**Supplemental Table 1:** Study characteristics; type fish used for preparation of oils and concentrates), length of intervention period, diet availability, prandial state at blood sampling and outcomes (dietary intake, adiposity)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Ref. | Fish species (w. Latin name when provided) or genus, part of fish used and processing, name of supplier  | Duration of intervention period | Diet availability | Prandial state at blood sampling (euthanasia or at retro-orbital blood sampling) | Dietary intake in intervention group relative to comparator group | Adiposity in intervention group relative to comparator group |
| Mounie J.1986([33](#_ENREF_33)) | Fish oil from North Sea herring | 40 days | Ad libitum | Fasted 16 hrs | N/A | N/A |
| Dolphin P.J.1988([40](#_ENREF_40)) | Redfish (Sebastes marinus) oil derived from the viscera and non-saleable portions (Vitashine Ltd., Nova Scotia) | Both experiments:8 weeks | Both experiments:Ad libitum | Both experiments:Fasted overnight | Both experiments:Energy intake: NS | Both experiments:N/A |
| Halvorsen B. 1995([31](#_ENREF_31)) | Fish oil concentrate of ethyl esters of very long-chain mono- unsaturated fatty acids (Pronova, Oslo, Norway) | 3 weeks | Ad libitum  | Non-fasted | Feed intake: NS | N/A |
| Halvorsen B. 2001([32](#_ENREF_32)) | Fish oil concentrate of ethyl esters of very long-chain mono- unsaturated fatty acids (Pronova, Oslo, Norway) | 3 weeks | Ad libitum | Non-fasted | Not tested statistically  | N/A |
| Yang Z.H.2011([37](#_ENREF_37)) | Pollock oil (Nippon Suisan Kaisha, Ltd., Tokyo, Japan) | 6 weeks. | N/A | N/A  | Feed intake: NS  | Epididymal and mesenteric relative WAT weights: NS |
| Yang Z.H.2011([38](#_ENREF_38)) | Saury oil concentrate of MUFA ethyl esters (Nippon Suisan Kaisha, Ltd., Tokyo, Japan) | 6 weeks | Ad libitum | Non-fasted | Feed intake: NS  | Mesenteric fat mass: NS |
| Yang Z.H.2011([39](#_ENREF_39)) | Saury oil (Nippon Suisan Kaisya, Ltd., Tokyo, Japan) | Exp.1:4 weeks Exp. 2:6 weeks | Both experiments:pair-feeding | Both experiments:Non-fasted | Both experiments:N/A | Exp. 1:Mesenteric fat mass: lower in saury oil groupExp. 2:Mesenteric fat mass: NS |
| Yang Z.H.2013([36](#_ENREF_36)) | Saury oil concentrate of LC-MUFAs (Nippon Suisan Kaisha, Ltd. (Tokyo, Japan) | 8 weeks | N/A | Non-fasted  | Feed intake: NS | Epididymal and subcutaneous relative WAT weights: lower in LC-MUFA groupMesenteric relative WAT weight: NS |
| Yang Z.H.2015([35](#_ENREF_35)) | Saury oil and fractions of fish oil concentrate of LC-MUFA ethyl esters (Nippon Suisan Kaisha, Ltd., Tokyo, Japan).  | Exp. 1:18 weeksExp. 2:8 weeks | Both experiments: Ad libitum | Both experiments:Fasted 5 hrs  | Both experiments: Feed intake: NS | Both experiments:N/A |
| Yang Z.H.2016([41](#_ENREF_41)) | LC-MUFA concentrate was supplied by Nippon Suisan Kaisha (Tokyo, Japan) | Both experiments: 12 weeks | Both experiments:N/A | Both experiments: Fasted 5 hrs  | Both experiments:N/A | Both experiments:N/A |
| Yang Z.H.2017([42](#_ENREF_42)) | Saury oil concentrate of CA ethyl ester (Nippon Suisan Kaisha, Tokyo, Japan) | 12-week  | N/A | Non-fasted | N/A | N/A |
| Østbye T.K. 2023([34](#_ENREF_34)) | Sandeel oil (Vedde AS, Langevåg, Norway) | 4 weeks | Ad libitum | Non-fasted | N/A | Epididymal WAT weight: NS |

NS; not statistically significant, N/A, data not available, WAT, white adipose tissue