**Supplementary Figure 6.** IL-1β mRNA expression in OIR diminishes in or LysM-Cre/Nrp1<sup>fl/fl</sup> mice.

**SUPPLEMENTARY FIGURE LEGENDS**

**Supplementary Figure 1.** Confocal image of retinal cross-section from a WT P14 OIR mouse stained for retinal ganglion cell (RGC)-specific βIII tubulin, vessels (Isolectin B4), nuclei (DAPI). The image shows RGCs in intimate contact with degenerating vasculature. Scale bar: 50 µm.

**Supplementary Figure 2.** Gating scheme explaining the identification of the CD11b+/F4-80+/Gr1- and CD11b+/F4/80+/Gr-1-/NRP+ mononuclear phagocytes in whole retinal lysates.

**Supplementary Figure 3.** Weights of mice in experimental paradigms involving OIR. Bar graphs represent the weight of mice used for FACS analysis in Figure 1 (A-C) and for vasoobliteration and neovascularization analysis (D, E) in Figure 4. No significant difference was noted between WT or LysM-Cre/Nrp-1<sup>fl/fl</sup> mice attesting that metabolic difference could not account for the observed phenotypes. Expressed as Weight ± SEM; n=6-18.

**Supplementary Figure 4.** Numbers of resident retinal microglia in WT and LysM-Cre/Nrp-1<sup>fl/fl</sup> mice were similar. (A, B) Representative FACS plots show the populations of CD11b+/F4-80+ cells (microglia) in retinas collected from WT or LysM-Cre/Nrp1<sup>fl/fl</sup> mice. (C-E) FACS analysis from retinas collected at P10, P14 and P17 from normoxic mice reveals similar numbers of resident microglia in retinas from WT and LysM-Cre/Nrp1<sup>fl/fl</sup> mice. Data are expressed as total numbers of CD11b+/F4-80+/Gr1- cells ± SEM; n=3 - 8 (total of 12-32 retinas per condition; each “n” comprises 4 retinas).
Supplementary Figure 5. CD45 expression on various cell populations in the mouse retina and spleen. Retinas and spleens collected at P14 from WT mice were analyzed by flow cytometry. Representative FACS histograms show intermediate/low expression of CD45 on microglia from retinas (Gr1⁻/CD11b⁺/F4/80⁺ cells) when compared to high levels of expression on spleen-derived monocytes (CD11b⁺/Gr1⁺/F4/80⁺), neutrophils (CD11b⁺/Gr1high/F4/80⁻ cells) and macrophages (Gr1⁻/CD11b⁺/F4/80⁺ cells). n= 4 (total of 16 retinas per condition; each "n" comprises 4 retinas).

Supplementary Figure 6. IL-1β mRNA expression in OIR. Retinas from OIR and control Normoxic WT or LysM-Cre/Nrp1fl/fl mice at P10 (A) and P14 (B) were analyzed by RT-qPCR. IL-1β mRNA was significantly induced in OIR in WT retinas yet remained at basal levels in LysM-Cre/Nrp1fl/fl mice. Data are expressed as a fold change relative to respective controls ± SEM; n=4-6; *p < 0.05, ***p < 0.001.
Supplementary Figure 1.
Supplementary Figure 2.

**Approximative gating of live cells**

**Gating to remove doublets**

**Selection of Viable Cells**

7 AAD

**Gated on CD11^+ F4/80^+ cells**

(Mononuclear Phagocytes (MPs))

**Gated on Gr1^+ cells**

Exclusion of Gr1^+ cells (ie. neutrophils)
Supplementary Figure 3.

A. P10

B. P14

C. P17

Wild-type Normoxia
Wild-type OIR
LysM-Cre/Nrp 1<sup>fl</sup> Normoxia
LysM-Cre/Nrp 1<sup>fl</sup> OIR

D. P12

E. P17

Mouse weight (g)

n.s.
Supplementary Figure 4.

A. WT

B. LysMCre/Nrp 1

C. P10

D. P14

E. P17

Number of retinal macrophages /sample of 4 retinas

- n.s.

- n.s.

- n.s.
Supplementary Figure 5.
Supplementary Figure 6.

A

P10

IL-1β mRNA

(Fold change relative to respective norm ctrl)

Wild-type Normoxia
Wild-type OIR
LysM-Cre/Nrp 1<sup>−/−</sup> Normoxia
LysM-Cre/Nrp 1<sup>−/−</sup> OIR

* P14

IL-1β mRNA

(Fold change relative to respective norm ctrl)

***