the randomization process?	N	No difference in pre-training PARs between groups
	Risk of bias judgement	**Low**	After screened 821 participants, 344 who did not pass the initial screening were
Bias due to deviations from intended interventions	2.1.Were participants aware of their assigned intervention during the trial?	Y	Participants and people delivering the intervention were aware of their assigned
	2.2.Were carers and people delivering the interventions aware of participants' assigned intervention during the trial?	Y	intervention during the trial due to different intervention methods.
	2.3. If Y/PY/NI to 2.1 or 2.2: Were there deviations from the intended intervention that arose because of the experimental context?	PN	It is unlikely to have deviation from the intended intervention because eHPD
	2.4 If Y/PY to 2.3: Were these deviations likely to have affected the outcome?	NA	
	2.5. If Y/PY/NI to 2.4: Were these deviations from intended intervention balanced between groups?	NA	
	2.6 Was an appropriate analysis used to estimate the effect of assignment to intervention?	Y	One-way analysis of variance (ANOVA) with Post-hoc analysis for Delta PAR
	2.7 If N/PN/NI to 2.6: Was there potential for a substantial impact (on the result) of the failure to analyse participants in the group to which they were randomized?	NA	
	Risk of bias judgement	**Low**	Participants and people delivering the intervention were aware of their assigned
Bias due to missing outcome data	3.1 Were data for this outcome available for all, or nearly all, participants randomized?	Y	Data for this outcome available for 321 participants out of 344 randomized
	3.2 If N/PN/NI to 3.1: Is there evidence that result was not biased by missing outcome data?	NA	
	3.3 If N/PN to 3.2: Could missingness in the outcome depend on its true value?	NA	
	3.4 If Y/PY/NI to 3.3: Is it likely that missingness in the outcome depended on its true value?	NA	
	Risk of bias judgement	**Low**	Data for this outcome available for 321 participants out of 344 randomized
Bias in measurement of the outcome	4.1 Was the method of measuring the outcome inappropriate?	N	The FAES used for data collection was a commercially available software-based
	4.2 Could measurement or ascertainment of the outcome have differed between intervention groups?	N	The same measurement methods applied for all participants.
	4.3 Were outcome assessors aware of the intervention received by study participants?	N	Outcome assessors were blinded.
	4.4 If Y/PY/NI to 4.3: Could assessment of the outcome have been influenced by knowledge of intervention received?	NA	
	4.5 If Y/PY/NI to 4.4: Is it likely that assessment of the outcome was influenced by knowledge of intervention received?	NA	
	Risk of bias judgement	**Low**	The FAES used for data collection was a commercially available software-based
Bias in selection of the reported	5.1 Were the data that produced this result analysed in accordance with a pre-specified analysis plan that was finalized before unblinded outcome data were available for analysis?	NI	No protocol was available for this study.
	5.2 ... multiple eligible outcome measurements (e.g. scales, definitions, time points) within the outcome domain?	N	The study has two outcomes, the difference in PAR levels and PAR pass rates.

of the reported result	5.3 ... multiple eligible analyses of the data?	N	No multiply eligible analyses applied of the data.							
	Risk of bias judgement	**Some concerns**	No protocol was available for this study. The study has two outcomes, the difference in PAR [illegible] and PAR [illegible]							
Overall bias	**Risk of bias judgement**	**Some concerns**	This RCT was designed to compare the difference in PAR value or PAR pass rates using different training methods. Nearly all